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Protecting banks from failure: a comparative analysis of banking regulation in Indonesia and the UK

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List of Abbreviations:

BCBS	Basel Committee on Banking Supervision
BIS	Bank for International Settlements
CCB	Countercyclical Buffer
CEMA	Capital Equivalency Maintained Assets
CFFS	coordination forum of financial stability
CGFS	Committee on the Global Financial System
DSIB	Domestic Systemically Important Bank
DTI	Debt service to income
ECB	European Central Bank
FSB	Financial Stability Board
GDP	Gross Domestic Bruto
GFC	Global Financial Crisis
GSIB	Global Systemically Important Bank
HQLA	High Quality Liquid Asset
ICAAP	Internal Capital Adequacy Assessment Process
ICR	Interest Coverage Ratio
IDIC	Indonesia Deposit Insurance Corporation
IFSA or OJK	Indonesia Financial Supervisory Authority
IMF	International Monetary Fund
IRB	Internal Rating Based approach
NPL	Non Performing Loans
NSFR	Net Stable Funding Ratio
LCR	Liquidity Coverage Ratio
LDR	Loan Deposit Ratio
LTI	Loan to Income
LTV	Loan to Value
MAG	The Macroeconomic Assessment Group
RFBI	Ring Fence Bank in Indonesia
ROA	Return on Assets
ROE	Return on Equity
RR	Reserve Requirement
RWA	Risk Weighted Asset
SA	Standardised Approach
SREP	Supervisory Review and Evaluation Process

Journal Abbreviation

Adv. Macroecon --- Advances in Macroeconomics
Am. Econ. Rev. ---- American Economic Review
Bus. Rev ---- Business Review
CEMLA (Centro De Estudios Monetarios Latinoamericanos
CEPR --- Centre For Economic Policy Research
DNB --- De Nederlandsche Bank
Econometrica – Journal of the Econometric society
Eur Bus Org Law Rev ---- European Business Organization Law Review
J. Bank. Financ. ---- Journal of Banking and Finance
J Financ Serv Res --- Journal of Financial Services Research
J. Financ. Stab. --- Journal of Financial Stability
J. Eur. Econ. --- Journal of the European Economic Association
Nat'L Econ. Rev. --- National Institute Economic Review
NBER WP ----- National Bureau of Economic Research Working Paper
Q. Rev. Econ. Finance ---- The Quarterly Review of Economics and Finance
RCAP --- Regulatory Consistency Assessment Programme
Rev. Fin. Stud. ----- Review of Financial Studies

Abstract

This thesis addresses ineffectiveness of Indonesia banking regulation, particularly capital and liquidity provisions. It presents the view through the lens of Indonesia bank's balance sheet, the level and direction of development of the Indonesian banking system, and the potential impact of the Indonesia regulatory environment that might either impair the efficient and safe operation of a bank or influence the soundness and safety of a bank institution. The original contribution of this thesis is to explain how the potential impact of the existing Indonesia regulatory environment influences the soundness, health and safety of a bank institution and enhances the possibility of a bank institution failing.

The existing banking law and prudential provisions in Indonesia are simple, short and too general in regulating and protecting banks from failure. However, the current regulatory environment in Indonesia cannot mitigate all risks comprehensively which are posed by Indonesia bank's balance sheet, the level and direction of development of the Indonesian banking system. Consequently, events of bank failure, such as Century Bank in 2008 and failing banks, such as Muamalat Bank in 2017 and Bukopin Bank in 2020, might potentially recur in the future. For example, under the existing Banking Act 1998, the absence of common definition or understanding of 'other form' under bank definition and lack of further provisions or instructions or guidelines on the implementation or processes of unregulated activities could augment implicit banking risks in Indonesia.

Furthermore, Indonesia banks highlight the compliance with 3 pillars of Basel III under current Indonesia capital provisions. They regulate minimum capital level but do not provide comprehensive provisions due to covering only briefly and simply the tasks and powers of supervisory authorities; no technical standard assessment procedure or methodologies are used for review and assessment; and there are no explicit disclosure requirements. This potentially lowers supervision, review, accuracy, consistency and reliability of capital calculation and bank minimum level. Moreover, Indonesia banking provisions have a further fundamental flaw associated with the liquidity provision. The meaning of LCR is less robust because it could potentially lead to or increase possibility of illiquid banks, resulting in potential vulnerabilities to liquidity runs. It further shows how the concern of illiquidity might arise as HQLA of Indonesia banks could not cover net liquidity outflow.

Therefore, there is a need for reform of Indonesia ex ante prudential provisions. The reform might be performed through adopting provisions or an approach from another country, notably the UK. The thesis will analyse the possible reform of Indonesia banking provisions and the possible impact of adoption of the components or levels of the UK provision. Based on this analysis, it will also make several proposals for future Indonesia regulatory environment.

Declaration

I, the author, confirm that the Thesis is my own work. I am aware of the University's Guidance on the Use of Unfair Means (www.sheffield.ac.uk/ssid/unfair-means). This work has not been previously been presented for an award at this, or any other, university.

DEDICATION

For My Family

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Law and Provisions

Indonesia

The Banking Act 1992
The Banking Act 1998
The Act of IDIC
The Act of Indonesia Financial Service Authority 2011

BI provision No. 2/27/PBI/2000 about commercial bank
The provision of Government No. 4 Year 2008
the IFSA provision No. 18/POJK.03/2014
The provision of Bank Indonesia : PBI no 17/12/PBI/2015
The Indonesia LCR provision 2015
The provision of Bank Indonesia Nomor 18/16/PBI/2016
The IFSA provision No. 11/POJK.03/2016 about minimum bank capital for commercial banks
The IFSA provision No. 34 /POJK.03/2016
The IFSA provision no. 38 /POJK.03/2017
The IFSA provision no 50/POJK.3/2017 about NSFR for commercial bank (the Indonesia NSFR provision 2017)
BI provision No. 20/08/PBI/2018
BI provision No. 21/13/PBI/2019
The IFSA provision No. 31/POJK.03/2019 about obligation of leverage ratio (the 31 IFSA leverage provision 2019)

The UK

Bank of England Act 1998
FSMA 2000
Financial Services and Markets Act 2000 (Ring-Fenced Bodies and Core Activities) Order 2014
Financial Services Act 2012
Banking Act 2009
Financial Services (Banking Reform) Act 2013
Capital Requirement Directive 2013/36/EU (the CRD)
Capital Requirements Regulation No 575/2013 (the CRR)

Chapter One – Introduction

1.1.Theme of The Thesis

This thesis is an analysis of Indonesia regulatory regime including banking law and prudential provisions in Indonesia in light of path dependence in relation to change of institutions through incremental development or evolution. It possibly contributes to improving the Indonesian banking provisions in order to protect banks from failure and mitigate the potential flaws of banking regulations which might influence soundnesss, healthy and stability of banking system, notably, unclear meaning of 'other form' which is included in the term 'bank', inadequate supervisory review involving no aspect of disclosure requirements on the competent authorities, disclosure requirement including no harmonisation of information, inaccuracy data and limited data on particular banks and possibility of illiquidity. Within the context of banking regulation, the study will endeavour to answer the main research question of the thesis regarding comparison of the UK and Indonesian regulatory regimes, namely, whether the Indonesian regulatory regime, particularly part of bank law, capital and liquidity aspects including supervisory review, disclosure requirement, level of capital and definition of liquidity could benefit from adopting the UK provisions. If so, what might the drawbacks be to this approach? These themes of the thesis are developed into several main research questions set out below that will be discussed from the next chapter until Chapter 7 of the thesis:

1. What are the main flaws of regulatory structure in Indonesia, particularly banking law and provisions?
2. Why did the UK bank institutions performed better than Indonesia bank institutions from 2012 to 2017?
3. What are similarities and differences of regulatory structure between the UK and Indonesia legal regimes?
4. Whether the Indonesian regulatory regime may benefit from adopting the UK regulations?

1.2.Background

The topic of failing bank, particularly in Indonesia, have been the source of much recent debate in the popular press in Indonesia. Much of this debate has centred on too few regulation or failure of regulation or ineffective regulation, particularly associating with ex ante prudential regulation that contains some provisions and prerequisites, notably not only lending provisions

and constraints, and capital requirements but also liquidity ratio and rules for the loss of loans, and so on[1]. Regarding the Banking Banana Skin Survey in 2015, Indonesia in 2017 faced concerns relating to banking risk, such as macroeconomic, credit risk, regulation and liqudity, and so on, respectively.[2]. This report reveals that regulation in Indonesia is ineffective and inefficient, resulting in a third-tier rank in 2017. The collapse of Century Bank which bail out following an event of financial instability in 2008 undoubtedly occurred against holding low capital and illiquidity problem. Century Bank held negative capital and cannot meet their obligation and had lack of customer trust, resulting in bank run which threatened the stability of banking system in Indonesia.[3]

The thesis acknowledges that those concerns are relevant and serious but also presents analysis of bank's balance sheet and the level and direction of development of the Indonesia banking system to augment understanding of Indonesia banking system and analyse the flaws of Indonesia regulatory regime, such as banking law, capital and liquidity in prudential provisions to protect banks from failure in Indonesia. The analysis is presented through the lens of path dependence in relation to change of institutions through incremental development or evolution, these weaknesses, potential concerns or risks, and these possible impacts. It shall be noted that whilst Indonesia regulatory regime has already regulated bank institutions strictly and Indonesia bank institutions maintain high capital and good liquidity, further limits to Indonnesia banking regulation including bank law and provisions exist because of possibility of ignoring path dependence. Legal amendments or reforms in developing states have been unsuccessful as they have ignored or not take into account path dependence, self reinforcing instruments.[4]

Therefore, the study contends that whilst Indonesia regulatory regime might provide the safety and soundness of a bank institution and the stability of banking system in Indonesia, regulatory bodies might ignore crucial concerns relating to not only the balance sheet, and the level and direction of development of the Indonesia banking system which remains a central aspects of the approaches used to analyse the trend of Indonesia banking environment, the bank performances and the potential risks and enhance understanding of Indonesia banking system

[1] Hupkes, Eva H.G.(2000) 'The Legal Aspect of Bank Insolvency: A Comparative Analysis of Western Europe, the United States and Canada' Kluwer Law International, Boston, MA, p. 11.
[2] PWC (2017) 'Indonesia Banking Survey 2017', p. 24
[3] Research Team of Century Case, 2018, 'Skema Indikasi Korupsi Kasus Bank Century (Berdasarkan Hasil Audit BPK)' Public Accountability Review <https://www.scribd.com/doc/27308211/Public-Accountability-Review-Kasus-Bank-Century> 5 October 2018.
[4] Brian Tamanaha, 'The Primacy of Society and the Failures of Law and Development' (2011) 44 Cornell Intl LJ 209

but also the limitation of Indonesia regulatory regime including banking law and prudential provisions which might enhance the risk of possibility of a failing bank.

Firstly, it will be demonstrated by this study that the Indonesia bank's balance sheet and the level and direction of development of the Indonesia. This might lead to illiquid assets, maturity mismatch, potential increase of risky activities, illiquidity and financial instability. Consequently, capital and liquidity might not be able cover the unexpected risk and illiquidity concern and the possible similar event of a failing bank, such as Century Bank might potentially recur in the future.

Secondly, the thesis will analyse the potential flaws of Indonesia regulatory regime including banking law and prudential provision, particularly facets of capital and liquidity, such as inadequate supervision, no disclosure requirement, the definition of liquidity, and the term 'Bank'. This might lead to enhance not only moral hazard, inaccuracy data, doubt of data, unstandardized data, and no consistency of bank financial report, and potentially uncertain quality of result or uncertain result of capital calculation but also disclosure requirement and inadequate supervision relating to either no technical criteria, untruthful reporting and methodologies being used for review and evaluation; or lack of clear measurement procedure.

1.3.Study Objectives

The thesis has two purposes in adopting the comparative methodology. First, it could augment understanding of the UK and Indonesia's regulatory system and banking structure. This could show that Indonesia regulatory system is flawed and also show that this legal structure and solution which is operated elsewhere, notably the UK, might have both drawbacks and advantages. Second, the purpose is to transplant or transpose or reform the law. This analysis will consider the possibility to transplant the UK banking regulation into Indonesia's jurisdiction. This might have transplanting difficulties, obstacles and limits of legal transplantation due to thick and thin notion on the rule of law which will be discussed in Chapter 7.

The study also chose to discuss some gaps in banking regulation in light of the incremental development or evolution including institutional development of 2012-2017 which is related to the debate on path dependence and legal transplant. The gaps involve a comparison of the Indonesia regulatory pattern and the UK structure because of path dependence in relation to change of institutions through incremental development or evolution. The level and direction of development of the Indonesian banking system slowly moving away from a traditional model based on deposits and loans, towards a business model that resembles that of large UK

banks (wholesale funding and securitised bonds). The UK provides a good learning example for Indonesia as firstly, Indonesia and the UK have similar incremental development or evolution which is related to the path dependence and legal transplant. This might minimize or prevent the possibility of failure of either legal transplant or the rule of law focused reforms in Indonesia. If the legal amendments or reforms attempt to become successful, they require to consider the adaptive behavior of legal culture.[5] It denotes a system particular mode in which practices, manner, value and legal institutions are incorporated into the legal system functioning.[6] Secondly, the UK has better performance than Indonesia due to low leverage, RWA, and NPL. Thirdly, the UK has better indicator of stability and financial development index than Indonesia. The UK had experience in not only performing business models, such as wholesale funding and securitised bonds but also facing, mitigating and addressing the potential risks. The comparative banking regulation between Indonesia and the UK is not extensive to time. The UK and Indonesia generally have similar components of banking regulation, particularly the term 'bank' in spite of different definition and similar components of capital and liquidity provisions, notably disclosure requirement, liquidity definition, and supervisory review process in line with the International dimension, Basel III. Furthermore, the study would conduct a detailed or comprehensive, a doctrinal analysis of banking regulation including framework of law and prudential provisions in these countries. The most exciting segment of the study is that it reveals that the trend in banking structure show the level and direction of development of the Indonesian banking system slowly moving away from a traditional model based on deposits and loans, towards a business model that resembles that of large UK banks (wholesale funding and securitised bonds). Thus, it would make comparison of two countries' regulatory framework and see and consider if whether the Indonesian prudential regulatory regime could benefit from adopting the UK regulatory pattern.

By examining the potential weaknesses or concerns of Indonesia bank's balance sheet and the level and direction of development of the Indonesian banking system in contributing an increase of banking risk, thus adding to the potential for failing bank and financial instability, this thesis adds to improve the Indonesia banking provisions in order to mitigate the potential risks or concerns which not only are posed by Indonesia bank's balance sheet and limitation of Indonesia banking provisions but also are triggered by the level and direction of

[5] Prado, M. and Trebilcock, M. 2009. 'Path Dependence, Development, and the Dynamics of Institutional Reform' 59 UTLJ 341

[6] Jaakko Husa, 2015. A New Introduction to Comparative Law. Hart, p.3-4

development of the Indonesian banking system. It shall critically analyse whether or not current Indonesia regulatory regime, notably prudential provisions pay sufficient attention to the fundamental flaws in bank's balance sheet and the risk of the level and direction of development of the Indonesia banking system. By addressing the research questions above, the study shall provide a critical analysis of current balance sheet, the level and direction of development of the Indonesian banking system and subsisting Indonesia regulatory regime, notably banking law, capital and liquidity structure in Indonesia banking environment or banking system. It shall be demonstrated that the Indonesia bank's balance sheet and the trend or rather the process of change faced by some Indonesian banks, whereby they are slowly moving away from a traditional model based on deposits and loans, towards a business model, notably securities bond that resembles that of large UK banks which might not be mitigated by Indonesia regulatory regime properly including banking law, capital and liquidity provisions in case of a failing bank. The case of Century Bank, Muamalat Bank and Bukopin Bank which face lack of capital and illiquidity concerns show flaws or ineffectiveness of Indonesia regulatory regime, particularly these provisions which do not work well to mitigate successfully the banking risks.

The facets of Indonesia regulatory framework, notably banking law and prudential provisions in Indonesia were revealed to be flawed by the case of Century Bank and other cases, notably Muamalat Bank and Bukopin bank. These facets involve inadequate supervision, no disclosure requirement, the definition of liquidity, and other weaknesses of Indonesia regulatory structure such as the term 'Bank'. This study provides strong evidence that the Indonesia bank's balance sheet and the trend or rather the process of change faced by some Indonesian banks, whereby they are slowly moving away from a traditional model based on deposits and loans, towards a business model, notably securities bond that resembles that of large UK banks might have weaknesses or risks but Indonesia regulatory regime might not be able to mitigate these risks comprehensively. Consequently, these risks might lead to an increase of possibility of bank failure or threaten the stability of Indonesia banking system.

On this basis it contends that Indonesia regulatory regime has already regulated bank institutions strictly and Indonesia bank institutions maintain high capital and good liquidity to mitigate risks and protect them from failure. However, the potential weaknesses or risks which are posed by Indonesia bank's balance sheet and the trend or rather the process of change faced by some Indonesian banks might not be mitigated properly and comprehensively by Indonesia regulatory regime, notably banking law, capital and liquidity provisions

comprehensively.

Firstly, the meaning of ‘other form’ which is included in the term ‘bank’ is not clear and could potentially be interpreted as either bad or good practice. Bank Century which will discuss further in Chapter 3 offered product of investment fund which could be assumed as a fictive product because the transaction is not recorded in the Bank’s balance sheet but the documents proved and showed their activities. This could be assumed that the activities might be covered and protected by Indonesia banking law as the interpretation of ‘other form’ description might allow a bank institution to engage in either the activities offering product of investment bank or a fictive product. Furthermore, the term ‘bank’ in Indonesia provides considerable flexibility not only to cover or perform activities which have different forms but also to allow bank institutions which de facto could not receive deposit and supply credit to gain benefits of the particular unregulated activities in reality, but this might be considered risky due to the absence of a common definition or understanding of other form in order to improve social welfare. This absence allows either non-bank institutions or the shadow banking system to make and develop various products of financial innovation and also allows them to grow, mostly unregulated, and to provide competition with bank institutions directly in their part of the traditional market which might contain implicit threats or risks.

Secondly, flaw of definition ‘liquidity’ might enhance moral hazard of the shareholders or Indonesia banks to maintain liquidity which cannot cover the net liquidity outflow and cannot ensure banks are liquid institutions. This might be incentive for bank institutions to maintain either poor quality asset or illiquid asset which is hard to be used to obtain cash quickly or is difficult to be converted into a liquid asset, like the case of Century Bank. Although Indonesia bank institutions hold higher assets than liabilities, this might involve poor quality asset or illiquid asset which is could not be converted into liquid assets when they need to meet their liabilities. Consequently, Indonesia bank institutions might face illiquidity concern.

Thirdly, inadequate supervisory review, particularly no aspect of disclosure requirements on the competent authorities might pose risks, notably wrong decision or strategy and the concern of moral hazard and inconsistency of supervisory reviews and evaluation and measurements, no transparency and accountability, uncertain quality of result of capital calculation, supervisory capture of assessment, and lack of clear measurement procedure. This incentives supervisory authority to merely follow or verify or validate the report provided by banks. Otherwise, they apply inconsistency of reviews, evaluation and measure as they do not have clear measurements, criteria, technical standard assessment procedure or methodology

used for review and assessment. This could potentially lead to difficulty in reporting, scrutinizing or analysing the actual condition of Indonesia banks, resulting in uncertain quality of result or uncertain reputation on bank capital.

Finally, although the Indonesia Banking Statistic which includes quantitative terms and reports on the profile of Indonesia's banking industry which includes qualitative demonstrate the feature of disclosure requirement as being in line with Pillar 3 disclosure requirements, Basel III, Indonesia has not regulated this into the IFSA provision. This might pose several risks including no harmonisation of information, inaccuracy data and limited data on particular banks which could be accessed by the market. This incentives bank institutions to provide the possibility of untruthful reporting to a supervisory authority

It is clear that the economies of Indonesia and the UK are very different. However, the thesis use the UK as a comparison in order to augment understanding of Indonesia regulatory system, particularly aspect of banking law and ex ante prudential provision including supervisory review, disclosure requirement, capital level and definition of liquidity, and the term 'Bank'. This could show that Indonesia regulatory system is flawed or ineffective and also show that this legal structure and solution which is operated elsewhere, notably the UK might likely have drawbacks and advantages. Hantrais and Mangen contend that cross national comparative study has several benefits including firstly, it could enhance deeper grasp of the most critical issues in dissimilar states. Secondly, it could provide new directions and helpful opportunity for future study. Thirdly, it assists to sharpen the concentration of the subject analysis under research by suggesting new viewpoints. Finally, it produces the gaps identification in knowledge.[7]

1.4. Importance of the study

Systemic threats across banking sector could be large and possess a multiplier implication of the economic rest.[8] Banking regulations including law and provision are vital as the regulatory body could consider interests of stakeholder and to make balance those interests in line with interests of public. It lowers the difficulty of collective action in reflecting broader interests of stakeholder to ensure that bank institutions already minimize the social costs of their risks. Furthermore, banks, with their varying roles in economic activities, have three

[7] Hantrais, L., Mangen, S. Cross-national Research Methods in the Social Sciences: Method and management of cross-national social research. Pinter, London,1998.

[8] Alexander, K. (2006) 'Corporate Governance and banks: the role of regulation in reducing the principal-agent problem', *Journal of Banking Regulation*, 7(1), pp. 17-40.

features that rationalise the need for particular provision within the banking sector[9]: firstly, they have different maturity of either assets or liability; secondly, they provide particular fundamental services, such as payments systems; and third, they provide a vital monetary policy transmission channel.[10]

This study is original and contributes to scholarship. Its originality includes its content and methodology. This thesis has combined quantitative approaches, comparative law and doctrinal approaches. Quantitative approaches are demonstrated by a comparison of not only trend in the UK and Indonesia bank business model illustrating the level and direction of development of the Indonesian banking system but also the financial ratios of the UK and Indonesia bank institutions. The methodical analysis and interpretation of handbooks, codes, and legislation in the UK and Indonesia law reveals the doctrinal and comparative facets of approach or methodology of the study. In relation to the originality in contents, the study extends the works on Basel III or global financial provision. The study has also chosen to discuss some gaps in banking regulation in light of the incremental development or evolution including institutional development of 2012-2017 which is related to the debate on path dependence and legal transplant.

A significant topic running in this study is the equilibrium of financial innovation and stability of banking system. The UK financial development index takes third place within the top twenty countries with score around 0,90 in 2018 whereas its Indonesia score is low approximately 0,36, far from top 20 countries.[11] Although Indonesia and the UK have small differences of the index of overall stability, around 89,8 (57th) and 93,2 (27th) in 2019, NPL level as a stability indicator in Indonesia is bigger than the UK in 2019, around 2,6% and 0,7% respectively.[12] Furthermore, bank soundness in Indonesia scored lower, around 63,4 (80th) than the UK, approximately 73,2 (52th) in 2019. [13] Nevertheless, financial intermediary institutions are overall still strong and were sounder but continue to possess several fragility sources, involving liquidity mismatches and increased risks of corporate debt, and are inadequate

[9] Cetin, N. (2011) 'Enforcement of Prudential standards in Turkish banking law' Vol 14 No. 3, Journal of Money Laundering Control, p. 254-25.
[10] Goodhart, C.A. and Charle, G. (1998) 'Financial Regulation: Why, How and Where Now?' Routledge, London, pp. 10-12.; Hupkes, Eva H.G.(2000), supra note 1, p. 11.;
[11] IMF. 2018. Financial Development Index Database. IMF Data. https://data.imf.org/?sk=F8032E80-B36C-43B1-AC26-493C5B1CD33B&sId=1481207801912
[12] Schwab, K. and Zahidi, S., 2020, The Global Competitiveness Report: How Countries are performing on the Road to Recovery. World Economic Forum. P. 30
[13] Schwab, K. 2019. The Global Competitive Report. World Economic Forum. P.285 and p.581

inclusive.[14] The author consider how Indonesia regulatory body could enhance own legal system and protect banks from failure.

Financial innovation creates new approaches for making investing and generating capital. Theoretically, this augment financial growth that enhances development of economy. Nevertheless, complicated financial products and methods have enhanced moral hazard as banks took excessive threats in generating earnings or profits. Therefore, stability of banking system is a significant aspect in a development of country's economy. Sir Mervyn King necessitate not only more capital but also greater asset disclosure to restore stability of banking system.[15] The right extent of regulation including law and provision is required to make balance between banking stability and financial growth.

Furthermore, this study would have practical effects for policy makers or regulatory bodies worldwide. Legal reform relies on particular preferences or interests of a country, political systems or principles, and local conditions. The right extent of regulation including law and provision is required to make balance between banking stability and financial growth. This equilibrium is of importance on an international level, so this study would have significant effects for policy makers or regulatory bodies and academics on global dimension. The concentration or focus of weaknesses in Indonesia banking regulations is real issue. Considering or studying the UK regulatory pattern and adopting reasonable proposals will be of interest to regulatory bodies or policy makers.

The author thinks that this study is strong or robust as he reconsidered a variety of primary and secondary literature in the study, therefore consistency throughout data triangulation which helpful in emphasizing result inconsistencies and consistencies was reached. A grasp of inconsistency in results or findings across dissimilar data varieties is useful or beneficial. This enable the author to verify the data or evidence.

1.5. Methodology, Time Horizon, Data Collection and Structure

1.5.1. Methodology

The thesis uses mixed methods, qualitative and quantitative approaches. Holloway and Wheeler describe qualitative research more universally.[16] They contend that qualitative study is immersed, universal, interpretative, and contextual. Qualitative methods are varied, the general approach of study are case study, archival research, action research, ethnography,

[14] Schwab, K. and Zahidi, S., supra note 12. P. 28
[15] Pimlott, D. (2011) 'King at odds with ECB on eurozone crisis', *The Financial Times,*
[16] Holloway, I. and Wheeler, S., eds. (2002) Qualitative research for nurses, Second ed., Oxford: Blackwell Science.

grounded theory and interviews. Furthermore, quantitative research depends on the analysis and collection of numerical data to express, expect, describe or manage variable and interest phenomena. [17] There are several methods to conduct quantitave research, notably descriptive research, survey research, and observational research.[18] Quantitative scientists consider their information or data by employing statistics, charts and graphs. Firstly, the thesis did a desk based on summarizing quantitative data and descriptive results. This thesis concentrate on quantitative because of better prediction than qualitative approach. Kuhn contends that predictions of quantitative are better than predictions of qualitative as statistics and math present not only accuracy but also concreteness.[19] Mertler contends that the goal of descriptive studies is to describe or express and interpret the current individual status, event or setting conditions.[20] In descriptive study, the scientist is merely researching the interest phenomenon as it is existent in nature, no effort is created to make manipulation of the events, conditions or individuals.[21] A qualitative aspect is used to explain phenomena in rich detail since it is set and situated in local framework, to show phenomenon to the readers, to recognize setting and contextual aspects which is associates with the interest phenomenon and to determine causes or source of a specific event.[22]

Originality is vital to the success of this study. In this study, it is demonstrated or showed by a mix approaches combining quantitative and qualitative research approaches. The analysis of qualitative approach includes a case study, comparative law and doctrinal research as the study is exploring current trend or phenomenon in protecting banks from failure through the lens of path dependence in relation to change of institutions through incremental development or evolution including bank's balance sheet, the level and direction of development of the banking system, potential risks, the possible flaw of regulatory regime in Indonesia and these possible impacts.

The quantitative analysis includes considering the financial ratio of bank's balance sheet and trend in banking structure to analyse and see path dependence in relation to change of institutions through incremental development or evolution are in line with Indonesia banking

[17] Gay, L.R., Mills, G.E. and Airasian, P. (2009) Educational Research Competencies for Analysis and Applications. Pearson, Columbus.
[18] Mertler, C. A. (2016). Introduction to educational research. Thousand Oaks, CA: SAGE. P. 111-114
[19] Kuhn, T., ed. (1970) The Structure of Scientific Revolutions, Third ed., Chicago: University of Chicago Press.
[20] Mertler, C. A. (2016). Introduction to educational research. Thousand Oaks, CA: SAGE. P. 111
[21] Mertler, C. A. (2016). Introduction to educational research. Thousand Oaks, CA: SAGE. P. 111
[22] Johnson, R. and Onwuegbuzie, A. (2004) 'Mixed Methods Research: A Research Paradigm Whose Time Has Come', *Educational Researcher,* 33(14), pp.14-26.

law and provisions. The percentages are also employed to check and analyse the similarities and dissimilarities of level and direction of development of the banking system between the UK and Indonesia. Furthermore, these percentages are employed to check and analyse the ratios of liquidity, capital and leverage in line with the banking provisions and potential risks of its development and bank's balance sheet. The study calculated the percentages using data between 2012 and 2017. These percentages are cross checked with report, financial banking statistics and data by supranational organization and regulatory bodies, BCBS, the IFSA, Bank Indonesia, Office for national Statistic, IMF, Bank of England, publication from office for national statistic. The approaches of quantitative research consist of interpretating financial charts, graps, and ratio from main sources, notably publications of regulatory bodies and government, online databases, subscription, journals and books. The study compared ratio in the overall UK and Indonesia bank institutions, not a specific institution, in chapter two in order to identify the level and direction of development of banking system, its potential flaws or risks and to achieve consistency. It also compared the financial ratios, notably liquidity, RWA, NPL, capital and leverage of the overall UK and Indonesia bank institutions. The business model of Century Bank (CB) is not usual as CB combined a traditional retail banks with dependence on innovative products including risky business activities, notably investment funds and securities. Therefore, CB is not included in the analysis of quantitative as it was hard to find the UK comparator which has the same case.

The study chose a combination of approaches as each kind of approach has its drawbacks and benefits. By providing unique and tailored mixed combining approaches to critical discussion or analysis of the UK and Indonesia banking laws and provisions, the author believes that the study is original. The author starts his study by employing doctrinal law expressing what the Act and provisions in Indonesia and the UK, then employs a comparative analysis to not only compare and contrast or recognize dissimilar and similar the banking legal regime in Indonesia and the UK but also identify the potential flaws of Indonesia banking regulations or what parts in particular matter. The ratios in the level and direction of development of banking system, and the financial ratios, notably liquidity, capital and leverage of the overall UK and Indonesia bank institutions are employed in the analysis or study to research, identify or investigate the path dependence in relation to change of institutions through incremental development or evolution, the flaws of law and provisions. The author rationalizes his methodology or methods by providing a deeper analysis of not only doctrinal law and comparative law but also case study.

1.5.1.1.Doctrinal analysis

Mann contends that doctrine is a combination of principles, rules, values, explanatory guidelines, norms that describes, rationalize or make coherent the provision part as segment of larger provision system.[23] Doctrinal law contains two steps, firstly, a scientist trace or find the relevant provision sources and secondly, the scientist examines and interprets them. Hence, it contains reasoning of inductive[24] or deductive[25] and analysis of interpretive of the provisions. A scientist prudently considers judgements of provision to seek ambiguities, inconsistencies and reconciling, notably dissimilarities.[26] Posner contends that general doctrinal law still plays a significant role in academic legal research but scholarship of interdisciplinary is developing at fast step.[27] Siems asserts that pure statutes or cases interpretation is not adequate to make originality.[28] Either a new approach to interpret laws and cases or a new solution to a difficulty is needed in order to make original study. Twinning contends that doctrinal law could be unique and restricted : "it takes as its commencing topic and its primary emphasis of interest provision of regulation, without usual or methodical reference to the framework of difficulties or problems they are considered to address, the intentions they were aimed to provide or the consequences they have in fact.[29]

Briefly, doctrinal research does not cope with how provisions could be either reformed or improved.[30] It is restricted and unique as it separates from politics and policy. However, it is still significance in legal scientistship in this time as it resolves difficulties or problems of law. It considers analytical method employed by judges when they decide a case. It is helpful to commence study or research as it determine "what the Act and provisions are". Therefore, the author begins his study with doctrinal law to determine "what the Act and provisions are" by considering the development of the UK and Indonesia banking law and provision through several significant parts of law and provisions, notably (the Indonesia banking act 1998, the IFSA provisions, the BI provisions in Indonesia and Banking Reform Act 2013 in the UK,

[23] Mann, T. (2010) 'Australian Law Dictionary', 197.
[24] It works from specific observation to more general
[25] It performs from the more general to the more specific
[26] Posner, R. (1981) 'The Present Situation in Legal Scholarship', The Yale Law Journal, 90(5), pp. 1113-1130.
[27] Posner, R. (2002) 'Legal Scholarship Today', Harvard Law Review, 115(5), pp. 1314-1326.
[28] Siems, M. (2008) 'Legal Originality', Oxford Journal of Legal Studies, 28(1), pp. 147-164.
[29] Twining, W. (1976) Academic Law and Legal Development, translated by Lagos: University of Lagos Faculty of Law.
[30] Hutchinson, T. (2013) 'Doctrinal research: Researching the jury' in Watkins, K. and Burton, M., eds., Research Methods in Law, Great Britain: Routledge.

CRD/CRR, Financial Service and Markets Act 2000 in the UK), and legal case. Then, the study adds or supplements the method with comparative legal analysiss and a case study.

1.5.1.2.Comparative legal analysis

Kahn-Freund expresses comparative legal analysis as an approach, not a subject.[31] Its advocates propose that there are four components of uniqueness including firstly, comparative legal analysis presents originality as once comparing or contrasting two or more legal system, it is likely to make legal or policy proposals.[32] Therefore, a scientist could make impact study and its use in practice. Secondly, comparative legal analysis presents a new legal study perspective.[33] Furthermore, when employing or applying comparative law, a scientist requires to be committed or devoted to theory. Finally, a scientist requires a commitment to interdisciplinary. The study is attempted to make policy proposals or use or application in practice. Hence the author believes by implementing or adopting comparative law, he could make new knowledge by make comparison or contrast the banking legal regimes in Indonesia and the UK. By make comparison the dissimilarities and similarities between two legal regimes in these countries, as well as the flaws exposed by the regulatory bodies in Indonesia and the UK, he could produce policy proposals on banking provision.

Hantrais and Mangen reveal that study of cross national comparison is implemented once states are made comparison relating to the similar models or concepts with the purpose of producing generality or obtaining a better grasp or knowledge of the occurrence under research.[34] According to Kohn's proposed methods of cross national comparative study, scientists could determine what degree of dissimilarities and similarities they ought to search for.[35] Furthermore, the thesis used analytical strategies, particularly individual level research approaches to make cross national comparison. Based on Gauthier, scientists follow this approach to analyse whether the outcomes gained on the base of one state could be replicated in another state to make generality of outcomes cross nationally. Dissimilar approaches could be employed when scientists follow this method. Mostly, it is to perform parallel analysis by

[31] Kahn-Freund, O. (1966) 'Comparative Law as an Academic Subject', Law Quarterly Review, 82, pp. 40-53.
[32] Siems, M. (2008) 'Legal Originality', Oxford Journal of Legal Studies, 28(1), pp. 147-164.
[33] Legrand, P. (1995) 'Comparative Legal Studies and Commitment to Theory', Modern Law Review, 58, pp. 262-278.
[34] Hantrais, L., Mangen, S. Cross-national Research Methods in the Social Sciences: Method and management of cross-national social research. Pinter, London,1998.
[35] Kohn, M..1987. Cross-National Research as an Analytic Strategy. American Sociological Review, 713-731.

considering the similar variables in all states. This approach allows scientists to analyse differences and similarities across states in term of correlation between variables.[36]

Comparing the UK banks with Indonesia banks is not easy, principally because they occupy different positions in their respective economies and exhibit very different levels of development. Although the economies of Indonesia and the UK are very different, the thesis identified that the trend or rather the process of change faced by some Indonesian banks, whereby they are slowly moving away from a traditional model based on deposits and loans, towards a business model, notably securities and wholesale that resemble that of large UK banks, as well as component of banking law and provisions share several similarities. In order to analyse the trend that Indonesia banks are slowly moving away from credit exposure towards a securities model that resemble that of large UK banks, the comparison use these instruments of the overall UK and Indonesia bank institutions (in total), not a specific bank and not one or two banks. Furthermore the thesis used similar instruments or variables such as loan and deposit (claim) and debt securities (claim) in the UK and Indonesia based on data from Basel Statistics and also use similar timing of data collection, from 2012 to 2017. In addition, the thesis analysed the similar positive rise in the trend of the possible use of wholesale funding. It used a similar instrument, particularly customer deposits and total assets based on IMF data and similar time between 2012 and 2017 in the UK and Indonesia.

Comparison of practical law might be mainly helpful and beneficial for transition of system where foreign pattern are employed as a methods of developing one's own provision with the purpose of either institutional development or legal reform. Borrowing provisions or copying legal institution from another states is employed as a method to enhance own legal structure.[37] This has obvious transplanting obstacles but even selective borrowing possesses its own difficulties concerning the rule of law which will discussed further in chapter 7.

Legal transplantation considers path dependence as a method of illustrating the significance of legal system in the past to legal transplant.[38] Literature of path dependence is helpful as it gives information on historical aspects which legal improver who might depend on transplantation of law require to take seriously. Legal reformers requires to be aware of institutional relationship or interdependences as specific institutions might change or develop

[36] Gauthier, H. The Promises of Comparative Research,. Paper prepared for the European Panel Analysis Group (2000)
[37] Ritaine, E. C. 2008, 'Legal Engineering in Comparative Law' in E Cashin Ritaine, L Frank and S Lalani (eds), L'inge¤ nierie juridique ete le droit compare¤ (ISDC 2008) 9
[38] Jaakko Husa, 2015. A New Introduction to Comparative Law. Hart, p.129

over time.[39] Path dependence expresses the boundaries concerning the specific way of how to employ transplantation of law as an instrument for legal reform. The layering method emphasize that institutions alter progressively as either institutional frameworks or new provisions are added or inserted on top of those which are now existent. Thus, path dependence appears for change or growth or progress throughout incremental development or evolution.[40] Prado and Trebilcock contend that path dependence could explain past legal reform failure and give several direction relating to future legal amendments.[41] It reveals what type of legal amendments is possible to be successful and what type of legal amendments is less possible to be effective. It is also not enough to express that legal historical knowledge matters, rather, it ought to be expressed that what segments and what periods in specific concern. Several reforms or transformation could rely on a contemporary path of historical knowledge rather than on early path. [42]

The UK and Indonesia generally have similar components of banking regulation, particularly the term 'bank' in spite of different definition and similar components of capital and liquidity provisions, notably disclosure requirement, liquidity definition, and supervisory review process in line with the International dimension, Basel, but their regulatory systems shows dissimilar concerns or issues. More significantly, lesson could be obtained and learnt from the UK model of regulations as the trend of banking business model in Indonesia is likely slowly moving away from traditional model based on deposits and loans, towards a business pattern, notably securities and wholesale but Indonesia banking act has no significant improvement or change since 1998 to mitigate its potential risks.

The comparative approach provides the scientist a new view or perspective to his study. Researching the model of Indonesia regulation alone is worthwhile but the UK experience with regulating business model, notably securities enhances another aspects and dimension to his study. For instance, although the UK and Indonesia directions of development of banking system between 2012 and 2017 is likely similar, financial ratios of the bank's balance sheet is not similar in these countries. This merits further analysis in the author's study and would have policy effects in banking law and provision. Emphasis of Legrand on commitment to interdisciplinary and theory denotes the method of interpretative in comparative law.[43] Texts

[39] Jaakko Husa, 2015. A New Introduction to Comparative Law. Hart, p.140
[40] Jaakko Husa, 2015. A New Introduction to Comparative Law. Hart, p.149
[41] Prado, M. and Trebilcock, M. 2009. 'Path Dependence, Development, and the Dynamics of Institutional Reform' 59 UTLJ 341
[42] Jaakko Husa, 2015. A New Introduction to Comparative Law. Hart, p. 141
[43] Legrand, P. (2009) Le droit compare, 3rd ed., Presses Universitaires France.

of law are not simple points or objects. Legrand reveals that comparative solicitors interpret texts of law in a social perspective[44] This method of interpretative is employed in case study and doctrinal research within the author's study. Throughout the process of study, he interpreted texts of law as well as statistics and financial ratios in discussing information or data on banking law and provisions. His policy proposals are based on the findings after analysing and interpreting rigorous information or data. Thus, comparative legal analysis is not merely another subject of positivism in that solicitors just concern with the provisions of a legal structure. It is a more attractive and complex approach of study of comparing legal structure, understanding the provisions and act and reforming or reconstructing in a subject of interdisciplinary..

1.5.1.3.Case study

Robson contended that a study of case is an approach for conducting study or research that includes an empirical study of a specific current occurrence within its actual life perspective employing various evidence sources.[45] Implementing or adopting the approach of case study will bring about not only exploratory study and explanatory journey. Queries starting with how and why will be answered. Perry contends that direct causal relationships in social study are not easy to make as relationships are intensely affected by the perspective or context.[46] The complicated casual relationship in a situation perspective are recognized as causal tendency.[47] Therefore, analysis of case study is an approach of in depth qualitative study employed to explore and consider causal relationships.

Several normative provisions which this study surveys and analyses are law and provisions, particularly in Indonesia and the UK. The study will gather data from either empirical or widespread theoretical study on prudential provisions to encourage its views. Chapters Two and Three rely primarily on critical evaluation of existing information or literature in the UK and Indonesia, particularly associating with financial ratios of bank's balance sheet, the level and direction of development of the UK and Indonesia banking system as well as doing a critical analysis of existing regulatory frameworks in both countries, and the case of Century Bank in Indonesia. These chapters also consider the use of comparative methodology to augment understanding and recognize potential concerns of financial ratios of bank's balance

[44] Legrand, P. (2009) Le droit compare, 3rd ed., Presses Universitaires France.
[45] Robson, C. (2002) Real World Research, Second ed., Oxford: Blackwell.
[46] Perry, C. (2000) 'Case research in marketing', The Marketing Review, 1(3), pp.303-323.
[47] Bhaksar, R., ed. (2008) Realist theory of science, First ed., London: Routledge.

sheet, the level and direction of development of the Indonesia banking system, and the possible limitation or flaws or what parts in specific matter of Indonesia banking regulation. Chapters Four and Five rely primarily on critical analysis of substantive facets of prudential provision in Indonesia and the UK including Basel 3 as an International dimension of capital and liquidity, and macroprudential provision that links to the topic discussed in previous chapters to provide insight or reason for the possible contribution of flaws of capital and liquidity provisions to the failing bank institutions in Indonesia. These chapters also perform comparative methodology to augment understanding and identify the roles, flaws and what parts in specific matters of these provisions in Indonesia with considering the data and analysis of the previous chapters. Chapter Six not only performs an analysis of possible adoption of a regulatory framework that is better suited to mitigate the type of risks in Indonesia that emerge in the context of this latter model of banking, including what type of legal amendments is possible to be successful and what type of legal amendments is less possible to be effective but also analyses its possible impact, thus mirroring the UK and the adoption of Basel III. Chapter Seven provides possible future development and way forward including its possible limits and Chapter Eight provide proposals for reform in a wide and conclusion.

1.5.2. Time Horizons

Phenomena or occurrence could be analysed either over a period of time or at a specific period. Cross sectional research consider the former while longitudinal researchs consider the latter. Surveys and studies of case are frequently employed for cross sectional research. The primary benefit of longitudinal research is the ability to analyse alteration and growth over time. Adam and Schvaneveldt revealed that a scientist could manage or control variables being researched in longitudinal research.[48] It is likely to bring in or make a longitudinal component into study even if there are limitations of time. One could reconsider information or data gathered over period to achieve this longitudinal component. Furthermore, Bekaert, Harvey, and Lundblad employ average data of five year times, from 1991 to 1996 to analyse the finance-growth relationship.[49] They concentrated on development rather than higher frequency correlations and reveal that financial liberalization intensifies growth of economy by enhancing

[48] Adams, G. and Schvaneveldt, J. (1991) *Understanding Research Methods* Second ed., New York: Longman.

[49] Bekaert, G., C. R. Harvey and C. Lundblad (2004), "Does Financial Liberalization Spur Growth?", Journal of Financial Economics., 66, 465-504

the rate of investment and the resources allocation.[50] Following time series techniques of Bekaert et al, the thesis calculated or analysed the proportions over a five year period time between 2012 and 2017. Based on the Bekaert et al research, financial liberalization augments growth of economy by enhancing the rate of investment and the resources allocation, so it is important to observe or conduct a research which focus on allocation of resources, notably trend in business model which could encourage the economic growth. By knowing this potential risks and analyzing whether or not the banking regulation have mitigated this risks or have facilitated the growth of allocation of resources could encourage or contribute to the economic growth with focusing on the soundness and health of a bank institutions and the stability of banking system so this thesis did research relating to allocation of resource or trend in business model which might contribute to Indonesia economic growth. Indonesia economic growth reveal or illustrate the growth of financial liberalization which is relating to the improvement of allocation of resource or rate of investment. Indonesia economic growth is approximately 5,1% in 2017 and the UK economic growth is around 1,7% over the same period.[51] However, based on data from IMF[52], the UK has better index of overall stability around 93,2% and financial development index which scored 0,90 rather than Indonesia stability index, around 89,8% and financial development index, approximately 0,36. Based on time series techniques of Bekaert et al, it is enough to use data average over 5 years to recognize or concentrate on growth or generalize findings of research study beyond the particular condition or growth. If data is less than 5 years, the data might have not been represented the trend.

1.5.3. Data collection

Most of the data employed in this thesis are available freely through not only online databases, subscription, journals and books. Several non legal and legal sources, several technical and non technical information or literature, notably empirical research on the case of failing bank, theory of capital and liquidity, report and financial banking statistic by supranational organization and regulatory bodies, BCBS, the IFSA, Bank Indonesia, IMF, FSB, Bank of England have been considered and related figure gained. Banking statistic, bank's balance sheet, the level and direction of Indonesia banking system have been analyzed to provide empirical sources for evaluations. Related statutory law and provision, notably banking

[50] Bekaert, G., C. R. Harvey and C. Lundblad (2004), "Does Financial Liberalization Spur Growth?", Journal of Financial Economics.
[51] World Bank, 2017, GDP percapita growth (annual %)
https://data.worldbank.org/indicator/NY.GDP.PCAP.KD.ZG?end=2017&locations=ID&start=2011&view=chart
[52] Schwab, K. 2019. The Global Competitive Report. World Economic Forum.

law, CRD/CRR, the provision of capital and liquidity together with regulatory report, statement of supervisory bodies or the IFSA press conference that have been released before 2018, have been analyzed thoroughly and carefully.

1.5.4. Structure of the thesis

The first substantive chapter of this thesis, Chapter Two, will consider contextual background including development of the UK and Indonesia banking system which is significant as the institutional framework possesses a direct effect on the way that provisions are made. The chapter begins with discussion of the importance of the banking and financial system to the economy. Furthermore, the second and third section of this chapter discusses the trends in banking structure and performance between Indonesia and the UK which will be used to contextualise the argument made later in this thesis. Therefore, this chapter will provide a contextual background encompassing the development of the UK and Indonesian banking structures and justifying further analysis of their level and direction of development of banking system, these countries' regulatory frameworks, the challenges and opportunities, and the possibility of proposals for reform.

Chapter three will analyse the regulatory structures in Indonesia and the UK. This analysis will concentrate on comsidering differences and similarities involving substantial aspects of banking law, role of regulatory bodies and prudential provisions particularly capital and liquidity in the UK and Indonesia in response to incremental evolution or development of banking system. The chapter will also consider these potential flaws or what part in particular matter critically relating to potential hidden risky activities, the term 'Bank', liquidity definition disclosure requirements on the competent authorities and no regulating disclosure requirement. Another flaw relates to the ring fence, which Indonesia, unlike the UK, has not yet implemented. The aim of this policy is to segregate retail services of bank institutions from distress elsewhere in the either wider system or the large bank organisations.[53] The chapter will also review the historical implementation of capital and liquidity provision in these countries. The discussion of failures of bank institutions in Indonesia, particularly Century Bank will assist the analysis of bank provisions conducted later in the thesis, to identify the causes or limitations of bank provision in Indonesia and to provide several rationales for possible adoption of the UK's prudential provisions. Finally, this chapter will discuss capital and liquidity principle as a foundation of prudential regulation.

[53] Alexander, Kern (2015) 'Regulating the Structure of the EU Banking Sector.' Eur Bus Org Law Rev 16: 234

Chapter four will consider differences and similarities of the main facets of prudential provisions, micro prudential provisions including its possible flaws or what parts in particular matter critically of its aspects. First, chapter four concentrates on the Basel III approach as an International dimension of capital and liquidity. Then, the chapter considers the different applications of substantive aspects of prudential provision, particularly capital requirements and liquidity provisions in Indonesia and the UK. The capital requirement is further divided into several parts for discussion, notably credit risk, IRB approach and the supervisory review process. The liquidity provisions discussion will focus on guidance and implementation regarding the Basel liquidity requirements in Indonesia and the UK. Finally, the chapter will analyse and compare the implementation of different components of micro prudential provision and the levels of these implementations in both jurisdictions as well as provide arguments and analysis of flaws or potential risks in Indonesia banks.

Chapter five will consider differences and similarities of a supplement or complement to micro prudential provisions, namely macro prudential provisions, including its possible flaws or what parts in particular matter critically of its aspects. This include tools to mitigate spill over from shock, tackle main amplification mechanisms of systemic risk and tackle risks from excessive expansion of credit in the financial system. This chapter starts with different implementations of macroprudential aspects, notably CCB and sectoral buffer, NSFR, leverage and instruments for lending including LTV, LTI, and DTI in Indonesia and the UK jurisdiction. Finally, the chapter will consider possible concerns over potential risks for Indonesia's macro prudential provisions including what parts in specific matter and also conduct comparative analysis of differences in macroprudential standards and levels of macroprudential instruments in Indonesia and the UK.

Chapter six will analyse the possibilities of adopting the UK's prudential provisions in the Indonesian context in order to protect Indonesia's bank institutions from failure including whether the Indonesian regulatory regime may benefit from adopting the UK regulations. Regarding the analysis from the previous chapters, the chapter considers adoption not only of the components of the UK provisions which could improve the quality of Indonesia's bank regulations but also the UK levels which could assist to mitigate the risks of Indonesia banks due to concerns over the high levels of RWA, NPL, capital, leverage, and potential increase of risky activity. The chapter starts by presenting a table that summarises the main divergences and convergences of the UK and Indonesian regulations, including RWA NPL, capital level, tools for lending, CCB and sectoral buffer, leverage ratio, LCR and NSFR and other components of prudential provisions. These analyses will help to contextualise the arguments

and analysis for the possible reform of Indonesia banking provisions including what type of potential legal amendments plan is possible to be successful and what type of potential legal amendments plan is less possible to be effective. Furthermore, the chapter will consider the potential implications or impacts of possible adoption of the UK prudential provisions including components of the UK banking provisions and the levels of these implementations into Indonesia provisions.

Chapter seven will discuss possible future development of the regulatory and institutional framework and way forward involving transplanting difficulties, obstacles and limits of legal transplantation due to thick and thin notion on the rule of law. Finally, Chapter eight will discuss the feasibility of three proposals for protecting Indonesia's bank institutions from failure and will also provide conclusions.

Chapter 2 Development of the UK and Indonesia Banking System

2.1.**Introduction**

The aim of this chapter is to make comparison the contextual background that consists of historical development of Indonesia and the UK from 2012 to 2017, notably structure of banking system including financial ratios of bank's balance sheet and the level and direction of development of the business model which will justify further analysis of regulatory structure in these countries, its challenges and the likelihood of proposals for reform. The UK and Indonesia data from not only Basel Statistics including debt securities, loan and deposit but also IMF involving proportions of capital, leverage, loan to deposit (LDR), profitability, quality of assets, liquidity and risk weighted assets to total assets, customer deposits and total assets will be analyzed. Data from Financial Stability Board (FSB) comprising size of banking assets to total assets, OFIs to total financial assets will also be discussed. The data underlines flaws in current Indonesia bank institutions between 2012 and 2017 notably high NPL, RWA and leverage ratios. This chapter discusses why Indonesia bank institution were weaker or more vulnerable than the UK bank institutions over these periods of time.

Institutional development provides a valuable chance to analyze regulatory facets of the banking sector, an analytical moment in the evolution of provision or regulation in the banking segment. The aim of the chapter is to fill a gap in the literature or works on financial growth, banking regulation or provision, and stability of banking system. Particularly, little research has been done comparing not only trend in the UK and Indonesia bank business model illustrating the level and direction of development of the UK and Indonesia banking system but also the financial ratios of the UK and Indonesia bank institutions between 2012 and 2017 and the effects deriving from the percentages.

The notion of incremental development or evolution is related to the debate on path dependence and legal transplant.[54] The importance of the period becomes noticeable as the past or history is the departure point for the now and the now is the departure point for the future.[55] Indonesia sees a shift slowly moving away from a traditional model based on deposits and loans, towards a business model that resembles that of large UK banks (wholesale funding and securitised bonds). This highlights the potential weakness of the term 'bank' in Indonesia which provides merely a traditional model of bank activities including both distributing funds and accepting funding but has the absence of a common definition or understanding of "other form".

[54] Brian Tamanaha, 'The Primacy of Society and the Failures of Law and Development' (2011) 44 Cornell Intl LJ 209

[55] Jaakko Husa, 2015. A New Introduction to Comparative Law. Hart, p. 142

This absence allows either non-bank institutions or the shadow banking system to make and develop various products of financial innovation and also allows them to grow, mostly unregulated, and to provide competition with bank institutions directly in their part of the traditional market which might contain implicit threats or risks. The performance of bank institutions is also poor due to high leverage, RWA and NPL. Therefore, the now might show the departure point for the future to regulate and monitor all bank activities closely and carefully and enhance the performance of Indonesia bank institutions in order to protect bank from failure and maintain stability of banking system.

The UK performed well in the index of financial development in 2018. They take third place and scored well, around 0,90. They scored well in banking stability, around 93,2 and was ranked 27th out of 141 in index component.[56] However, the UK financial system is imperfect. Bank soundness scored 73,2 (52th) and market efficiency scored low, around 64,6 and is ranked 21th out of 141.[57] Indonesia financial development index scored low, around 0,36, far from 20 countries. Although macroprudential stability in Indonesia also scored high, around 90, it is ranked 54th and bank soundness is lower, approximately 63,4 (80th)[58] than UK. Its NPL level is also relatively high, approximately 2,6% (45th) compared to the UK, around 0,7% (8th).[59] Nevertheless, financial intermediary institutions are overall still strong and were sounder but continue to possess several fragility sources, involving liquidity mismatches and increased risks of corporate debt, and are inadequate inclusive.[60]

This thesis extends the academic work on bank regulations. The extensive part of study in the regulatory banking facets was conducted by Barth et al.[61] It provides the broad cross country analysis of the effect of bank provision on the bank operation and analyses the validity of method of Basel to provison of banks. Barth et al reveal that either increasing supervision or enhancing standards of capital do not cause better efficiency of banking institutions. They require more discipline of market, notably better banking monitoring, transparency and disclosure than on directive, rule and control provisions.[62]

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[56] Schwab, K. 2019. The Global Competitive Report. World Economic Forum. P.581
[57] Schwab, K. 2019. The Global Competitive Report. World Economic Forum . P.581
[58] Schwab, K. 2019. The Global Competitive Report. World Economic Forum . P. 16, 285
[59] Schwab, K. 2019. The Global Competitive Report. World Economic Forum . P.285
[60] Schwab, K. and Zahidi, S., 2020, The Global Competitiveness Report: How Countries are performing on the Road to Recovery. World Economic Forum. P. 28. P. 28
[61] Barth, J., Caprio, G. and Levine, R., eds. (2006) *Rethinking Bank Regulation: till angels govern,* New York: Cambridge University Press.
[62] Barth, J., Caprio, G. and Levine, R., eds. (2006) *Rethinking Bank Regulation: till angels govern,* New York: Cambridge University Press.

The outcomes of Bart et al[63] study ought to be re-analysed in view of development of contemporary banking structure and performance. The thesis use combination of comparative method and empirical findings to consider how Indonesia bank institutions could enhance their performances. Financial innovations have made approaches for making investment and generating capital. Theoretically, this augments development of banks that enhances growth of economy. Nevertheless, complicated procedures and financial products have enhanced moral hazard as financial intermediary institutions take excessive risks to obtain high returns. Furthermore, financial innovations have lowered transparency throughout transaction confidentiality and complex products. Acharya et al reveal that obligations of collaterised liability or debt did not shift threats in the procedure of securitisation and so the view that it could make diversification of risks and therefore allow financial market to develop is weak.[64] Therefore, stability of banking system is a significant aspect in a development of country's economy. The right provision amount is required to make balance between stability of banking system and financial growth.

This thesis would have practical effect for regulatory bodies or policy makers, particularly in Indonesia and the UK. Although they likely have similar direction of development of the bank's business model, they have differences in terms of culture, economy and population. Improvements or reforms in banking provision rely on national particular priorities, political principles and local conditions. The business of Indonesia bank institutions depend on more intermediation than securitisation. Is it reasonable to implement stricter standards of leverage, liquidity and capital to Indonesia bank institutions? The IFSA is presently considering leverage provision, along with other G20 states. Indonesia bank institutions might look capable of fulfilling requirements of Basel III leverage but its implementation in Indonesia might be difficult because of low interest of Indonesia bank institutions on performing securitisation to lower their risky assets and high level of RWA which might influence their capital positions.

Ranciere et al submits that states which have experienced financial distress have shown higher development of economy than states which have revealed more stable financial circumstances. They submits that the systemic risk taking activities which defeats financial difficulties to growth of economy is relating to occasional financial distress although they are

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[63] Barth, J., Caprio, G. and Levine, R., eds. (2006) *Rethinking Bank Regulation: till angels govern*, New York: Cambridge University Press.

[64] Acharya, V. V., Philippon, T. and Richardson, M. (2009) 'The Financial Crisis of 2007-2009: Causes and Remedies.' in Acharya, V. V. and Richardson, M., eds., *Restoring Financial Stability: How to Repair a Failed System*, New Jersey: John Wiley & Sons, pp.1-56.

not submitting that financial distress is good for development of economy.[65] The right extent of provision is required to make balance between stability of banking system and financial growth. This equilibrium is of importance on international dimension, so this chapter would possess essential effects for policy makers or regulatory bodies and academics on global scale.

Therefore, this chapter discusses deposit taker institutions in the UK and Indonesia. The study concentrates on banking industry or overall bank institutions than level of individual bank company. This illustrates the level and direction of development of the UK and Indonesian banking system which might influence growth of economy. Rajan and Zingales contend that better development of financial intermediary institutions and markets assist to handle friction of markets which drive a segment between the internal finance and external price. Decreased external finance costs ease or facilitate development of company and new creation of company.[66] Beck and Levine reveal that greater financial growth speeds up the financially dependent industry development.[67] The bank institutions play a significant role in the UK and Indonesia economies. They also have complicated balance sheets and are revealed to securitisation in the market of wholesale funding. They study has considered or choosed overall deposit taker institutions in the UK and Indonesia with data from IMF, FSB and Basel statistics for comparison to maintain consistency, individual bank institutions is not included in the analysis of quantitave approach as it is difficult to make or maintain consistency with similar indicator or instrument, variable, time period and sources and also the several business patterns in the UK and Indonesia might be dissimilar.

Variable influencing profitability of bank institutions could be split into external and internal determinant factors.[68] This chapter concentrate on the internal determinant facet. The data for this thesis include proportions of profitability, leverage, quality of asset, liquidity and capital. These proportions are employed by regulatory bodies to analyse bank institutions. These proportions are employed to analyse or check the connections of the bank performance and these previous ratios. Furthermore, this study also use data, such as retail deposit, total assets, loans and deposits, and debt securities. These proportions are employed to analyse the trend in banking structure or the level and direction of development of the UK and Indonesia banking

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[65] Ranciere, R., Tornell, A. and Westermann, F. (2008) 'Systemic crises & growth', *Quarterly Journal of Economics*, 123(1), pp. 359-406

[66] Rajan, R. G. and L. Zingales (1998), "Financial Dependence and Growth", American Economic Review, 88: 559-586

[67] Beck, T. and R. Levine (2002), "Industry Growth and Capital Allocation: Does Having a Market- or Bank-Based System Matter?", Journal of Financial Economics, 64: 147-180.

[68] Athanasoglou, P., Brissimis, S. and Delis, M. (2005) 'Bank specific, industry specific and macroeconomic determinants of bank profitability', *Journal of International Financial Markets, Institutions and Money*, 18(2), pp.121-136.

system. Bekaert, Harvey, and Lundblad employ average data of five year times, from 1991 to 1996 to analyse the finance-growth relationship. They concentrated on development rather than higher frequency correlations and reveal that financial liberalization intensifies growth of economy by enhancing the rate of investment and the resources allocation.[69] The thesis calculated or analysed the proportions over a five year period time between 2012 and 2017.

The thesis employ data from not only IMF and Basel to analyse the trend in banking structure or the level and direction of development of the UK and Indonesia banking system but also FSB to analyse the size of banking assets to total assets and other financial institutions (OFIs) to total financial assets. Cottrell described several types of wholesale funding, notably ratio of total deposits to total assets or ratio of customer deposits to liabilities.[70] Following Cottrell approach, the thesis illustrates the use of retail deposits and wholesale funding using proportion of total deposits to total assets (TDTA) as the measure of retail deposits that are used to fund total financial assets. TDTA is described as the sum or amount of retail deposits involving customer deposits scaled or divided by total financial assets based on the data of IMF. The possible use of wholesale funding is described as 100% minus TDTA. This highlights the direction or development of the UK and Indonesia banking structure through the use or dependence of funds from markets of wholesale funding. The higher TDTA, the bigger dependence on retail deposits and the less dependence on wholesale funding by bank institutions. The thesis also use data from Basel statistic, particularly loans and deposits (claim) and debt securities to analyse the direction of development of the UK and Indonesia banking system in the banking asset side.

Quality of asset is the proportion of NPL to total loans. The tier 1 capital proportion is provided by tier 1 capital divided by RWA. Leverage is calculated by a more commonly used measure (equity divided by total assets). Calculation of liquidity level in this study is merely concentrate on liquid assets to total assets and liquid assets to short term liabilities to reveal the asset liquid owned by the UK and Indonesia bank institutions. Profitability is calculated by proportions of ROE and ROA. The proportion of ROA denotes the capital bank intensity which is helpful in light of the discussion of whether more capital degree will benefit bank institutions. The proportion of ROE assesses the bank efficiency in producing or obtaining returns. A flaw of the proportion of ROE is that it does not consider debt into report or account. A bank

[69] Bekaert, G., C. R. Harvey and C. Lundblad (2004), "Does Financial Liberalization Spur Growth?", Journal of Financial Economics., 66, 465-504

[70] Cottrell, S.P., 2015. What Drive Bank Wholesale Funding Spreads? Empirical Evidence from Australia. Flinders University. P. 26-29.

institution can enhance its return on equity if it could issue debt at a lower rate of interest than the return rate on its investment. Nevertheless, higher debt enhances the possible failure threat for a bank institution. Therefore, the study consists of proportion of ROA in its data. Sinkey considers the proportions of ROE and ROA[71] as the best measurements of overall performance of bank institutions[72] even though the ROA proportion seems to be the primary proportion for calculating performance of bank institutions.[73] Measures are analysed or checked against either secondary works or data of market where likely to confirm or ensure sturdiness.

2.2. The importance of the banking and financial system to the economy

Growth of financial sector has been revealed to be greatly effective in fostering development of economy.[74] To improve frictions of market, financial systems affect the funding distribution across time and area or space.[75] The development of bank institutions which enhance the information acquisition about managers and corporations would certainly change the credit allocation.[76] Bekaert et al that employ data in five year average reveal that financial reform augments growth of economy by enhancing the funding allocation and the rate of investment.[77] The correlation between distribution of income and financial growth is also essential for grasping the process of economic growth. Distribution of income could affect decisions of savings, public policies, incentives to innovate and the funding allocation.[78]

D'Onofrio et al argue that growth of local banking institution minimize inequality of income but the connection of the finance and inequality exhibits itself merely in relatively advanced regions.[79] While growth of banking institutions has modest impacts throughout the growth of

[71] Sinkey, J. J. F. (2002) *Commercial Bank Financial Management,* Englewood Cliffs, N.J.: Prentice-Hall.

[72] Ho, C. T. and Wu, S. (2006) 'Benchmarking Performance Indicators for Banks', *Benchmarking*, 13(1), pp. 147-159

[73] Sundararajan, V., Enoch, C., San José, A., Hilbers, P., Krueger, R., Moretti, M. and Slack, G. (2002) *Financial Soundness Indicators: Analytical Aspects and Country Practices* Washington, D.C: International Monetary Fund.

[74] Levine, R., 2004. Finance and growth: theory and evidence. In Aghion, P., Durlauf, S. N., Handbook of Economic Growth (Eds.), Volume 1A, Amsterdam, Elsevier North Holland, 865—934.

[75] Merton, R. C. and Z. Bodie (1995), "A Conceptual Framework for Analyzing the Financial Environment", In: the Global Financial System: A Functional Perspective, Eds: D. B. Crane, et al., Boston, MA: Harvard Business School Press: p.12.

[76] Levine, R. 2004. Finance and Growth: Theory and evidence. NBER Working Paper Series. P. 5.

[77] Bekaert, G., C. R. Harvey and C. Lundblad (2004), "Does Financial Liberalization Spur Growth?", Journal of Financial Economics., 66, 465-504

[78] Bagchi, S., Svejnar, J., 2015. Does wealth inequality matter for growth? The effect of billionaire wealth, income distribution, and poverty. Journal of Comparative Economics 43, 505—530.
Aghion, P., M. Dewatripont, and P. Rey (1999), "Competition, Financial Discipline and Growth", Review of Economic Studies, 66: 825-852

[79] D'Onofrio, A., Minetti, R., and Murro, P., 2016, Banking Development, socioeconomic structure and income inequality. Journal of Economic Behavior & Organization, p.1

human capital and material infrastructures, they reveal evidence that growth of banking institutions could lower inequality by influencing urbanization and geographical movement. Once they also insert the indicators of material infrastructures and human capital to the data, the impact of banking growth on inequality remains basically unchanged. Conversely, once they manage for the indicators of urbanization and geographical movement, these indicators are likely to mitigate or cover the impact of banking growth on inequality. Generally, the outcomes propose that geographical movement and urbanization might create two essential channels throughout that growth of banking institutions influences the distribution of income.[80]

Furthermore, some researches reveal that financial growth could decrease poverty and inequality of income by mitigating asymmetries of information and cost of credit enforcement that might be remarkably necessary on not only poor households but also businesspersons with inadequate collateral and internal resources.[81] The theoretic patterns highlight dissimilar channels whereby financial growth could decrease disparity or inequality.[82] Once the poor households have lack of access to loan or credit, they are averted from spending on education and thus, from getting more lucrative or remunerative works. Financial growth might allow the poor to spend on education, and hence minimizing inequality.[83] Another channel concentrates on the poor capability to become businesspersons or entrepreneurs. By improving constrains of loan, financial growth might abate requirements of collateral and cost of borrowing, and might foster formation of company and entrepreneurship.[84] Financial growth might also change the income allocation via a rise in demand of labor by companies rather than via a rise in access to loan by the poor households.[85] The rise in demand of labor might benefit low salary employees.

Growth of banking institutions could decrease inequality of income throughout several channels. Several empirical sources have particularly focused on instruments, notably formation of company, entrepreneurship, and demand of labor.[86] Conversely, there are very restricted evidence on the implications that financial growth could possess on inequality of

[80] D'Onofrio, A., Minetti, R., and Murro, P., 2016, Banking Development, socioeconomic structure and income inequality. Journal of Economic Behavior & Organization, p. 1
[81] D'Onofrio, A., Minetti, R., and Murro, P., 2016, Banking Development, socioeconomic structure and income inequality. Journal of Economic Behavior & Organization, p.3-4
[82] Aghion P., Bolton P., 1992. Distribution and growth in models of imperfect capital markets. European Economic Review 36, 603—611.
[83] Galor, O., Moav, O., 2004. From physical to human capital accumulation: Inequality and the process of development. The Review of Economic Studies 71, 1001—1026.
[84] Banerjee, A.V., Newman, A.F., 1993. Occupational choice and the process of development. Journal of Political Economy 101, 274—298.
[85] Beck, T., Levine, R., Levkov, A., 2010. Big bad banks? The winners and losers from bank deregulation in the United States. The Journal of Finance 65, 1637—1667.
[86] Beck, T., Levine, R., Levkov, A., 2010. Big bad banks? The winners and losers from bank deregulation in the United States. The Journal of Finance 65, 1637—1667.

income throughout its effect on the socio economic framework. Yet, several researchers contend that essential aspects, notably education, infrastructure, urbanization and migration could play a primary role in allocation of income.[87]

a. Unraveling the channels

The available loan could affect capability of agents to buy properties and land and move or shift across geographical regions, and thus influencing diffusions of migration and urban flow. Growth of banking institutions could also allow to fund or support immaterial and material infrastructures which could assist to smooth out or ease inequalities, notably by supporting better approach or access to chances of investment for the poor households. Further, a more growth of local banking segment could enhance capability of agents to develop human capital, assisting them to fund the education costs and making availability of funds to support the school improvement and development.

b. Urban arrangement and migratory flows

The literature expects that urbanization and flow of migration could possess a considerable effects on inequality within local societies. According to the urban arrangement, several researches submit that a more diffusion of urbanization and a reduced concentration in large towns could assist to decrease inequality of income.[88] This will arise as big towns are more favorable to segmentation, highly selective productive businessperson, change of skill biased technology, and might then worsen inequality throughout these channels. For instance, Behrens and Nicoud improve a pattern that towns make improvement of productivity throughout economic accumulation. They reveal that this could support formation of company and highly selective productive businesspersons, aggravating inequality.[89] Regarding these contentions, there is an expectation that a more diffusion of urban structure could better minimize inequalities within the regions or provinces. The net implication of migratory flows on inequality of income is uncertain a priori.[90] Flow of migration might aggravate inequality in local societies as the influx of relatively poor households or immigrants is likely to broaden the allocation of income. At the same time, regions with a bigger immigrant outflow could undergo

[87] D'Onofrio, A., Minetti, R., and Murro, P., 2016, Banking Development, socioeconomic structure and income inequality. Journal of Economic Behavior & Organization, p.1-20 Calderon C., Serven, L., 2004. The effects of infrastructure development on growth and income distribution. World Bank Policy Research Working Paper 3400.
[88] D'Onofrio, A., Minetti, R., and Murro, P., 2016, Banking Development, socioeconomic structure and income inequality. Journal of Economic Behavior & Organization, 73. Behrens, K., Robert-Nicoud, F., 2014a. Survival of the fittest in cities: Urbanisation and inequality. The Economic Journal 124, 1371—1400.
[89] Behrens, K., Robert-Nicoud, F., 2014a. Survival of the fittest in cities: Urbanisation and inequality. The Economic Journal 124, 1371—1400
[90] Blau, F., Kahn, L., 2015. Immigration and the distribution of incomes. In: Chiswick, B. R., Miller P. W. (Eds.), Handbook of the Economics of International Migration. Elsevier, Amsterdam, 793—843.

a rise or a decline in inequality due to transfers from their rich or poor immigrants.[91] D'Onofrio et al reveal that migratory flow into the primary town of the region is likely to enhance inequality and growth of banking development might assist to minimize inequality by supporting a more diffusion of urban structure.[92]

c. Human capital and infrastructure

Material infrastructures could decrease inequalities by smoothing out the access to valuable chances by the poor individuals.[93] D'Onofrio et al revealed that higher education in the region seems to be correlated with lower inequality of income.[94] They also investigated the channels of banking growth effect on inequalities, with importance on socioeconomic facets. They considered the effect of formation of human capital, geographic movement, urbanization, education, and material and immaterial infrastructures. The outcome submit that geographic movement and urbanization might play a relatively significant role in the correlation of inequality and finance. Indeed, the analysis submit restricted effect of education and material infrastructures in the relationship of inequality and finance. They contend that these outcomes could mirror the major role performed by the Country relative to banking segment in supporting the growth of education scheme and infrastructures. [95]

In relation to function or role of financial function, Merton and Bodie provide several classifications of financial function[96] but Levine contend that there are five categories of financial system which are useful in classifying a review of the theoretical work including producing ex ante information about potential investments and allocating capital, exerting corporate governance after supplying credit and monitoring investments, facilitating risk management and diversification, pooling and mobilizing deposits or savings, and easing the exchange of services and goods.[97]

[91] D'Onofrio, A., Minetti, R., and Murro, P., 2016, Banking Development, socioeconomic structure and income inequality. Journal of Economic Behavior & Organization, p. 16-18
[92] D'Onofrio, A., Minetti, R., and Murro, P., 2016, Banking Development, socioeconomic structure and income inequality. Journal of Economic Behavior & Organization, p. 16-18
[93] Lopez, H., 2003. Macroeconomics and inequality. World Bank Working Paper, Washington D.C.
[94] D'Onofrio, A., Minetti, R., and Murro, P., 2016, Banking Development, socioeconomic structure and income inequality. Journal of Economic Behavior & Organization, p.18-19
[95] D'Onofrio, A., Minetti, R., and Murro, P., 2016, Banking Development, socioeconomic structure and income inequality. Journal of Economic Behavior & Organization, p.18-19
[96] Merton, R. C. and Z. Bodie (2004), "The Design of Financial Systems: Towards a Synthesis of Function and Structure", National Bureau of Economic Research Working Paper Number 10620.
[97] Levine, R., 2004. Finance and growth: theory and evidence. In Aghion, P., Durlauf, S. N., Handbook of Economic Growth (Eds.), Volume 1A, Amsterdam, Elsevier North Holland, P. 5.

Firstly, it produces ex ante information about potential investments and distributes capital. Evaluating conditions of market, managers, and companies before making decisions of investment generally need large costs. Individual investors or savers might not possess the capability to gather, manage and generate information on potential investments. High costs of information might maintain capital to flow toward its use of highest value as they would be unwilling to engage in activities or businesses which have little reliable data or information. Therefore, although several approaches presume that capital is distributed to the most profitable companies, this assumes that savers possess good information about conditions of market, managers and companies.[98]

Financial intermediary institutions might lower the expense of processing and acquiring data or information and thereby enhance allocation of funds.[99] Without them, each individual saver or investor will face big cost relating to assessing conditions of economy, managers and companies. As a result, groups or companies might establish financial intermediary institutions which engage in the costly procedure of likelihoods of researching investment for others.[100] Financial intermediary institutions resemble bank institutions which they receive deposit and supply credits.[101] Several researchers also develop approaches where financial intermediary institutions occur to generate information on companies and offer this information to either investorss or savers.[102] By developing information on conditions of economy, managers and companies, financial intermediary institution could speed up development of economy. Supposing that several businesspersons or entrepreneurs seek capital and that resources are limited or inadequate, financial intermediary institutions which generate better information on companies would finance more favorable companies and produce a more efficient capital distribution.[103]

Secondly, it pools and mobilizes deposits or savings. Mobilizing savings or pooling of deposits is the costly method of collecting funds from dissimilar depositors or investors for investment. It includes (a) handling the informational asymmetries relating to make investors

[98] Bagehot, W. (1873), Lombard Street, Homewood, IL: Richard D. Irwin, (1962 Edition). p. 53

[99] Boyd, J. H. and E. C. Prescott (1986), "Financial Intermediary-Coalitions", Journal of Economics Theory, 38: 211-232.

[100] Boyd, J. H. and E. C. Prescott (1986), "Financial Intermediary-Coalitions", Journal of Economics Theory, 38: 211-232.

[101] Boyd, J. H. and E. C. Prescott (1986), "Financial Intermediary-Coalitions", Journal of Economics Theory, 38: 211-232.

[102] Levine, R., 2004. Finance and growth: theory and evidence. In Aghion, P., Durlauf, S. N., Handbook of Economic Growth (Eds.), Volume 1A, Amsterdam, Elsevier North Holland, p.7-10

[103] Greenwood, J. and B. Jovanovic (1990), "Financial Development, Growth, and the Distribution of Income", Journal of Political Economy, 98: 1076-1107.

or depositors feel secure and comfortable in relinquishing handling of their deposits and (b) handling the costs of transaction relating to agglomerating deposits or funds from dissimilar depositors or individuals.[104]

To saving or minimizing the costs relating to various bilateral agreements, mobilizing savings or pooling of deposits might also arise throughout intermediary institutions, where thousands of depositors delegate or trust their wealth to intermediary institutions which supply credits or invest in many companies.[105] Poolers have to assure depositors of the soundness and safety of funds and investments.[106] Intermediary institutions might be concerned with building stellar repute, so that depositors feel secure and comfortable about trusting or delegating their deposits or funds to the intermediary institutions.[107]

Banking system which are not ineffective at mobilizing the funds of depositors could greatly influence growth of economy by enhancing deposits, developing level of economy, and addressing indivisibilities of investment. Better pooling of deposits could enhance allocation of funds and augment innovation of technology. Without accessing various savers, several methods of production will be restricted to inexpensively inefficient degrees.[108] Moreover, pooling of deposits commonly includes the formation of small denomination devices. These devices give chances for households to maintain diversification of portfolios.[109] Acemoglu and Zilibotti reveal that with big, inseparable scheme, financial plans which pools deposits from various dissimilar individuals or depositors and supply funds to or invest in a diversified risky project portfolio ease a fund distribution toward higher return businesses with positive effects on development of economy.[110]

Thirdly, it eases the trade or exchange of service and goods. Financial plans which decrease costs of transaction could encourage innovation of technology, specialization, and

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[104] Levine, R., 2004. Finance and growth: theory and evidence. In Aghion, P., Durlauf, S. N., Handbook of Economic Growth (Eds.), Volume 1A, Amsterdam, Elsevier North Holland,. P. 5.

[105] Sirri, E. R. and P. Tufano (1995),"The Economics of Pooling", In: The Global Financial System: A Functional Approach, Eds: D. B. Crane, et al., Boston, MA: Harvard Business School Press: 81-128.

[106] Sirri, E. R. and P. Tufano (1995),"The Economics of Pooling", In: The Global Financial System: A Functional Approach, Eds: D. B. Crane, et al., Boston, MA: Harvard Business School Press: 81-128.

[107] Lamoreaux, N. (1995), Insider Lending: Banks, Personal Connections, and Economic Development in Industrial New England, New York: Cambridge University Press.

[108] Sirri, E. R. and P. Tufano (1995),"The Economics of Pooling", In: The Global Financial System: A Functional Approach, Eds: D. B. Crane, et al., Boston, MA: Harvard Business School Press: 81-128.

[109] Sirri, E. R. and P. Tufano (1995),"The Economics of Pooling", In: The Global Financial System: A Functional Approach, Eds: D. B. Crane, et al., Boston, MA: Harvard Business School Press: 81-128.

[110] Acemoglu, D. and F. Zilibotti (1997), "Was Prometheus Unbound by Chance? Risk, Diversification, and Growth", Journal of Political Economy, 105

development. The connection between innovation, specialization facilitating transaction and development of economy were main aspects of Adam Smith's Nation Wealth.[111] He contended that type of specialization, workers is the main facet underlying enhancements of productivity. With bigger specialization, employees are more possible to create or invent better devices or methods of production.[112] He also concentrated on the capital role in decreasing costs of transaction, allowing bigger specialization, and promoting innovation of technology.[113] Nevertheless, costs of information might also stimulate the appearance of funds. Because it is expensive to assess the goods attributes, better trade or exchange is very expensive. Therefore, an easily recognizable trade medium might occur to ease trade or exchange.[114] Nevertheless, the decrease in costs of information and transaction is not essentially a one time reduction when economies shift to funds. Costs of information and transaction might continue to decrease throughout financial invention or innovation.

Greenwood and Smith showed the link between innovation, specialism and exchange.[115] More specialism needs more businesses or transactions. Because each business is expensive, financial plans which decrease costs of transaction would ease greater specialism. In this approach, markets which stimulate exchange support improvements of productivity. There might also be response from these improvement of productivity to growth of financial market. If fixed costs arise relating to building markets, higher earning indicate that these fixed expenses are less onerous as a per capita income share. Therefore, growth of economy could encourage the financial markets growth.[116] However, in the model of Greenwood and Smith, the decrease in costs of transaction does not encourage the new innovation and better technologies of production. Instead, lower costs of transaction increase the set of processes or methods of 'on the shelf' production which are inexpensively interesting.[117] Furthermore, the approach describe better markets as a method or system for encouraging more specialized

[111] Smith, A. (1776), An Inquiry into the Nature and Causes of the Wealth of Nations, London: W. Stahan & T. Cadell.
[112] Smith, A. (1776), An Inquiry into the Nature and Causes of the Wealth of Nations, London: W. Stahan & T. Cadell.
[113] Wright, R.E. (2002), The Wealth of Nations Rediscovered: Integration and Expansion in American Financial Markets, 1780-1850, Cambridge, UK: Cambridge University Press.
Smith, A. (1776), An Inquiry into the Nature and Causes of the Wealth of Nations, London: W. Stahan & T. Cadell.
[114] Williamson, S. D. and R. Wright (1994), "Barter and Monetary Exchange under Private Information", American Economic Review, 84: 104-123.
[115] Greenwood, J. and B. Smith (1996), "Financial Markets in Development, and the Development of Financial Markets", Journal of Economic Dynamics and Control, 21: 145-181.
[116] Greenwood, J. and B. Smith (1996), "Financial Markets in Development, and the Development of Financial Markets", Journal of Economic Dynamics and Control, 21: 145-181.
[117] Greenwood, J. and B. Smith (1996), "Financial Markets in Development, and the Development of Financial Markets", Journal of Economic Dynamics and Control, 21: 145-181.

procedures of production. This does not describe the appearance of financial institution or devices which decrease costs of transactions and thereby generate a condition which encourage specialized technologies of production naturally.[118]

Furthermore, it scrutinizes investments and exerts corporate governance after supplying credit. Corporate governance is important to grasp development of economy and the function of financial aspects in particular. The extent to which the capital funders to a company could effectively scrutinize and affect how companies employ that capital possesses effects on savings and decisions of distributions.[119] To the degree that investors and shareholders effectively scrutinize companies and encourage directors to boost value of company, this would enhance the effectiveness with which companies distribute funds and induce creditors more willing to fund improvement, innovation and production. The lack of financial plans which improve corporate governance might slow down the saving mobilizations from different agents and maintain funds from flowing to lucrative investing or investments. Therefore, the effective mechanism of corporate governance directly influence performance of company with possibly big effects on rates of national development. [120]

In terms of intermediary institutions, Diamond improves an approach in which a bank institution enhance corporate governance.[121] It gathers the savings of many creditors and supply these funds to companies. This 'delegated monitoring' decreases or saves on aggregate costs of monitoring and removes the free rider difficulty as the bank institution performs the monitoring for all the savers. In addition, as bank institutions and companies build and maintain long run relations, this could further decrease costs of information acquisition.[122]

In terms of growth of economy, a number of patterns reveal that well-functioning banking institutions affect development by enhancing corporate governance. Bencivenga and Smith reveal that financial intermediary institutions that enhance corporate governance by decreasing or saving on costs of monitoring would lower rationing of credit and thereby enhance efficiency

[118] Levine, R., 2004. Finance and growth: theory and evidence. In Aghion, P., Durlauf, S. N., Handbook of Economic Growth (Eds.), Volume 1A, Amsterdam, Elsevier North Holland, p.25

[119] Myers, S. C., and N. Majluf (1984), "Corporate Financing and Investment Decisions when Firms Have Information that Investors Do Not Have", Journal of Financial Economics, 13: 187-221. Levine, R., 2004. Finance and growth: theory and evidence. In Aghion, P., Durlauf, S. N., Handbook of Economic Growth (Eds.), Volume 1A, Amsterdam, Elsevier North Holland, p.10-15.

[120] Stiglitz, J. and A. Weiss (1983), "Incentive Effects of Terminations: Applications to Credit and Labor Markets", American Economic Review, 73(5): 912-927.

[121] Diamond, D. W. (1984), "Financial Intermediation and Delegated Monitoring", Review of Economic Studies, 51: 393-414.

[122] Diamond, D. W. (1984), "Financial Intermediation and Delegated Monitoring", Review of Economic Studies, 51: 393-414.

or production, accumulation of capital and development.[123] Harrison, Sussman and Zeira improve approaches where financial intermediary institutions facilitate the funding flows from creditors to investors in the existence of informational asymmetries with positive impacts of development.[124] Concentrating on innovative business, De La Fuente and Marin evolve an approach in which financial intermediary institutions appears to perform the mainly expensive method of monitoring innovative businesses.[125] This develops distribution of credits among competing technology makers with positive effects on development of economy.

Finally, it facilitates risk management and diversification. Theory of traditional finance concentrates on cross sectional risk diversification.[126] Banking system might minimize the threats relating to companies, states, regions, industries and individual projects. Securities markets, mutual funds and banking institutions give instruments or intermediary for risk diversification, pooling and trading. The ability of banking system to give service of diversifying risk could influence long run development of economy by changing distribution of funds and rates of saving. Therefore, financial markets that make people easier to spread threat might tend to encourage or manage a shift of portfolio towards businesses with higher expected profits or returns.[127]

Acemoglu and Zilibotti prudently demonstrate the relationships between diversification of cross sectional risk and development. They suppose that (i) there are safe ventures or projects that might provide lower profit, (ii) risky ventures or projects are often inseparable and need a big initial funds or investments, (iii) capital is inadequate, and (iv) people do not like threat. In the lack of financial plans which allow agents to maintain diversification of portfolios, agents would prevent risky ventures or projects which generate the high return as they need agents to participate excessively in risky activities. They reveal that banking system which allow agents to maintain diversification of risky projects portfolio promote a saving reallocation toward projects which generate high return with positive ramification on development.[128]

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[123] Bencivenga, V. R. and B. D. Smith (1993), "Some Consequences of Credit Rationing in an Endogenous Growth Model", Journal of Economic Dynamics and Control, 17: 97-122.

[124] Harrison, P., O. Sussman and J. Zeira (1999), "Finance and Growth: Theory and Evidence", Washington, DC: Federal Reserve Board (Division of Research and Statistics), mimeo.

[125] De la Fuente, A. and J. M. Marin (1996), "Innovation, Bank Monitoring, and Endogenous Financial Development", Journal of Monetary Economics, 38: 269-301.

[126] Levine, R., 2004. Finance and growth: theory and evidence. In Aghion, P., Durlauf, S. N., Handbook of Economic Growth (Eds.), Volume 1A, Amsterdam, Elsevier North Holland, 15-21

[127] Obstfeld, M. (1994), "Risk-Taking, Global Diversification, and Growth", American Economic Review, 84: 1310-1329.

[128] Acemoglu, D. and F. Zilibotti (1997), "Was Prometheus Unbound by Chance? Risk, Diversification, and Growth", Journal of Political Economy, 105: 709-775.

Furthermore, banking system enhance sharing of intertemporal risk. In considering the link between sharing of cross sectional risk and development, theory tend to concentrate on the market role, rather than intermediary institution.[129] Nevertheless, in considering sharing of intertemporal risk, it has concentrated on the beneficial intermediary role in facilitating or easing smoothing of intertemporal risk.[130] Threats which could not be diversified at specific time, notably macroeconomic distress, could be varied or diversified through groups or generations. Long lived intermediary institutions could ease sharing of intergenerational threat by making investment with a long run prospect and generating profits or returns which are relatively high in slack periods and low in boom periods. Although this kind of risk distribution is not theoretically unlikely with markets, intermediary institution might enhance the possibility of intertemporal threat distribution by decreasing contracting expenses or costs.[131]

Financial intermediary institutions might also augment liquidity, lower risk of liquidity and affect growth of economy. Model of Diamond and Dybvig's presumes it is excessively expensive to monitor and examine distress to individuals, so it is not possible to write inducement or incentive compatible agreements of nation-contingent insurance.[132] Under these circumstances, financial intermediary institutions could offer or provide liquid funds to investors or creditors and provide demand deposits and a combination of illiquid and liquid investments. By selecting a suitable combination of illiquid and liquid investments and providing demand deposits, financial intermediary institution give comprehensive insurance to depositors or investors against risk of liquidity while concurrently easing or smoothing long run venture in high return schemes or projects.[133] Turning back to development, Bencivenga and Smith assess a development approach in which pre current obstacle or impediments to the appearance of liquid markets emphasize the liquidity improving role of financial intermediary institutions. They reveal that by decreasing risk of liquidity, financial intermediary institutions could augment investment in the illiquid assets, high return schemes and thus speed up development.[134]

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[129] Levine, R., 2004. Finance and growth: theory and evidence. In Aghion, P., Durlauf, S. N., Handbook of Economic Growth (Eds.), Volume 1A, Amsterdam, Elsevier North Holland, p. 16.

[130] Allen, F. and D. Gale (1997), "Financial Markets, Intermediaries, and Intertemporal Smoothing", Journal of Political Economy, 105: 523-546.

[131] Levine, Ross. 2004. Finance and Growth: Theory and Evidence. NBER Working Paper Series. National Bureau of Economic Research. Cambridge. 15-21.

[132] Diamond, D. W. and P. H. Dybvig (1983), "Bank Runs, Deposit Insurance, and Liquidity", Journal of Political Economy, 91: 401-419.

[133] Levine, Ross. 2004. Finance and Growth: Theory and Evidence. NBER Working Paper Series. National Bureau of Economic Research. Cambridge. P. 15-21.

[134] Bencivenga, V. R. and B. D. Smith (1991), "Financial Intermediation and Endogenous Growth", Review of Economics Studies, 58: 195-209.

Some kinds of alternative lending or finance, notably cryptocurrency, lending of peer to peer (P2P), and crowdfunding led disruption of several familiar model of banking services globally.[135] These alternative finances reveal particular essential feature: they try to evade control of supervisory body or government or any other external regulator over transaction, they try to remove traditional activities of banking institutions from providing credits or financing transactions, and their activities are systemized or managed around the utilization of advanced technologies for sharing, distribution and processing information.[136]

Crowdfunding signifies raising resources from big number of individual savers, characteristically by employing either platforms of particular resources or online social systems.[137] Lending of P2P is basically debt crowdfunding. It tries to decrease the unsecured borrowing expenses by removing the need for a commercial intermediary services or any other lender institutions.[138] By employing cutting-edge technology to not only underwrite credits promptly but also process information and at low expense, its sites might be able to match individual debtors and creditors efficiently.[139]

Two facets are essential in the dynamic of development toward a more reintegration or integration of alternative lending (P2P) model into conventional banking system. The first aspect is the dominance of institutional creditors as purchasers of these credits. In the currently existing environment of low interest rate, large savers looking for return - financial intermediary institutions or private equity funds – have become the primary purchasers of products of marketplace credit that largely provide higher interest rates than traditional credits supplied by bank institutions.[140] Several these investments are leverage with financial intermediary institution offering credit or financing for savers in marketplace credits.[141] The entrance of institutional savers enhance competition in the segment and makes marketplace lending companies to develop their volume of credit origination, to make diversification of their credit products, and to make consolidation or to consolidate.[142] The familiar securitization dynamic might be being recapitulated in the growth of P2P model. Marketplace creditors are

[135] Hockett, R. C., and Omarova, S.T., (2017) The Finance Franchise. 102 Cornell L. Rev. 1143, 1201
[136] Hockett, R. C., and Omarova, S.T., (2017) The Finance Franchise. 102 Cornell L. Rev. 1143, 1202
[137] Joan MacLeod Heminway & Shelden Ryan Hoffman, *Proceed at Your Peril: Crowdfunding and the Securities Act of 1933*, 78 TENN. L. REV. 879, 881 (2011).
[138] Hockett, R. C., and Omarova, S.T., (2017) The Finance Franchise. 102 Cornell L. Rev. 1143, 1203
[139] Hockett, R. C., and Omarova, S.T., (2017) The Finance Franchise. 102 Cornell L. Rev. 1143, 1203
[140] Todd Baker, *Marketplace Lenders Are a Systemic Risk*, AM. BANKER (Aug. 17, 2015), https://www.americanbanker.com/opinion/marketplace-lenders-are-a-systemic-risk [https://perma.cc/EQ6H-BNQ3]
[141] Kevin Wack et al., *Innovation of the Year: Online Marketplace Lending*, AM. BANKER (Dec. 17, 2014), https://www.americanbanker.com/news/innovation-of-the-year-online-marketplace-lending [https://perma.cc/KLS5-AU54]
[142] Kevin Wack et al., *Innovation of the Year: Online Marketplace Lending*, AM. BANKER (Dec. 17, 2014),

vigorously developing partnership with financial intermediary institutions and other institutional savers, pursuant to which financial intermediary institutions and other savers committing to purchase a particular proportion of whole credit origination throughout the platform of marketplace.[143] To meet demand of institutional savers for this categories of lucrative asset, marketplace creditor are driven to strengthen their efforts of borrower acquisition, that make incentives to offer more high risk credits.[144]

The second aspect is the significant role of financial intermediary institutions as creator or originators of marketplace credits. The dominant platforms of P2P finance depend on insured financial intermediary institutions for three essential role: (1) keeping a separate account of deposit into which the platform deposits payment obtained from debtors; (2) financing credits by crediting each bank account of individual debtors in the full credit amount; and (3) receiving and gathering deposits from individual creditor that commit to finance particular credit displayed on the platform.[145] Financial intermediary institutions obtain fees for playing these roles.[146] After a short time of keeping the credit on its own balance sheet, the financial intermediary institution trade the credit to the operator of marketplace platform that then delivers to each individual creditor or issues a note that represents such right of individual creditor to obtain a proportional part of all interest payments and principal obtained from the debtor.[147] The short P2P description reveal the aspects at which marketplace creditors straightforwardly tap into the financial intermediary system. The funds apparently flows throughout insured financial intermediary institutions.[148] By connecting to financial intermediary institutions, platforms of marketplace lending obtain access to considerably lower funding cost without becoming subject to provision of financial intermediary institutions.

Another alternative finance is cryptocurrencies. It might initially emerge to harm the core of banking institutions, loans as the basis of funds and the significance of full trust of the sovereign

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[143] Mike Cagney, *How Marketplace Lenders Will Save Financial Services*, AM. BANKER (Aug. 19, 2015), https://www.americanbanker.com/opinion/how-marketplace-lenders-will-save-financial-services [https://perma.cc/4JWC-44CU]

[144] Todd Baker, *Marketplace Lenders Are a Systemic Risk*, AM. BANKER (Aug. 17, 2015), https://www.americanbanker.com/opinion/marketplace-lenders-are-a-systemic-risk [https://perma.cc/EQ6H-BNQ3]

[145] Chapman and Cutler LLP, The Regulation Of Marketplace Lending: A Summary Of The Principal Issues (2015 UPDATE) 2–3 (April 2015) http://docplayer.net/2792024-The-regulation-of-marketplace-lending-a-summary-of-theprincipal-issues-2015-update-april-2015.html [https://perma.cc/8RUE-FNTP]

[146] Hockett, R. C., and Omarova, S.T., (2017) The Finance Franchise. 102 Cornell L. Rev. 1143, 1201-1211

[147] Chapman and Cutler LLP, The Regulation Of Marketplace Lending: A Summary Of The Principal Issues (2015 UPDATE) 2–3 (April 2015) 2–3 (April 2015) http://docplayer.net/2792024-The-regulation-of-marketplace-lending-a-summary-of-theprincipal-issues-2015-update-april-2015.html [https://perma.cc/8RUE-FNTP]

[148] Hockett, R. C., and Omarova, S.T., (2017) The Finance Franchise. 102 Cornell L. Rev. 1143, 1203-1208

public. It is a decentralized virtual money which work throughout a P2P computer system, called nodes.[149] It allows the application of bitcoins, data bits or tokens of electronic, as a methods of trade and payment like regular moneys.[150] Nevertheless, unlike such moneys, its formation and utilization are not managed or supervised by any single private organization or any country or is not backed by any sovereign.[151] It is an innovative technology of blockchain which enable each transaction recording and verification within network in a publicly distributed account book.[152] Since the public account book could not be changed, its users require not full faith in the system itself.[153] It is stored or kept in digital wallets but the real transacting party identities are maintain confidential and secret.[154] It might be either mined by resolving the encrypted transactions which are intensified the blockchain continuously or purchased with conventional currency.[155] It is also a commodity or product which could be purchased, trade and sold for conventional currency.[156]

2.3.Structure of the Banking System between the UK and Indonesia

2.3.1. Foreign Bank

Several researches concentrated on not only the possible advantages but also the effect of foreign bank institutions entry on domestic market.[157] Foreign bank institutions could possess effect of either destabilizing or stabilizing on the host banking industry, relying on the distress nature. If distress is domestic geographically, then they could play a stabilizing role due to their access to not only capital but also liquidity from their parents.[158] Furthermore, they are normally more varied than domestic bank institutions, and therefore, ought to be less influenced by domestic distress.[159] Nevertheless, at the same time, they could import distress from overseas, either from other states or their home state. This sequentially could provide destabilizing effect on the host banking system. Likewise, by enhancing competition in the domestic industry, the existence of foreign bank institutions could possibly augment distress or volatility by pushing

[149] Pedro Franco, Understanding Bitcoin: Cryptography, Engineering, and Economics 4, 110-11 (2015)
[150] Jose Pagliery, Bitcoin and The Future of Money 6 (2014)
[151] Pedro Franco, Understanding Bitcoin: Cryptography, Engineering, and Economics 4, 1101-11, p.3 (2015)
[152] Pedro Franco, Understanding Bitcoin: Cryptography, Engineering, and Economics 4, 110-11, p.15 (2015).
[153] Pedro Franco, Understanding Bitcoin: Cryptography, Engineering, and Economics 4, 110-11, p.8-9 (2015)
[154] Rainer B¨ ohme et al., *Bitcoin: Economics, Technology, and Governance*, 29 J. Econ. Persp. 213, 220–21 (2015)
[155] Hockett, R. C., and Omarova, S.T., (2017) The Finance Franchise. 102 Cornell L. Rev. 1143, 1208-1211
[156] Rainer B¨ ohme et al., *Bitcoin: Economics, Technology, and Governance*, 29 J. Econ. Persp. 213, 220–21 (2015)
[157] Haas R, Lelyveld I, 2005, Foreign banks and credit stability in central and eastern Europe. A panel data analysis. Journal of Banking and Finance
[158] Cull, R., Peria, M.S.M., and verrier, J. (2017) Bank Ownership: Trend and Implications. IMF Working Paper WP/17/60, p.18
[159] Cull, R., Peria, M.S.M., and verrier, J. (2017) Bank Ownership: Trend and Implications. IMF Working Paper WP/17/60, p.18

domestic bank institutions to either out of business wholly or riskier sectors.[160] Barth et al contend that barriers to entry of foreign bank institutions are positively relating to fragility of bank institution.[161] Morgan and Strahan reveal a positive relationship between instability of economy and presence of foreign bank institutions.[162] The author's outcomes are encouraged by the data of Basel and IMF of 2014 and 2016. The UK had foreign bank's segments of domestic banking sector, share of total assets, approximately 48,2% in 2014 and 50,4% in 2016 based on data from Basel[163] whereas Indonesia had around 21,28% in 2014 and 29,31% in 2016 of foreign bank's segment of domestic banking sector over the same period regarding data from IMF[164]. Monitoring closely the growth and activity of foreign banks by supervisory bodies is thus significant to protect the domestic banking system.

2.3.2. Size of Banking System and Other Financial Institutions (OFIs)

Table 2.3.2.1

Country	Variable (in USD Trillion)	2012	2013	2014	2015	2016	2017	average 5 years percentage
Indonesia	Total bank asset	0,31	0,36	0,41	0,45	0,49	0,54	
	total OFIs	0,05	0,06	0,06	0,06	0,07	0,09	
	Total Financial assets	0,5	0,6	0,7	0,7	0,8	0,9	
	Ratio of Total Banking Assets to total financial assets	62%	60%	59%	64%	61%	60%	61%
	Growth of ratio of total banking assets to total financial assets		-2%	-1,43%	5,71%	-3,04%	-1,25%	-0,40%
	Ratio of total OFIs to total financial assets	10%	10%	9%	9%	9%	10%	9%
	Growth of ratio of total OFIs to total financial assets		0%	-1,43%	0%	0,18%	1,25%	0%

[160] Cull, R., Peria, M.S.M., and verrier, J. (2017) Bank Ownership: Trend and Implications. IMF Working Paper WP/17/60, p.18

[161] Barth, J., Caprio, G. and Levine, R., eds. (2006) *Rethinking Bank Regulation: till angels govern*, New York: Cambridge University Press., 205–248

[162] Morgan D, Strahan PE (2004) Foreign bank entry and business volatility: Evidence from U.S. states and other countries. In: L.A. Ahumada and J.R. Fuentes, Editors, Banking Market Structure and Monetary Policy, Central Bank of Chile, Santiago, 241–269

[163] BCBS. 2018. Structural changes in Banking after the crisis. CGFS Papers No. 60.

[164] IMF. 2016. Table Annex 1. Institutional Coverage for Deposit Takers and OFCs. Data IMF. https://data.imf.org/regular.aspx?key=61405094

The UK	Total bank asset	16,88	14,78	14,8	13,45	15,16	14,67	
	total OFIs	8,8	8,69	9,04	7,81	9,44	10,06	
	Total Financial assets	30,8	28,8	29,5	27	30,9	31,4	
	Total Banking Assets	54,81%	51,32%	50,17%	49,81%	49,06%	46,72%	50%
	Growth of ratio of total banking assets to total financial assets		-3,49%	-1,15%	-0,35%	-0,75%	-2,34%	-1,62%
	Total OFIs	28,57%	30,17%	30,64%	28,93%	30,55%	32,04%	30%
	Growth of ratio of total OFIs to total financial assets		1,60%	0,47%	-1,72%	1,62%	1,49%	0,69%

Source : FSB data.[165]

The percentages of total banking assets to total financial assets between the UK and Indonesia on average 5 years were around 61% in Indonesia and 50% in the UK but they have big different proportions of total OFIs to total financial assets, approximately 9% in Indonesia and 30% in the UK. According to data provided by the FSB, the average growth of banking assets and OFIs to total financial assets was approximately -0,40% and 0% compared to the UK, around -1,62% of banking assets and 0,69% of OFIs respectively. The segment of banking system of total financial assets reduced in the UK and Indonesia that indicates slower growth of banking system together with rised competition from other channels of financial intermediation. It is important to note that overall, the UK and Indonesia banking system had a negative growth of total banking assets to total financial assets and the UK OFIs was a positive growth of OFIs to total financial assets.

2.3.3. Trend in Business Models of Bank institutions

Table 2.3.3.1

Data IMF of Wholesale Funding (Millions of National Currency)						
Indonesia	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Customer Deposits	2.999.056.842	3.412.428.195	3.792.499.950	4.073.547.189	4.520.005.700	4.920.427.118
Total Assets	4.253.066.108	4.939.561.628	5.599.302.879	6.111.069.521	6.633.398.434	7.280.220.710
Customer Deposits/Total Assets	71%	69%	68%	67%	68%	68%

[165] FSB. 2012-2017. Total Financial Assets. NBFI Report (https://data.fsb.org/dashboard/Jurisdiction%20View)

(in percentage)						
Trend of the use of customer deposits (in percentage)		-1,43%	-1,35%	-1,07	1,48%	-0,55%
5 year average the trend of use of customer deposits (in percentage)	-0,59%					
Possibility of the use of wholesale funding	29,48%	30,92%	32,27%	33,34%	31,86%	32,41%
Trend of the possible use of wholesale funding (in percentage)		1,43%	1,35%	1,07%	-1,48%	0,55%
5 year average (the possible use of wholesale funding)	0,59%					
The UK	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Customer deposits	3.094.044	3.117.236	3.332.340	2.754.859	2.961.277	2.948.465
Total Assets	8.647.998	7.905.840	9.841.457	8.586.637	9.162.361	8.754.664
Customer Deposits / Total Assets (in percentage)	36%	39%	34%	32%	32%	34%
Trend of the use of customer deposits (in percentage)		3,65%	-5,57%	-1,78%	0,24%	1,36%
5 year average the trend of use	-0,42%					

of customer deposits (in percentage)						
Possibility of the use of wholesale funding (in percentage	64,22%	60,57%	66,14%	67,92%	67,68%	66,32%
Trend in percentage		-3,65%	5,57%	1,78%	-0,24%	-1,36%
5 year average (the possible use of wholesale funding)	0,42%					

Source: IMF data[166]

Comparing the UK banks with Indonesia banks is not easy, principally because they occupy different positions in their respective economies and exhibit very different levels of development. There was a similar trend or rather the process of change in the strategic direction of several UK and Indonesia bank institutions from 2012 to 2017. Some Indonesia banks are slowly moving away from a traditional model based on loans and deposits, towards a business model that resembles that of large UK banks, notably debt securities and wholesale funding. These models have been clear in the changes of strategy implemented by several Indonesia bank institutions and in the compositions of their balance sheet.

Bank institutions gain funds through a diversity of sources. Bank institutions traditionally attracts retail deposit accounts, mostly from households or retail deposits. However, bank institutions currently have enhanced access or approach to wholesale funds to support or fund their activities through not only non financial companies but also other financial firms.[167] Van den End and Tabbae contend that bank institutions altered their structure of funding to convince themselves of liquidities.[168] In order to complement inadequate retail deposits, bank institutions might borrow wholesale funding with devices or instruments notably bonds, federal funds and

[166] IMF. 2012 – 2017. Table Annex 3. Sectoral Financial Statement: Deposit Takers – Balance Sheet https://data.imf.org/regular.aspx?key=61404591

[167] Huang, R., Ratnovski, L., 2011. The dark side of bank wholesale funding. *Journal of Financial Intermediation* 20 (2), 248-263.

[168] Van den End, J., Tabbae, M., 2012. When liquidity risk becomes a systemic issue: empirical evidence of bank behavior. *Journal of Financial Stability* 8 (2), 107-120.

repurchase agreements.[169] Structure of funding mirrors dissimilar patterns of business. Bank institutions with higher retail deposit ratio are more possible to implement approach of conservative operation and undergo less unstable revenues or earnings while wholesale funds allows bank institutions to enlarge significantly and engage in high earnings but risky activities as they occur. [170]

The UK and Indonesia bank institutions are unlikely to avoid wholesale funding and investment banking completely. According to table 2.3.3.1, Indonesia banks show more approach of conservative operation with higher retail deposit ratios but its trend tended to lower, approximately -0,59% and trend of the possible use of wholesale funding tended to increase, around 0,59%. The UK bank institution show more approach of engaging in high profits and risky activities and its trend of the use of retail deposits to finance their activities tended to reduce, around -0,42% and the trend of the possible use of wholesale funding tended to rise approximately 0,42%. The positive rise of the ratio of use of wholesale funding reveals that the UK and Indonesia bank institutions perform wholesale funding as part of their business model or activities, but it does not mean Indonesia should adapt the UK model of funding through wholesale market which might possibly trigger instability. Gorton and Metric argued that the originality or novelty of the instability between 2007 and 2009 did not arise in the traditional banks, but rather in the recently growing wholesale banking system designed at the relationship of sale and repurchase agreement or securities or commercial paper.[171] Indonesia banks implement more approach of conservative operation with higher retail deposit ratios but the growth of fund distribution of Indonesia banks in asset side was not able to be covered merely by retail funding and thus Indonesia banks used wholesale funding to support development of their activities or to finance their businesses. Generally, table 2.3.3.1 indicate the trend or rather the process of change faced by some Indonesia banks, whereby they are slowly moving away from a traditional model based on deposits, towards a business model that resembles that of large UK banks, notably wholesale funding. It is worth nothing from the level and direction of bank's business model in the UK and Indonesia based on table table 2.3.3.1, there has been a decline in average growth of a traditional model based on deposits, but average growth of wholesale funds revealed a positive rise despite small percentage. Due to hard in gaining data,

[169] Huang, R., Ratnovski, L., 2011. The dark side of bank wholesale funding. *Journal of Financial Intermediation* 20 (2), 248-263.
[170] Jin, Justin Yiqiang & Kanagaretnam, Kiridaran & Liu, Yi, 2018. "Banks' funding structure and earnings quality," International Review of Financial Analysis, Elsevier, vol. 59(C), pages 163-178.
[171] Gorton, G. and Metrick, A. 2012. The Financial Crisis of 2007-2009. Yale ICF Working Paper No. 12-20. http://ssrn.com/abstract=2003388

the average trend in the structure of funding in this thesis merely reflects Indonesia bank's business patterns which resembles that of large UK banks, notably wholesale funding. The several UK and Indonesia banks had a similar positive rise in the trend of the possible use of wholesale funding in liability side from 2012 to 2017, around 0, 0,42%% and 0,59% respectively.

Table 2.3.3.2

Year	**Indonesia (in million of US dollars)**				**The UK (in million of US dollars)**			
	Loan and deposit (claim)		Debt securities (Claims)		Loan and deposit (claim)		Debt securities (Claims)	
	Claim (in Million of US Dollars	Trend (in percentage	Claim (in Million of US Dollars	Trend (in percentage	Claim (in Million of US Dollars	Trend (in percentage	Claim (in Million of US Dollars	Trend (in percentage
2012	366.698		41.842		6.560.621		882.258	
2013	325.638	-11%	47.102	13%	6.650.399	1%	901.359	2%
2014	357.941	10%	58.550	24%	5.633.267	-15%	1.219.435	35%
2015	351.859	-2%	54.342	-7%	5.372.545	-5%	1.078.446	-12%
2016	365.568	4%	68.347	26%	4.829.215	-10%	990.913	-8%
2017	412.374	13%	84.237	23%	5.822.866	21%	1.060.100	7%
Trend average from 2012 to 2017		2,74%		15,74%		-1,62%		4,95%

Source : Basel Statistics.[172]

Another similarity on major trend of the UK and Indonesia bank's business model between 2012 and 2017 was relating to less growth of traditional model based on loans than debt

[172] BIS. 2021. BIS Statistic Explorer. Locational banking statistics.
https://stats.bis.org/statx/srs/table/A5?c=ID&p=20174 (Indonesia)
https://stats.bis.org/statx/srs/table/A5?c=GB&p=20174 (the UK)

securities in asset side or asset portfolios. According to table 2.3.3.2, the average trend of Indonesia bank's segments of loans and deposits (claim) was still a positive but its grow was less from the growth of debt securities. In other words, the growth of debt securities was higher than the growth of loans and deposits (claim). The ratios of average growth between loans and deposits (claims) and debt securities were approximately 2,74% : 15,74% which is equal 1 : 5,74 respectively. It means if loans and deposits (claim) grow 100%, debt securities will grow 574%. In the UK, although the growth of loans and deposits (claim) was a negative, its growth was less from the growth of debt securities. In other words, the growth of debt securities in the UK was higher than the growth of loans and deposits (claim). The ratios of average growth between loans and deposits (claims) and debt securities in the UK were around -1,62% : 4,95% which is equal 1 : 5,06. It means if loans and deposits (claim) grow 100%, debt securities will grow 506%. This indicate the trend or rather the process of change faced by some Indonesia banks, whereby they are slowly moving away from a traditional model based on deposits and loans, towards a business model that resembles that of large UK banks, notably debt securities. It is worth nothing from the level and direction of trend of the UK and Indonesia bank's business model in asset side or asset portfolios based on table 2.3.3.2, average growth of debt securities revealed a positive rise and higher than the growth of loans and deposits (claim). Due to hard in gaining data, the average trend in the structure of asset portfolios or asset side in this thesis merely reflects Indonesia bank's business patterns which resembles that of large UK banks, notably debt securities. Their ratios of the growth of loans and deposits (claim) and debt securities from 2012 and 2017 were relatively similar with around 1 : 5,74 in Indonesia and approximately 1 : 5,06 in the UK respectively.

2.4.The UK and Indonesia Balance Sheet

2.4.1. Descriptive outcome

Table 2.4.1.1 from 2012 to 2017

Variable	Indonesia (average in percentage from 2012 to 2017)	The UK (average in percentage from 2012 to 2017)
Tier 1 capital ratio	19,25%	15,65%
Leverage ratio	14%	5,18%
Loan to deposit ratio	98%	119,89%
Non-performing Loans to Total Gross Loans	2,25%	1,83%
Return on Assets	2,60%	0,30%
Return on Equity	19,78%	4,73%

Risk weighted assets to total assets	70,61%	33,14%
Liquid Assets to Total Assets (Liquid Asset Ratio)	23,35%	21,32%
Liquid Assets to Short Term Liabilities	33,25%	36,63%

Source : IMF data from 2012 to 2017[173]

2.4.2. Capital

Capital, particularly equity is considered as a shock or loss absorber to safeguard bank institutions from unexpected loss or the negative externalities. A decline in asset quality or price and a rise possibility of bank failure denotes that bank institutions have to trade or sell their assets at market prices when they face distress condition or instability. In such a case, bank institutions needs more capital.[174] Nevertheless, several experts contend that high capital percentage would not have avoided the instability between 2007 and 2008.[175] Holding higher capital level alone would not resolve the difficulty. Better capital quality is essential to better distress absorber. Blundell-Wignall and Atkinson made a figure that reveals several losses of EU and US bank institutions will absorb most or all of their capital amount during the downturns.[176] Their computation refers to the ratio of leverage under International standard, Basel III. The UK and Indonesia bank institutions had differences of Tier 1 capital ratio on average over 5 years, approximately 15,62% and 19,25% respectively.[177] Banks in these countries had higher percentages than Basel III. Tabel 2.4.1.1 reveals that the average Tier 1 capital of the UK and Indonesia bank institutions exceeds the Basel III minimum Tier 1 capital and total capital level of holding 6% and 8% of risk weighted assets respectively. Better capital quality is thus significant to cover or absorb unexpected losses.

2.4.3. Quality of assets

Oshinsky and Olin contend that the mixture of risky assets and low percentages of capital level could cause failures of bank institutions.[178] Jin et al undertook study into the aspects

[173] IMF. 2021. Sectoral Financial Statement: Deposit Takers – Balance Sheet. https://data.imf.org/regular.aspx?key=61404591
IMF. 2021. Core FSIs for Deposit Takers. Data IMF https://data.imf.org/regular.aspx?key=61404590

[174] Powell, R. and Allen, D. (2011) 'Credit Risk and Real Capital: An Examination of Swiss Banking Sector Default Risk Using CVaR', *Journal of Modern Accounting and Auditing*, 7(6), pp. 541-554.

[175] Financial Services Authority (2010) 'Financial Services Authority, Summary of feedback to the Turner Review Conference Discussion Paper (DP09/4)', [online], available: http://www.fsa.gov.uk/pubs/discussion/fs10_02.pdf

[176] Blundell-Wignall, A. and Atkinson, P. (2010) 'Thinking beyond Basel III: Necessary solutions for capital and liquidity', *OECD Journal: Financial Market Trends, Vol. 1*.

[177] IMF.2021. Table Annex 4: Sectoral Financial Statement: Deposit Takers – Memorandum items.

[178] Oshinsky, R. and Olin, V. (2006) 'Troubled banks: why don't they all fail?', *FDIC Banking Review*, 18(1), pp. 23-44.

causing failures of bank institutions during instability in 2008. They employed some variables, notably development in several categories of loan, percentage of securitized assets to total assets, mix of loan portfolios and NPL level. Their outcomes reveal that NPL have a positive connection with failures of bank institutions.[179] Because of hard in getting information, the study merely managed to gain data on NPL in Indonesia and UK bank institutions from the IMF's data. Table Tabel 2.4.1.1 reveals that Indonesia bank institutions had an average 2,25% NPL to total credits from 2012 to 2017, increasing to 2,6% in 2018.[180] UK bank institutions had an average 1,83% over the same period, reducing to 0,7% in 2018.[181] Furthermore, the UK bank institutions have a better percentage of RWA to total assets between 2012 and 2017, with average of 33,14% compared to an average of 70,61% RWA among Indonesia bank institutions. Sheila Bair, former Chairman of the FDIC, asserted that the concern of RWA that might be able to cause insufficient capital when the credit cycle worsen during downturn rationalizes the need for leverage.[182] Lower RWA is thus significant to prevent possibility of insufficient capital.

2.4.4. Profitability

Profitability is calculated by proportion of not only return on equity (ROE) but also return on assets (ROA). The proportion of ROA signifies the strength of bank capital. It is more accurate calculation of productivity as it considers debt into account. The ROE proportions calculates the bank efficiency in making revenues or profits. A flaw of the proportion of ROE is that it does not consider debt into report or account. A bank institution can enhance its return on equity if it could issue debt at a lower rate of interest than the return rate on its investment. Nevertheless, higher debt enhances the possible failure threat for bank institution. Therefore, the study consists of proportion of ROA in its data. Beltratti and Stulz undertook study at level of bank institution and cross country as to why several bank institutions had better performance than others in the instability 2008.[183] Concentrating on a level of bank, they discovered that bank institutions which maintained more deposit and Tier 1 capital level in 2006 had higher

[179] Jin, J., Kanagaretnama, K. and Lobo, G. (2011) 'Ability of accounting and audit quality variables to predict bank failure during the financial crisis', *Journal of Banking & Finance*, 35(11), pp. 2811-2819.
[180] Schwab, K. 2019. The Global Competitive Report. World Economic Forum. P.581
[181] Schwab, K. 2019. The Global Competitive Report. World Economic Forum. P.581
[182] In ''A Special Report on International Banking'', The Economist, 19 May, 2007. See Dermine J. 2015. Basel III leverage ratio requirement and the probability of bank runs. Journal of Banking & Finance 53 (2015) 266–277
[183] Beltratti, A. and Stulz, R. (2009) *Why Did Some Banks Perform Better During the Credit Crisis? A Cross-Country Study of the Impact of Governance and Regulation*, NBER Working Paper No. 15180: unpublished.

earnings during the downturn. Bank institutions which maintain more liquid assets and credits had better performance during the month following the bankruptcy of Lehman.[184] The research of Beltratti and Stulz has a weakness in which they merely researched the regression of return during instability in 2008. The thesis covers across five years and reveals that Indonesia bank institutions had higher proportion of profitability in not only ROA but also ROE. Bank institutions in Indonesia are more efficient due to having high ROE. The IFSA reveals that Indonesia bank institutions were efficient and obtained a rise in profits, resulting in an increase in bank performance. [185] Because of hard in obtaining information, the study merely managed to get data on ROA and ROE in Indonesia and UK bank institutions. Indonesia bank institutions had a better profitability, with average of 2,60% of ROA and 19,78% of ROE compared to an average of 0,30% of ROA and 4,73% of ROE among the UK bank institutions.

2.4.5. Leverage and LDR

Kiema and Jokivuolle showed that leverage influences the bank failure through,[186] firstly, a rise in the leverage amplifying not only the capital amount but also the amount of high risk credits in the bank's mixed portfolios, and banks might feel safe due to the impact of this diversification. The measurement fault tends to intensify this impact, provided that the credits that are described as low risk credits are reasonably risky assets. Boyd and Runkle mentioned that the advantages of risk diversification could be zero regarding the possibility of bank failure when they are counteracted by a decrease in capital.[187] Secondly, a rise in leverage augments the credit volumes which are included in mixed portfolios provided that their volume or size has been standardised to one. The contaminated impacts tend to enhance the possibility of bank defaults. Because of hard in getting information, the study merely managed to gain data on leverage ratio in Indonesia and UK bank institutions from the IMF's data. Indonesia bank institutions had higher leverage ratios, with average of 14% compared to an average of 5,18% of leverage level among the UK bank institutions

The proportion of loan to deposit exhibits how deeply a bank institution is dependent on borrowing. The UK bank institutions had higher proportion of borrowing compared to the

[184] Beltratti, A. and Stulz, R. (2009) *Why Did Some Banks Perform Better During the Credit Crisis? A Cross-Country Study of the Impact of Governance and Regulation*, NBER Working Paper No. 15180: unpublished.
[185] IFSA, 2017. 'Report of Indonesia Banking Profile' Quarterly IV
[186] Kiema, I., Jokivuolle, E. (2014) 'Does a leverage ratio requirement increase bank stability. Journal of Banking and Finance 39' 240-254. p. 248. www.elsevier.com
[187] Boyd, J., Runkle, D. (1993) 'Size and Performance of Banking Firms.' Journal of Monetary Economics, 47–67.

Indonesia bank insitutions. The heavy dependence on borrowing from the wholesale funding proved to be a dangerous pattern when either interbank markets or short term funding dry up or froze[188] The risk of bank institutions that have unconstrained access to wholesale funding is liquidity risk. Sharma explained the risk of liquidity in terms of adverse results of liquidity which derive from a mixture of either non liquidity or external trigger occurrence and an internal susceptibility.[189] He further explained the result of liquidity as force asset sale to enhance liquidity, failure to repay liabilities, a business chance loss because of liquidity shortage, realizing a loss of market as the premature outcome. The occurrence of these potential results indicate the robust relationship between risk of liquidity and risk of market. As for the bank institutions, they might cause the whole financial system disruption.[190] Because of hard in gaining equal data, the study merely managed to gain data on proportion of loan to deposit in Indonesia and UK bank institutions from the data of IMF. Table 2.4.1.1 reveals that Indonesia bank institutions have a better percentage of loan to deposit between 2012 and 2017, with average of 98% of LDR compared to an average of 119,89% LDR among the UK bank institutions.

2.4.6. Liquidity

Indonesia and the UK bank institutions generally had a high ratio of liquid assets to total assets although they have smaller differences. According to data provided by the IMF from 2012 to 2017, Indonesia maintained an average of around 23,35% liquid asset ratio compared to an average of 21,32% liquid asset ratio among the UK bank institutions. The UK held higher average of 36,63% liquid assets to short term liabilities compared to an average of 33,25% among the UK bank institutions. Overall, Indonesia and the UK bank institutions had a healthy liquid asset proportions and liquid asset to short term liabilities.

2.5.Conclusion.

This chapter discussed the significance of banking and financial system to foster development of economy. Financial growth could decrease poverty and inequality of income by mitigating asymmetries of information and cost of credit enforcement that might be

[188] Shin, H. (2009) 'Reflections on Northern Rock: The Bank Run that Heralded the Global Financial Crisis', *Journal of Economic Perspectives,* 23(1), pp. 101-119.
[189] Sharma, P 2004, 'Liquidity Risk', A Speech: http://www.fsa.gov.uk/pages/library/communications/sppeches/2004/SP201/.
[190] Sharma, P 2004, 'Liquidity Risk', A Speech: http://www.fsa.gov.uk/pages/library/communications/sppeches/2004/SP201/.

remarkably necessary on not only poor households but also businesspersons with inadequate collateral and internal resources.[191] Essential aspects, notably education, infrastructure, urbanization and migration could play a primary role in allocation of income.[192]

The chapter also discussed some kinds of alternative lending or finance, notably cryptocurrency, lending of peer to peer (P2P), and crowdfunding which led disruption of several familiar model of banking services globally.[193] These alternative finances reveal particular essential feature: they try to evade control of supervisory body or government or any other external regulator over transaction, they try to remove traditional activities of banking institutions from providing credits or financing transactions, and their activities are systemized or managed around the utilization of advanced technologies for sharing, distribution and processing information.[194]

This chapter has noted the trend of size of banking system asset and OFIs. the UK and Indonesia banking system had a negative growth of total banking assets to total financial assets and the UK OFIs was a positive growth of OFIs to total financial assets. The UK bank institutions also had bigger foreign bank's segments of domestic banking sector than Indonesia banks. The UK had foreign bank's segments of domestic banking sector, share of total assets, approximately 48,2% in 2014 and 50,4% in 2016 based on data from Basel whereas Indonesia had around 21,28% in 2014 and 29,31% in 2016 of foreign bank's segment of domestic banking sector over the same period regarding data from IMF

This chapter also discussed business model of bank institutions in both countries. The trend or rather the process of change faced by some Indonesia banks, whereby they are slowly moving away from a traditional model based on deposits and loans, towards a business model that resembles that of large UK banks, particularly wholesale funding and securitized bonds. These models of business are clear in portfolios of bank assets and in liabilities side between 2012 and 2017.

This chapter has noted that Indonesia bank institutions had higher capital, ratio of liquid assets, ROE and ROA, but lower asset quality in 2017, higher leverage and NPL than the UK bank institutions. Interestingly, the percentage of capital and leverage was higher amongst Indonesia bank institutions than the UK bank institutions. The UK bank institutions had a better

[191] Galor, O., Moav, O., 2004. From physical to human capital accumulation: Inequality and the process of development. The Review of Economic Studies 71, 1001—1026.
[192] D'Onofrio, et al, supra note 71 Calderon C., Serven, L., 2004. The effects of infrastructure development on growth and income distribution. World Bank Policy Research Working Paper 3400., 1-20
[193] Hockett, R. C., and Omarova, S.T., (2017) The Finance Franchise. 102 Cornell L. Rev. 1143, 1202-1203
[194] Hockett, R. C., and Omarova, S.T., (2017) The Finance Franchise. 102 Cornell L. Rev. 1143, 1202-1203

performance as their proportions of leverage, RWA, NPL and liquid assets to short term liabilities were managed or controlled.

The pendulum ought to move or shift towards stability of banking sector but without threatening the development of economy. Better capital quality is essential to cover either externalities or potential unexpected losses. Lower proportion of leverage is necessary to minimize or mitigate the potential bank failure. Better law and provisions are needed.

It is to regulatory structure in the UK and Indonesia to protect banking from failure and mitigate the potential risk which posed by bank's balance sheet and the level and direction of development of Indonesia banking system which this study now turns.

Chapter 3 Comparison between the regulatory structure of Indonesia and the UK

3.1. **Introduction**

The previous chapter outlined the development of the UK and Indonesia banking system involving the financial ratios bank's balance sheet and the level and direction of development of the banking system. This chapter will consider regulatory structure to discuss whether Indonesia legislations mitigate the potential risks of wholesale funding and securitized bond or facilitate these growth. The focus of this chapter is on flaws or ineffectiveness of regulatory structure including Banking Act 1998, institutional regulatory bodies, and the prudential provisions in Indonesia, particularly what segments in specific concern. A comparison would be established with regulatory pattern in the UK where generally not only had similar incremental evolution, had experience in not only performing business models, such as wholesale funding and securitised bonds but also facing, mitigating and addressing the potential risks, but also had similar legal regime that encourages bank institution to generate better bank's performance, better indicator of stability and financial development index. The chapter is based on a study of existing banking regulation, current papers and reports.

The main weaknesses and failure of Indonesia banking regulation are due to unclear meaning of 'other form' which is included in the term 'bank', simple and weak prudential provision. No clear explanation of 'other form' enables either shadow banking system or non bank institution to develop, largely unregulated, and to compete with banks directly in their segment of the traditional retail that might comprise implicit risks. Furthermore, the focus of capital provision was too general. It regulates capital level for bank institution without considering or regulating disclosure requirement on the competent authorities and no regulating requirement yet explicitly. Inadequate supervisory review and no disclosure requirement provide potential likelihood of untruthful reporting to a supervisory authorities. The failure of Century Bank underlines the shortcomings of the prudential regulatory pattern in Indonesia and the problem relating to moral hazard, inadequate supervision and illiquid asset. Negative capital of Century Bank contributed to an increase of moral hazard and excess risk assumption. Its business focused on supplying the majority of credit to a firm that is owned by the similar shareholder without adequate collateral and managing investment fund from costumer or investor irresponsibly and improperly. Century Bank faced a decline in asset quality that possibly led to concerns that avoided the Century Bank from gaining cash quickly. With the development of business model, such as wholesale funding and securitised bond, risky activity which might influence the soundness and health of a bank institution might be hard to be

monitored or supervised effectively. Weak regulation, unclear meaning of 'other form' led to criticisms that Indonesia banking regulation have not mitigated these potential risks comprehensively and properly.

This chapter would possess policy effect for regulatory bodies or policy makers and practitioners on state, Indonesia and international level. By considering the flaws of Indonesia regulatory structure in light of incremental development, notably trend in business model and failure of Century Bank and then make comparison of the regulatory framework with the UK regulatory pattern, the chapter gives a new insight into banking regulation.

Section 3.2 analyses the regulatory structure in Indonesia in terms of the legal base which responds to incremental evolution, particularly the Banking Act 1998, comparing its components with those of the UK Banking Act. These regulatory structures in general reflect the characteristics of the market structure, financial development levels, risks, and banking size in these countries. A traditional theory is that to be efficient, the regulatory framework requires to reflect the controls and regulation of the market structure.[195] Then, this section discusses the possible limitation of Indonesia banking regulation. This section also discusses the UK regulatory model, particularly ring fence in response to incremental evolution in previous chapter.

Section 3.3 consider Institutional regulatory bodies in the UK and Indonesia. The reason of the supervisory structure could be somewhat deemed as a reaction to the change of institutional circumstances that is typified by growing unification of not only securities, insurance and banks but also their respective service, instrument and product.[196] Several patterns of unification of financial supervision have been created[197] that make the background of supervision less harmonized in several countries particularly Indonesia. Therefore, this section will discuss the role of supervision and supervisors in banking regulation

Section 3.4, considers the prudential provision, particularly capital and liquidity provision in Indonesia which are made by regulatory bodies to protect bank from failure. Then, the chapter discuss the role of capital and liquidity provision in Indonesia banking instability. This discussion begins with considering the case of bank failure which occurred in Indonesia. This section will discuss the concerns which might contribute to a failed bank. Thus, the section first

[195] Abrams, R. and Taylor, M. (2000) 'Issues in the unification of financial sector supervision' IMF Working Paper 00/213, Washington, DC

[196] C˘ ihak, M. and Podpiera, R. (2006) Is one watchdog better than three? International experience with integrated financial sector supervision, IMF Working Paper 06/57, Washington, DC

[197] IMF (2006) Spain: Financial Sector Assessment Program – Technical Note – Supervision of Insurance: Alternative Models for an Independent Agency, Country report no. 06/217, Washington, DC

analyses the collapse of Century Bank which showed a concern which might result from holding low capital and illiquidity problem. Century Bank held negative capital and cannot meet their obligation and had lack of customer trust, resulting in bank run which threatened the stability of banking system in Indonesia. In relation to these concern, supervisory bodies demanded the implementation of certain prudential provisions to ensure the soundness and safety of bank institutions and the banking system. The result was the capital and liquidity provisions which are discussed briefly at the end of this section. It shall note that the aspects of capital and liquidity provisions did not work well appropriately to address the issues of low capital and illiquidity concern. The discussion of capital and liquidity will bring to analysis of capital and liquidity principle as a foundation of prudential regulation. The final section of this chapter will provide the conclusions.

3.2. Banking Law

Financial regulation has three major goals, namely protecting consumers, maintaining the financial market's integrity, and maintaining stability.[198] There are five components of such provision: (1) a provision objectives or aims that would mostly reflect the interests of the public in some circumstances; (2) standards of provision to provide the correct structure and content of provision; (3) institutional regulatory structure of the framework of regulatory bodies which supervise the regime of provision but also the responsibility and authority provided to the regulatory bodies; (4) method of supervision of application of the objectives of provision; 5) enforcement that includes imposition of sanctions for disobeying the provisions.[199] However, this chapter will focus on discussion of banking law, the framework of regulatory bodies and banking provisions, particularly capital and liquidty in both countries.

3.2.1. Indonesia

The response to the level and direction of development of Indonesia banking system and potential concern is to demand further analysis of law which encourages the growth of banking institution and mitigates this risks, and a renewed emphasis on the significance of the institution and activity which could be performed, that led to the Banking Act 1998 (the Act 1998) in Indonesia. The level and direction of development of Indonesia banking system towards a business model that resembles that of large UK banks, such as wholesale funding and securities

[198] Avgouleas, E. (2005) 'The Mechanics and Regulation of Market Abuse: A Legal and Economic Analysis.' Oxford: Oxford University Press

[199] Akinbami, F. (2013) 'Is meta-regulation all its cracked up to be? The case of UK financial regulation.' Journal of Banking Regulation 14(1): 3-4

although these exposures are lower than credit might be deemed as risky or dangerous that could threaten the soundness and safety of bank institution and the banking stability. This development is not facilitated or regulated or mitigated by Indonesia banking law properly. Consequently, their activities which are not regulated or mitigated by the Indonesia banking law comprehensively pose hidden risks which could threaten the soundness and safety of a bank institution in Indonesia. The discussion of potential hidden risk might be relating to bank activities that is prohibited and allowed, and objection and function of banking law.

Article 10 the Act 1998 Indonesia bank institution prohibited to

a. Performing capital injection or equity investment, except allowed by Article 7 (b) and 7(c)..
b. Performing insurance activity. However, article 7 allows capital injection or equity investment in a company, such as insurance and venture capital. It could be assumed that Indonesia banks are not allowed to perform insurance activity but they have either horizontal or vertical structural linkage which might enhance big possibility that shareholder or bank institutions perform this activity.
c. Performing other activities which are not regulated by Article 6 and Article 7. However, one of the activity that is allowed by Article 7 is a bank institution is allowed to perform other general activities if it does not conflict with the Act 1998 and other existing provisions. This might have hidden risk because there is still no law that regulate either security or derivative. There is two assumption of possibility relating these activities, firstly, if these activities are profitable, these activities might be allowed but secondly, if these activities are not profitable or bank get loss, these activity might be prohibited.

   Howeever, the bank balance sheet in Indonesia include securities, derivative, and equity investment based on the IFSA publication[200] that presents Indonesia banking statistics. Furthermore, financial conglomerate is dominated by banks. It could be assumed that their activity might be engage in broad activity which have risks which might not be able to be supervised by supervisory bodies in Indonesia. Therefore, the risky activities might pose hidden risk and could threaten the soundness and safety of an Indonesia bank institution due to unclear activity that are allowed by the banking law. This could enhance moral hazard and excessive risk or increase hidden activity that might have high risk. If a bank face a trouble due to their activity, it will depend on their argument or view to either avoid their case or address their concern, like the case of Century Bank in 2008

[200] The IFSA, 'Indonesia Banking Statistics' (2017) vol 15 No.07 Otoritas Jasa Keuangan

which performed product of investment fund, but their activity is not reported in the bank balance sheet but the document showed their activities. This will be discussed further in the subsection 3.4.2.2 of this chapter.

Furthermore, banks in Indonesia are now subject to the regulatory regime under the Banking Act 1998 which replaced the Banking Act 1992. The primary function of banks in Indonesia under the Act 1992 is accepting deposits and distributing or supplying credit.[201] However, Section I, article 1 (2) of the Act 1998 sets out that a bank is a legal entity that accepts funding from society in the form of deposits and supplies funds to society in the form of credit and or other form in order to improve social welfare. The meaning of 'other form' which is not clear might allow an Indonesia bank institution to engage in broad activities which are categorized as risky business model. The following section discuss the possible concern of Indonesia banking law.

3.2.2. The possible limitation of Indonesia banking regulation

The principal function of Indonesia bank under the Act 1998 still focuses on characteristic of a traditional model of bank activities including both distributing funds and accepting funding. It is likely that this function and the objective under banking law contradicts the practice of Indonesia banks and the term 'bank' because the meaning of 'other form' is not clear and could potentially be interpreted as either bad or good practice. For example, in relation to work discussed further in sub section 3.4.2.2 of this chapter, Bank Century offered product of investment fund which could be assumed as a fictive product because the transaction is not recorded in the bank's balance sheet but the documents proved and showed their activities. This could be assumed that the activities might be covered and protected by Indonesia banking law as the interpretation of 'other form' description might allow a bank institution to engage in either the activities offering product of investment bank or a fictive product.

Furthermore, Article 3 states that banks supply credit to society but regulators also permit banks to invest or supply their funds to other companies in the capital market or insurance. When banks invest or supply their funds to an unregulated third party, they have to ensure their own safety and that the risks are managed properly by the other entities. If they suffer losses, they might not improve social welfare. Nevertheless, the practice performed by an unregulated third party to manage risks properly has proven more difficult since the market might provide more liquidity or become liquid. The market complicates the originators' monitoring task as

[201] Article 3, The Banking Act No 7 Year 1992

they might not be aware of which companies are taking risks. As a result, a disruption in the market might potentially affect growth in the future.

Moreover, the use of securitised products or efficient risk sharing among investors or innovative products with risky business activities shows that such new participants in the capital market might be subject to risk and consumers might possibly be treated as a product. When a bank invests or supplies its funds to a non-bank institution which is a new entrant to the capital market, it might face greater risk. Non-bank institutions might continue to fund long-term assets with short-term credit and their assets might be primarily illiquid. When the possibility of default arises, the lenders might not roll over existing credits to protect from losses. If they suffer losses, their performance would affect the bank which provided the funds. Therefore, if there is still an absence of description of 'other form' and no further provisions or instruction or guideline on their implementation or processes, it could be assumed that Indonesia banking law is risky due to the possible practice of unregulated activities into banking businesses.

Therefore, the potential weakness of the term 'bank' in Indonesia highlighted the shortcoming of bank description and the concerns associated with an absence of description of 'other form'. The term 'bank' in Indonesia provides considerable flexibility not only to cover or perform activities which have different forms but also to allow bank institutions which de facto could not receive deposit and supply credit to gain benefits of the particular unregulated activities in reality, but this might be considered risky due to the absence of a common definition or understanding of other form in order to improve social welfare. This absence allows either non-bank institutions or the shadow banking system to make and develop various products of financial innovation and also allows them to grow, mostly unregulated, and to provide competition with bank institutions directly in their part of the traditional market which might contain implicit threats or risks.

The discussion above might have significant ramification for the design of the term 'bank'. When Indonesia bank institutions engage in broad activities or models of universal banking institutions or investment banks which need dissimilar treatment, Indonesia banking law which regulate clearly bank specificities ought to reflect the possible broad activities relating to the level and direction of development of Indonesia banking system. This might encourage the development of financial innovation and supervisory body in Indonesia might provide strict and close supervision of the bank activities and their products. Consequently, this might contribute to reducing the probability of similar case of Century bank which offer investment products, but the transaction were not recorded in its balance sheet that will be discussed further in the subsection 3.4.2.2 of this chapter.

3.2.3. **The UK**

The UK responds to the development of banking system which already discussed in previous chapter through CRD/ CRR, and ring fence into banking reform law 2013. CRD[202]/CRR[203] does not describe a bank specifically but provides a description of an institution that is either an investment entity or a credit institution, which is expressed as conducting activity of "taking deposits or other repayable from the public and granting credit". In contrast, the UK Banking Act 2009 provides different descriptions of a bank as defined in Article Part 1 Article 2. It is described as a UK institution that not only has authorisation but also fulfils Section 22 FSMA 2000 to engage in regulated activity in a particular type of business associated with investment or claims management services or property or business model in the UK or administering a benchmark or information about a person's financial standing. The UK Banking Act 2009 provides limitation of bank interpretation under Article 2 (2). It also defines UK institutions under Article 2 (3) as an institution that is either established or incorporated under the UK law.

Furthermore, The Turner Review revealed that particular banks' activities need to be isolated formally in order to enable better management by supervisory bodies. [204] In 2010 the Independent Commission on Banking (ICB – also known as the Vickers Commission), appointed by the Chancellor of the Exchequer, George Osborne, conducted a study on how to make the UK bank institutions safer and competitive while still able to perform their significant role in the economy. [205]

In 2011, it issued a report and made several recommendations. Its most significant proposal is that parts of large UK bank institutions ought to be reorganised institutionally, particularly retail deposit taking and payment services should be separated from risky business and other activities of investment banking. [206] The ICB claimed that this would make it easier for the large banking organisations to maintain critical banking services during instability while also allowing them to mitigate excessive risk taking business in other parts of the group due to separation of the assets and liabilities of large bank organisations from the assets and liabilities of the ring fenced bank institutions. [207]

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[202] Article 3 (1) CRD
[203] Article 4 (1) CRR
[204] Turner, A. (2009) 'The Turner Review: A Regulatory Response to the Global Banking Crisis' Financial Services Authority, London
[205] Alexander, Kern, (2015) 'Regulating the Structure of the EU Banking Sector' Eur Bus Org Law Rev 16, p. 233
[206] Alexander, Kern, (2015) 'Regulating the Structure of the EU Banking Sector' Eur Bus Org Law Rev 16, p. 233
[207] Alexander, Kern, (2015) 'Regulating the Structure of the EU Banking Sector' Eur Bus Org Law Rev 16, p. 233

In 2012, the ICB's ring fencing proposals on primary provisions were accepted by the UK government. In 2013, they received royal assent as the Financial Service (Banking) Act 2013 which introduced the concepts of ring-fenced bodies and core and excluded businesses.[208] In 2014, secondary provisions which defined ring fencing for bank institutions with core deposits of £25 billion or more were introduced by the Treasury. [209] The aim of ring fencing provision is to segregate services of bank institutions which are vital to SMEs and individuals from distress elsewhere in either the wider system or large bank organisations through making it easier to handle distressed entities "in an orderly manner" without liability of the taxpayer or major disruption or trouble within the core banking services.[210]

The UK's approach to ring fencing is significant in terms of two elements: first, the separation of ring-fenced banks is mandated before any instability occurs. This ensures the separation is imposed effectively and in line with the time limits and dynamics of an instability. Second, the framework of provisions provides well defined and convincing conditions or measurements on what services and assets are vital and how they would be safeguarded from distress. [211] This signifies that the approach provides more room for bank institutions, supervisory bodies and creditors to interpret or analyse information and take action.[212]

The core activities concept as established by the Banking Reform Act 2013 is applied to ring-fenced bank institutions in the practice of payment systems, deposit taking entities, overdraft facilities to businesses and households in the UK.[213] This does not insulate core services completely from other financial service institutions. Rather, existing large bank organisations have to adjust the structure of their organisation in a way which will allow the activities of ring fencing to be implemented technically through 'making decisions independently of other members of its large banks' organisations'. [214] This has to be complemented by an independency of resources. There has to be assurance that the failure or collapse of one or more parts of large banks' organisation would not influence the funds available to the ring-fenced companies. [215]

[208] Financial Services (Banking Reform) Act 2013
[209] Financial Services and Markets Act 2000 (Ring-Fenced Bodies and Core Activities) Order 2014 SI 2014/1960
[210] HM Treasury(2012) 'Department for Business Innovation and Skills' BIS at p 4.
[211] Alexander, Kern, (2015) 'Regulating the Structure of the EU Banking Sector' Eur Bus Org Law Rev 16 , p.234
[212] Parliamentary Commission on Banking Standards (PCBS) (2013) 'Changing banking for good', at pp 57–61
[213] Independent Commission on Banking (2011) 'Final Report: Recommendations' London: Domarn Group
[214] 142H of the Act, as amended by the Financial Services (Banking Reform) Act 2013
[215] Metzing, P. C. (2016) 'Macro-prudential financial regulation of banks after the crisis of 2008.' Newcastle University Business School. P.4

Furthermore, the law prohibits ring-fenced companies from making investments in particular 'excluded activities' which will increase risk to insured funding sources and cause distress in the financial market. [216] Excluded activities are defined by the FSMA 2000 (Excluded Activities and Prohibitions) Order 2014. Nevertheless, particular exemptions from excluded activities are provided but are reliant on the objective of the specific investment. Taking prohibition of trading commodities for proprietary trading as an example, these commodities still could be traded by the ring-fenced companies once the trade activities become elements of the risk management, notably to tackle the risk of liquidity. [217] However, arbitrage might occur once they disguise prohibited activities with ancillary activities as being elements of handling the management of risk[218] Thus, this insulation strategy could change several types of interactions in activities of ring-fenced entities and the other large bank organisations of the bank holding enterprise. [219] In addition, the law introduced prohibitions on ring-fenced bank institutions. These are similar to the excluded activities order but differ in relation to their targets, with the targets of prohibitions being places and people and the target of exclusions being activities. [220] The prohibitions include restriction of other members of the bank on holding enterprises from which to access secured sources to equalise or balance losses in their transactions. In addition, it introduced the need or requirement to price intra group transactions, notably asset sales and loans under market conditions 'as if they are performed by unrelated companies or parties'[221] in order to circumvent disguised cross financing activities. [222] This makes it easier for supervisory bodies both to access the entities and safeguard according to the ring fence. [223] The purposes of provisions associated with the ring fence are described by the Banking Reform Act 2013. [224]

[216] HM Treasury. (2012) 'The Financial Services Bill: the Financial Policy Committee's macroprudential tools'
[217] Metzing, P. C. (2016) 'Macro-prudential financial regulation of banks after the crisis of 2008.' Newcastle University Business School. P.4 p. 75
[218] HM Treasury (2012b) 'Sound banking: delivering reform' Cm 8453, October Stationery Office Limited. P.10
[219] Metzing, P. C. (2016) 'Macro-prudential financial regulation of banks after the crisis of 2008.' Newcastle University Business School. p. 75.
[220] Alexander, Kern, (2015) 'Regulating the Structure of the EU Banking Sector' Eur Bus Org Law Rev 16, .p. 237-240
[221] Metzing, P. C. (2016) 'Macro-prudential financial regulation of banks after the crisis of 2008.' Newcastle University Business School.
[222] HM Treasury (2012a) 'Banking reform: delivering stability and supporting a sustainable economy' Cm 8356. Stationary Office Limited UK
[223] Metzing, P. C. (2016) 'Macro-prudential financial regulation of banks after the crisis of 2008.' Newcastle University Business School. p. 74-75
[224] Metzing, P. C. (2016) 'Macro-prudential financial regulation of banks after the crisis of 2008.' Newcastle University Business School. P.4 74-75

The following section will discuss institutional regulatory structure of the framework of regulatory bodies which supervise the regime of provision but also the responsibility and authority provided to the regulatory bodies.

3.3. Regulatory bodies

Another components of such provision is institutional regulatory structure of the framework of regulatory bodies which supervise the regime of provision but also the responsibility and authority provided to the regulatory bodies. Institution could be describe social practices and systems which gain widespread recognition and have showed resilience.[225] Institution could also be theorized to establish a universally social structure for activity or behavior.[226] A considerable literature is associated with the institution stability, however, this subsection focuses on institutional structure in Indonesia that regulates and supervises banking institutions so as to prevent banking from failure and maintain financial stability.

In general, there are no powerful arguments for any particular framework of supervision, but pro and cons of different form of supervisory framework depend on the environment in a particular country or jurisdiction.[227] Kremes et al and Wymeersch suggests that several dissimilar aspects affect the pattern of supervisory framework, notably: not only history, country, and financial structure but also size of financial sector and political system. [228] In the following sub chapter would review institutional structure of financial supervision in Indonesia.

3.3.1. Indonesia Financial Supervisory Authority (IFSA)

The IFSA is the single regulator for the financial services sector in Indonesia. The IFSA was formed in 2011 under the IFSA Act 2011 No. 21 Year 2011, when it took over responsibilities from Central Bank which was responsible for overseeing only the banking industry. The IFSA has gradually taken responsibility for regulating banking, building societies, insurance and the investment industry.

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[225] Scott, W. R. (2001). Institutions and organizations (2nd ed.). Thousand Oaks, CA: Sage

[226] Barley, S. R., & Tolbert, P. S. (1997). Institutionalization and structuration: studying the links between action and institution. Organization Studies, 18(1), 93e117

[227] Llewellyn, D. (2006) Institutional Structure of Financial Regulation and Supervision: The Basic Issues, paper presented at the World Bank Seminar: Aligning Supervisory Structures with Country Needs, 6–7 June, World Bank, Washington, DC

[228] Kremers, J., Schoenmaker, D., & Wierts, P., 2003. Cross-Sector Supervision: Which Model? Brookings-Wharton Papers on Financial Services, pp. 225–243; Wymeersch, E., 2006. The structure of financial supervision in Europe: About single, twin peaks and multiple financial supervisors. European Business Organization Law Review, 8, 237–306

Under the IFSA Act 2011, the IFSA is required to pursue three statutory objectives:[229] to ensure all business activities in financial sectors to (1) be reliable, fairness, transparent and accountable; (2) be able to realize a financial system that grows sustainably and stable, and (3) be able to protect the interest of consumers and society. The IFSA will provide integrated regulation and supervision to all financial institution,[230] notably the sector of banking, investment, insurance and other financial institution.[231] Beside, the IFSA has a function to regulate and provide supervision concerning on prudential regulation, notably liquidity, capital, asset quality, banking report, credit testing and other prudential provisions.

The IFSA Act 2011 sets out all the activites which are regulated by the IFSA. These involve activities of financial service and banking institution, notably accepting deposit, hybrid product, activities in financial service; The IFSA is responsible for both authorising and supervising companies carrying out regulated activities. The integrated structure of the IFSA denotes that any company wishing to carry on a regulated activity must apply to a single authorisation department. The authorisation provided is like a driving licence, with a list of permission on it. These permissions are the activities the IFSA would permit the company to do. Therefore, a bank would apply for permission to be a deposit taker. However, if a bank wishes to provide financial advice, it would also require to seek a licence to do so.

The IFSA Act 2011 also set out coordination and cooperation between institutions.[232] IFSA performs coordination with Bank of Indonesia to make supervised regulation for banking institution, notably capital, integrated system of banking information, banking product and other activities, and systemically important bank.[233] The IFSA, Bank of Indonesia and IDIC must build and maintain integrated sharing of information.[234] In addition, in order to maintain financial stability in Indonesia, the Act creates coordination forum of financial stability (CFFS) involving finance ministry as a principal coordinator and member, Governor of Bank Indonesia as a member, Principal Director of IFSA as a member, and Principal Director of IDIC as a member.[235] In normal condition, CFFS attends meeting at least four times a year and do

[229] Article 4, The IFSA Act 2011
[230] Article 5, The Act of Indonesia Financial Service Authority 2011
[231] Article 6, The IFSA Act 2011
[232] Section X, The IFSA Act 2011
[233] Article 39, The IFSA Act 2011
[234] Article 43, The IFSA Act 2011
[235] Article 44, The IFSA Act 2011

information sharing,[236] but when indication of financial instability occor, each of member could propose a meeting to CFFS to determine strategy to prevent or resolve crisis.[237]

There are possible strength and weaknesses of the IFSA which applies single integrated supervision. The responsibility of IFSA in Indonesia might be too wide. It is a super regulator which regulates and oversees banks, capital market, insurance, finance, investment and other financial institutions in Indonesia. The changes in the financial innovation and technology potentially provide serious risks and cost to the Indonesia financial system. The IFSA might potentially fail to detect risks prior to banking failure and financial crisis, and might possibly be too slow to tackle financial instability due to lack of expertise to the difficulties of individual sector and unclear focus on the objective of regulation.

Figure 2.7.1

Tabel 38 Total Aset dan Perbandingan 44 KK

	TW III - 2016
Total Aset	**5.521,6 T**
% terhadap Total Aset Perbankan	83,98%
% terhadap Total Aset Sektor Jasa Keuangan	65,91%

Sumber: OJK

Source: IFSA Quarterly Bulletin 2016 (Q3 – RIBP)

However, based on Figure 2.7.1, financial conglomerate in Indonesia accounted for 83,98% of the banking sector. The IFSA as a single integrated supervisors is suitable to oversee and regulates financial conglomerates which dominate the banking sector in Indonesia. Integrated supervisor could scrutinize significant transaction of intragroup and risk concentration in the comprehensive framework of the alliance as a whole. [238]. Abrams and Taylor and Llewellyn argue that because of the increasing formation of financial conglomerates as well as the convergence of function among different types of financial institutions, single supervision authority for all financial system is increasingly considered as one the most viable supervision model. [239] Therefore, the IFSA as an integrated supervisory body might be able to manage the groups of financial conglomerates effectively.

[236] Article 45 (1), The IFSA Act 2011
[237] Article 45 (2), the IFSA Act 2011
[238] Kremers, J.J.M., Schoenmaker, D., and Wierts, P. 2003. Cross-Sector Supervision: Which Model? Brookings-Wharton Papers on Financial Services
[239] Abrams, R. and Taylor, M. (2000) 'Issues in the unification of financial sector supervision' IMF Working Paper. Furthermore, Llewellyn, D.T. (1999c) 'The Institutional Structure of Regulatory Agencies, in Central

In contrast, twin peaks model in the UK is an institutional framework where each of two regulatory bodies have task to secure one of the two primary goals of provision including consumer protection and prudential provision. [240] Pattern of twin peak is an alternative method to supervision and regulation that was suggested by Goodhart[241] and Taylor.[242] Such supervision denotes establishing two separate integrated agencies. The Financial Service Act 2012 transforms a single financial regulator or the FSA into the Prudential Regulation Authority (PRA) and the Financial Conduct Authority (FCA).[243]

The PRA is required to pursue primary statutory objectives: (a) promoting the soundness and safety of PRA authorised person;[244] (b) seeking to safeguard the transactions of PRA authorised persons conducted in a system which minimises and circumvents any adverse impacts on financial stability in the UK[245]. Besides, there are additional PRA objectives requiring insurance companies to safeguard protection to an appropriate degree for current and potential policyholders[246]

The FCA is now responsible for regulating and supervising the conduct of all financial institutions and to ensure that the market performs well with operational goals for safeguarding an appropriate level of consumer protection, augmenting the financial system integrity and promoting effective competition in the consumer's interest. The FCA has responsibility to determine and regulate the degree of cunsumer protection but has to consider a matter list detailed by the Act and involving the common rule that consumers ought to take accountability or obligation for their decisions.[247]

The Regulated Activities Order sets out all the activities which are supervised and regulated by the PRA and FCA. Section 22 (1) defines a regulated activity as: a particular kind of activity that is carried on by way of business and (1) associates with a particular kind investment or (2)

Banking Publications, How Countries Supervise their Bank, Insurers and Securities Markets' London: Central Banking Publications

[240] Akinbami, F. and Ngwu, F. N. 2016. Overhauling the institutional structure of financial regulation in Nigeria: The unfinished reform. Journal of Banking Regulation Vol 17, 4, 311-331. Macmillan Publishers. www.palgrave.com/journals

[241] Goodhart, C., & Schoenmaker, D. (1995). Should the functions of monetary policy and banking supervision be separated?. Oxford Economic Papers, 539-560.

[242] Taylor, M. (1995). " Twin Peaks": A Regulatory Structure for the New Century. Centre for the study of financial innovation.

[243] Kokkinis, Andreas (2013) *The financial services act 2012 : the recent overhaul of the United Kingdom's financial regulatory structure.* International Company and Commercial Law Review, Volume 24 (Number 9). pp. 325-328.

[244] FSMA, s 2B(2)

[245] Widely defined in FSMA, s 1T

[246] FSMA, s 2C(2).

[247] Financial Services Act 2012 s.6; new FSMA 2000 s.1C(2)(d).

in the case where an activity is carried on in relation to a particular property. The PRA is responsible for authorising and regulating companies carrying out activities specified as regulated activity under subordinate provisions created by HM Treasury under FSMA, section 22A. The authorisation provided by the PRA subjects a regulated company with regard to concerns relating to the statutory goals of PRA, but does not replace regulation of the company by the FCA on the subject of separate statutory goals of the FCA. The term 'authorised person' as employed by FSMA denotes all persons with a licence under FSMA and the term 'PRA authorised person' refers to a company which is dual regulated by both the FCA and PRA.[248]

3.3.2. Bank of Indonesia

Bank Indonesia (BI) is an independent state institution that performs its duties and powers, free from interference from Indonesia government.[249] Its duties include a) determining and implementing monetary policy, b) regulating and maintaining the smooth operation of the payment system; c) regulating and supervising the Indonesia bank institutions, but after government introduced the IFSA Act 2010, the IFSA took over the BI duties to regulate and supervise Indonesia banks. However, the draft of new BI Act is planning to amend several parts of the current BI Law. Its draft is removing the independence of BI regulated by Article 9 the BI Act 1999. It could be assumed that the BI's freedom to determine policies will be removed.[250] Furthermore the draft of new BI Act is regulating the presence of a monetary council which might interfere in policy. Its draft is also changing the task of bank of bank supervision in which BI will take over and carry out this task from the IFSA.[251]

The draft of new BI Act is still debatable. Supratikno, who is a member of the House of Representative, said that the amendment is expected to encourage growth of national economy and investment through additional authority related to macroprudential policy.[252] Furthermore, the IFSA will concentrate on supervision of illegal insurance and financial technology due to the draft of amendment of BI Act. On the other hand, several researchers and bankers criticize

[248] Walker, G. and Purves, R. (2014) 'The PRA and FCA and the Handbooks of Rules and Guidance' Financial Service Law (3rd Edition)
[249] Article 4 (2) the Act of Bank Indonesia
[250] Fathurohman, I. (2020) 'Undang Kegaduhan, Ini alasan DPR RI Revisi UU Bank Indonesia. Idntimes.com https://www.idntimes.com/business/economy/irfanfathurohman/undang-kegaduhan-ini-alasan-dpr-ri-revisi-uu-bank-indonesia
[251] Fathurohman, I. (2020) 'Undang Kegaduhan, Ini alasan DPR RI Revisi UU Bank Indonesia. Idntimes.com https://www.idntimes.com/business/economy/irfanfathurohman/undang-kegaduhan-ini-alasan-dpr-ri-revisi-uu-bank-indonesia
[252] Fathurohman, I. Sept 3, 2020. Revisi UU Bank Indonesia: OJK Gagal Melakukan Fungsi Pengawasan Bank. Idntimes.com https://www.idntimes.com/business/economy/irfanfathurohman/revisi-uu-bank-indonesia-ojk-gagal-melakukan-fungsi-pengawasan-bank/2

its draft. The plan to form a monetary board might threaten BI's independence. Monetary Boards that are led by Finance Ministry perform tasks which direct monetary policy in line with government policies in the economic sector.[253] Listiyanto, vice director of Institute for Development of Economic and Finance (INDEF), argued that if Monetary Boards control BI, the government might control and manage fiscal and monetary policies. Conseqently, its policies might not be trusted by financial market and might lead to reduce market confidence and also economic crisis might spread or broaden to security and politic crisis.[254] Furthermore, Pardede from Permata Bank argued that the reduced independence and intervention of BI could certainly affect credibility. He explained that BI must be independent, especially from political pressure which could make monetary policy inconsistent and credible difficult to achieve. The government changes every five years, so that the direction of the policy can change. If it is intervened, the long term target will not focus as it has to complete the short term target.[255] Pardede also argued that independence will result in maximally accelerated monetary policy and could maintain financial system stability and support the strengthening of the national economy.[256] However, the thesis will not discuss the draft of the amendment of BI Act due to limitation in Chapter 1.

In contrast, the Bank of England has several primary responsibilities including first, it manages the UK's money supply. It endeavors to retain and maintain stability of sterling price through controlling or managing interest rate with a analysis or view to fulfilling the target of UK government inflation. Secondly, it maintains financial stability. It performs task to protect the integrity of the UK's financial systems from threats of systemic risk. Finally, it performs regulatory supervision of banking and financial services. Under the financial Services Act 2012, most of the responsibilities and tasks are being transferred over to the Bank of England even though a tripartite system including not only the FSA and the UK Treasury but also the Bank of England now supervises regulatory supervision of financial services in the UK.

The Bank of England performed a programme of quantitative easing (QE) to ease monetary policy in 2009 and 2016. It is replacing large quantities of longterm government debt or gilts with overnight deposit in the Bank of England.[257] Its programme amounted to around £375

[253] Article 9A and 9B the draft of amendment of the BI Act
[254] Laoli, N. (2020) 'Agar dipercaya pasar, kedudukan Bank Indonesia (BI) harus independen' Kontan.co.id https://nasional.kontan.co.id/news/agar-dipercaya-pasar-kedudukan-bank-indonesia-bi-harus-independen
[255] Riswan, K., K., (2021) 'RUU sektor keuangan, Ekonom : Bank Indonesia harus independen'. Antaranews.com https://www.antaranews.com/berita/2109734/ruu-sektor-keuangan-ekonom-bank-indonesia-harus-independen
[256] Riswan, K., K., (2021) 'RUU sektor keuangan, Ekonom : Bank Indonesia harus independen'. Antaranews.com https://www.antaranews.com/berita/2109734/ruu-sektor-keuangan-ekonom-bank-indonesia-harus-independen
[257] Allen, W. A. (2017) Quantitative Easing and The Independence of the Bank of England. National Institute Economic Review No. 241. P. R65.

billion in 2009 and its total quantities was around £545 billion in 2006 of which around £100 billion for a Term Funding Scheme to encourage bank credit.[258] Several researchers argued that own solvency of the Bank of England ought to not be over concerned.[259] They revealed that the amount over note issue which received by a bank institution is a kind of additional capital and although other central bank, notably Chile have not been solvent, they have continued to run effectively. Nevertheless, the income for this is transferred to the government straightforwardly or directly and any adjustment to that activities will need legislation. Mostly, any loss created by central bank might be a form of public spending or expenditure that should be approved by the Treasury.[260] The programme of QE might have inevitable implication for the Bank's financial correlation with government that might compromise its independence.[261]

Similarly, Bank Indonesia also performed a program of QE since 2020. The large amount of QE was around Rp. 740.7 trillion rupiah or 4.80% of gross domestic product.[262] In 2021, BI continues to increase additional liquidity around Rp. 14.16 trillion rupiah through performing monetary expansion.[263] Perry Warjiyo who is Governor of Bank Indonesia revealed that liquid instrument to third party fund was around 31.67% and interest rate is low, approximately 3.04%.[264] He also contended that monetary expansion or a program of QE is expected to encourage supply of credit.[265] However, the large amount of QE to encourage supply of credit might be a concern if there is no provision to limit potential excessive credit exposure to either a group company or a bank institution. A risk of moral hazard might arise and increase because

[258] Macleod, R. and Patrick, H. (2013) Scottish independence: the Bank of England (and Wales, Northern Ireland and Scotland). Law and Financial Markets Review. Vol 7. Iss 2.
[259] Allen, W. A. (2017) Quantitative Easing and The Independence of the Bank of England. National Institute Economic Review No. 241. P. R66.
[260] Allen, W. A. (2017) Quantitative Easing and The Independence of the Bank of England. National Institute Economic Review No. 241. P. R66.
[261] Allen, W. A. (2017) Quantitative Easing and The Independence of the Bank of England. National Institute Economic Review No. 241. P. R66.
[262] Pangastuti, T. Feb 10, 2021. BI Sudah Quantitative Easing Rp 740,7 Triliun. Investor.id https://investor.id/business/bi-sudah-quantitative-easing-rp-7407-triliun#:~:text=JAKARTA%2C%20investor.id%20%E2%80%93%20Gubernur,terbesar%20di%20antara%20negara%20emerging
[263] Pangastuti, T. Feb 10, 2021. BI Sudah Quantitative Easing Rp 740,7 Triliun. Investor.id https://investor.id/business/bi-sudah-quantitative-easing-rp-7407-triliun#:~:text=JAKARTA%2C%20investor.id%20%E2%80%93%20Gubernur,terbesar%20di%20antara%20negara%20emerging
[264] Pangastuti, T. Feb 10, 2021. BI Sudah Quantitative Easing Rp 740,7 Triliun. Investor.id https://investor.id/business/bi-sudah-quantitative-easing-rp-7407-triliun#:~:text=JAKARTA%2C%20investor.id%20%E2%80%93%20Gubernur,terbesar%20di%20antara%20negara%20emerging
[265] Pangastuti, T. Feb 10, 2021. BI Sudah Quantitative Easing Rp 740,7 Triliun. Investor.id https://investor.id/business/bi-sudah-quantitative-easing-rp-7407-triliun#:~:text=JAKARTA%2C%20investor.id%20%E2%80%93%20Gubernur,terbesar%20di%20antara%20negara%20emerging

the majority of bank institutions has big capital level, around 22% and they have good liquidity based on figure 2.2.8 and 2.2.9 which already discussed in Chapter 2. Therefore, limiting credit exposure to either a group company or a bank institution might be considered to reduce risk of credit default or the occurrence of similar case, like Century Bank which provided majority of its credit to a company that is owned by the same shareholder as the bank without sufficient collateral.

3.3.3. Indonesia Deposit Insurance Corporation (IDIC)

Government introduced the Act (the 2004 Act) of Indonesia Deposit Insurance Corporation (IDIC) No. 24 Year 2004, but starting its fully operational on September 2005. The primary function of the IDIC is to both protect depositors and maintain financial stability. Under article 4 the 2004 Act, it also formulates, determines and performs policies to resolve both systemic and non systemic banks.

The 2004 Act would be applied to all commercial banks and rural banks. These banks must be an IDIC membership. They also have to submit and fulfill documents regulated by the 2004 Act, and pay contribution of membership, a semi annual premium of fixed rate around 0,1% of the montly average total deposit balance for each period of time.[266] They could calculate the premium that have to be paid, but the IDIC would verify and assess the calculation. If there is a difference, they have to make adjustment of a premium.

The 2004 Act authorized the closing program of Blanket Guarantee and has lowered the coverage of DI within 18 months steadily since its effective date of implementation. Under Article 100(2a), from September 2005 to March 2006, the 2004 Act provided explicit full guarantee which merely provide fully insurance of bank deposit, not including liabilities of bank. After this period time, the 2004 Act regulate a restriction to coverage of DI explicitly which would gradually lower from Rp 5 billion rupiah between March 2006 and September 21, 2006, Rp. 1 billion rupiah from September 21, 2006 to March 21, 2007, and Rp. 100 million rupiah for after these period time, respectively. However, once financial instability occured in Indonesia in 2007, the government introduced provision No. 66 Year 2008 (the 2008 provision) to respond the distress. The 2008 provision augment the coveragae of DI from Rp. 100 million rupiah to Rp. 2 billion rupiah since October 2008 until now.

Similarly, the UK also implements a scheme of deposit insurance under Financial Service Compensation Scheme (FSCS). FSCS which is the statutory last resort fund in the UK for

[266] Article 9(b) the 2004 Act

depositors of legal financial institutions was established by the FSA under Part XV of the Financial Service and Market Act (FSMA) 2000 and began its operational on December 1, 2001. It is a single scheme manager to provide payment of compensation once a financial institution could not be able or possibly to not be able, to fulfill claims against it. However, it has a narrow function and run as a "pay-box" which denotes that its function is to manage the scheme administration, make collecting of contributions from legal company member and to make payments of compensation to authorized claimants once required. It has no authorities not only in the process of regulation but also in the insolvency process of an insolvent bank institution.[267]

However, the FSCS applies different minimum degree of coverage of Deposit Insurance (DI) protection which was 100% of the first GBP 35,000 and then was augmented to 100% of GBP from October 2008. The Directive of Deposit Guarantee Schemes would raise the payment of minimum compensation to EUR 50,000 in June 30, 2009, and EUR 100,000 in December 31 2010, except concluded by the Commission this is inappropriate. However, in the UK, the FSCS enhanced the limit of protection level in January 30, 2017 to GBP 85,000 and to GBP 170,000 for joint account. Mark Neale, Chief Executive of FSCS, expresses that an "increase of limit of FSCS is to safeguard more funds and more public that would safeguard approximately by 98% of people in the UK, resulting in the public confidence of their fund that would be safe in building societies, bank institutions and credit unions".[268]

The following section will discuss the prudential provision, particularly capital and liquidity provision in Indonesia which are made by regulatory bodies to protect bank from failure.

3.4. Capital and liquidity provision in the UK and Indonesia

3.4.1. The UK/The EU

In the late 1990s, the Financial Service Action Plan (FSAP), the agenda for the EU's financial reforms, proposed revision of the capital structure, particularly in the context of the parallel assessment of the 1988 Basel Capital Accord. The proposal for the revised capital framework was presented by the Commission on 14 July 2004 and included two directives for recasting the Capital Adequacy Directive (CAD) and the Codified Banking Directive (CBD). The Commission's proposal was approved on 28 September 2005, with amendments by the

[267] Campbell, A., Protecting Creditors of Insolvent Banks: How should the rights of different types of creditors be best managed, in Financial Crisis Management and bank resolution ed. Labrosse, J.R., Olivares-Caminal R., Singh D., Informa 2009, p. 207.

[268] FSCS Team, January 30, 2017. Updated £85,000 deposit limit. FSCS.org.uk http://www.fscs.org.uk/news/fscs-news/new-85000-deposit-limit/

European Parliament, and finalised on 14 June 2006. On 30 June 2006, the CRD and recast CAD were issued or published.

The clauses of CRD 2006 were reviewed because of a concern of inadequacies in the framework of regulation that were revealed by the financial instability. The first review of the CRD was initiated in 2007. In April 2008, the Commission presented a first formal proposal. The final proposal for amending the CRD and recast CAD was provided by the Council in the October 2008. The Council adopted the first review measures (CRD2) in September 2009. The CRD 2 was published in November 2009 (Directive 2009/111/EC). It was introduced to update aspects of the CBD which raised issues regarding the regime of large exposure, the delineation of hybrid capital instruments and the arrangements of supervision.

A second legislative proposal was published by the Commission on 13 July 2009 for amending the CRD. It raised concerns involving capital requirements not only for a more severe regime for the trading book and the treatment of the controversial complex securitisations but also specific disclosure requirements. A further set of proposals for CRD amendments was issued in the first half of 2010. On 24 November 2010, the council adopted the rules on compensation policy, trading books and securitisation under Directive 2010/76/EU (CRD 3). A significant change of CRD III relates to the structure of remuneration and capital requirements for banks and investment firms.[269] In the UK, the leading role for adopting and implementing the new remuneration provisions was played by the FSA. On 10 December 2010, the final proposal of Guidelines on Remuneration and Policies and Practices was issued by the Committee. The CRD III was published on 14 December 2010 in the official journal and came into force on 1 January 2011 for CRD III remuneration provisions.[270]

The CRD IV was introduced by the EU in 2013 and included Directive 2013/36/EU (the CRD) and Regulation No. 575/2013 (The CRR) which have been applied in the EU states since 1 January 2014.[271] These provisions aim to boost prudential requirements for bank institutions and maintain adequate liquidity and capital reserves. The CRD sets out corporate governance of bank institutions, requirements on internal risk management and responsibilities and powers of national authorities, notably supervision, authorisation and capital buffer and sanctions. The CRR establishes the provisions for calculating capital requirements but also reporting and

[269] PLC Financial Service, CRD III, Thomson Reuters Practical Law (accessed on 18 August 2019) https://uk.practicallaw.thomsonreuters.com/5-503-2593?transitionType=Default&contextData=%28sc.Default%29

[270] Vaillant, I (2012) 'Banks' Remuneration Rules (CRD III): Are they implemented and do they work in practice?' Workshop Implementation of Banks' Remuneration Rules (CRD III), Brussel, European Banking Authority.

[271] European Council (EC) (Council of the European Union), 'Capital Requirements for the banking sector' https://www.consilium.europa.eu/en/policies/banking-union/single-rulebook/capital-requirements/

general obligations for liquidity requirements. In July 2015, a public consultation was held by the Commission to respond to reporting requirements under the provision of prudential requirements for banks, particularly the potential effect of capital provisions on bank financing of the economy. In May 2016, as part of the review, two consultations were held by the Commission, on proportionality in the future capital requirement of market risk and the NSFR in the EU.

The reformed version of Basel III, namely Basel IV, was published by BCBS in December 2017. It is aimed to lower the excessive RWA variability and restore reliability of the RWA calculation through[272] (a) Augmenting the SA's robustness and risk sensitivity for both operational risk and credit risk; (b) Adding to the ratio of risk weighted capital not only a revised and robust capital floor but also a finalised leverage ratio (c)Restricting the use of IRB methods. It would be implemented in 1 January 2022. Further legislative proposals of the CRD V package were adopted by the Commission in May 20219. The review of the CRD was expected to tackle not only several shortcomings of provisions but also contribute to maintaining the ability of the banking system to encourage the economy.[273] The shortcomings of the provisions include: (a) bank institutions maintain the binding leverage ratio at approximately 3% but they ought to fulfil the requirement with more than 49% of CET1 capital; (b) the review relates to waivers of capital and liquidity within cross border large banking organisations; and (c) it relates to the review of the structure of macro prudential provision in line with the European Systemic Risk Board proposals. Another proposal review is associated with minimising the impact of exceptional NPL removal on the parameter of loss given the default employed in IRB methods to make calculations for credit risk.

Therefore, the CRD IV/CRR is becoming a mostly complex normative structure including extensive prudential provisions and bank resilience measures. The lessons learned from the crisis and plan of regulatory amendment do not so far seem to have revolutionised the regulatory framework. The measures mostly tackle gaps, specificities and issues appropriately and also strengthen the BCBS standards on capital, liquidity and leverage, and therefore respect the ambition and balance of the Basel III structure.

[272] BCBS, 2017, Basel III: Finalising post crisis reforms. BIS
[273] Stamegna, C. (2019) 'Amending capital requirements: The CRD V package.' European Parliamentary Research Service

3.4.2. Indonesia

3.4.2.1. Indonesia capital and liquidity provisions

Provisions on minimum capital requirement in Indonesia have undergone several changes since 2008. The capital provision is different from other regulations that are introduced following debate of the documents or legislative procedure. According to the IFSA Act, the capital provision is made by financial authorities who regulate or supervise the banks. Before the IFSA Act, banks were supervised by Bank Indonesia, but since introduction of the IFSA Act, bank supervision has been conducted by the IFSA. Several amendments have been made to adjust the economic conditions, but primarily, insufficiency in the structure of regulation has been revealed as a result of the financial instability. The thesis will discuss amendments of capital provision introduced from 2008 to 2016. Further amendments are also presently under debate, in line with debate occurring in the FSB and the Basel Committee[274] and will be represented in subsequent reviews of the capital provision in Indonesia. Specifically, the implementation of Basel III is adjusted in line with the national interest.

In September 2008, Bank Indonesia introduced the provision of minimum capital requirement, PBI No. 10/15/PBI/2008 (The 10 provision 2008), but this came fully into force starting 1 January 2009. The 10 provision 2008 was initiated so as to provide updates of aspects of capital provision in line with International standard, Basel II that had not been adopted since being published by the Basel Committee in 2004. It is argued that Bank Indonesia has been late to adopt Basel II. he background related primarily to the introduction of the 10 provision 2008, including the minimum capital requirement that must be held by banks, hybrid capital instrument, and type of RWA that needs to be calculated by banks. The debates were for the most part not influenced by the lessons drawn from the financial instability, but further significant amendments related to adoption of the developments of International standard, Basel II.

On 28 November 2012, Bank Indonesia introduced a minimum capital provision under PBI No 14/18/PBI/2012 (the 14 provision 2012). This provision changed the 10 provision 2008. In order to create soundness and safety in the bank system, the framework, requirement and calculation of banks' minimum capital needed to be adjusted in line with the International standard. The 14 provision 2012 introduced further adoption of the International Convergence of Capital Measurement and Capital Standard: A Revised Framework, or Basel II. This

[274] OJK Press Conference (2017) 'implementation of Basel III in line with national interest' SP 106/DHMS/OJK/XII/2017, Jakarta 8 December 2017

involved not only adoption of ICAAP and SREP but also mitigating other risks and implementation of Capital Equivalency Maintained Assets (CEMA). ICAAP is a process to determine minimum capital in line with bank risk profile. The ICAAP was reviewed by Bank Indonesia under SREP to ensure the amount of bank minimum capital in line with bank risk profile. Besides, the 14 provision 2012 considered other types of risk that had not been regulated by the 10 provision 2008, including risk of credit concentration, market for banking book, liquidity risk, strategy risk, law, reputation, and impact of implementation of stress testing.

On 12 December 2013, Bank Indonesia changed the 14 provision 2012 with PBI No. 15/12/PBI/2013 (the 15 provision 2013). The 15 provision 2013 came fully into force starting 1 January 2014. This provision adopts several prompt regulatory responses to the instability from Basel III. This provision concerned mitigating excessive risk taking through obligation of improvement of the quality and quantity of their capital to be able to absorb the risks by either instability or increase of excessive bank credit. Banks can improve the quality of their capital through the adjustment not only of components and requirements of the capital instrument but also the capital ratio. The enhancement of quantity of bank capital is reached through obligation on making additional capital as a buffer. Banks must provide both minimum Tier 1, 6% of RWA, and minimum Common Equity Tier 1, 4,5% of RWA for individual institutions or consolidation with subsidiary companies. The amount of additional capital as a buffer includes a capital conservation buffer of around 2,5% of RWA, countercyclical buffer of around 0-2,5% of RWA, and capital surcharge for D-SIB of around 1-2,5% of RWA. Minimum core capital and buffer have different transition time. The conservation buffer was implemented gradually from 1 January 2016 to 1 January 2019 depending on bank risk profile.

On September 2014, the IFSA published a consultative paper on the framework of the Basel III LCR. On 23 December 2015, the IFSA introduced the provision no. 42/POJK.03/2015 on the obligation for commercial banks to meet the LCR ratio. This provision aims both to establish or enhance the soundness and safety of the banking system through holding adequate liquidity to anticipate financial instability and to boost quantities of HQLA to anticipate net cash outflow in line with the International standard. On 29 January 2016, the IFSA introduced a new minimum capital requirement.[275] In the majority of the content and its clear vision as to the way forward this provision is relatively similar to the previous provisions[276], but it does not

[275] The provision no. 11/POJK.03/2016
[276] The BI provision No. 15/12/PBI/2013

seem to clearly explain either how the concerns would be addressed or give information on important changes with potential high impacts. This new provision does not provide substantial changes relating to the new technique to absorb the losses. Although the changes allow insertion of coordination between the IFSA and authorised authority when determining the method of calculation and determination of capital level for D-SIB (article 6 (6)) and for systemic banks (Article 5 (2)), there are no guidelines or methods or further information or other provisions to explain or regulate systematically.

On 22 September 2016, the IFSA introduced the 34 provision 2016 which fixed and changed several rules in the 11 provision 2016. The concerns of the 34 provision 2016 are mostly similar to those of the 11 provision 2016, specifically adoption of Basel III including components of capital requirement, core capital and a buffer through some insertion and elimination of the 11 provision 2016. It does not highlight several other aspects, such as credit valuation adjustment (CVA), sovereign exposure, procyclicality, further revision or guideline of internal rating-based approach and determining output floor for RWA from an internal model. On 13 July 2017, the IFSA introduced the provision No. 50/POJK.03/2017 about obligation to satisfy NSFR for commercial banks. This provision aims to establish or augment the soundness and safety of banking system and also to maintain stable funding based on asset composition and transaction of administrative account in line with International standard.

Most likely, the IFSA will amend the 34 provision 2016 or reform the provision to implement further adoption of Basel III in line with national interest, but will also be expected to tackle these issues. Wimboh Santoso, principal Commissioner of the IFSA, stated that the IFSA will carry out legal reforms associated with the Basel III framework in line with the national interest, including such as RWA for sovereign exposure of around 0%, but also relating to reduction of the complexity of RWA calculation and improvement of aspects of comparability and transparency.[277]

Therefore, through further legal reform, Indonesia is adopting a mainly dense normative structure covering extensively aspects of prudential provisions, particularly capital and liquidity provision in line with the national interest. These legal reforms do not seem to have changed the structure of prudential provision significantly. They have primarily tackled the gaps, inadequate supervisory review, disclosure requirement, and tightening of regulatory treatment.

[277] OJK Press Conference (2017) 'implementation of Basel III in line with national interest' SP 106/DHMS/OJK/XII/2017, Jakarta 8 December 2017

3.4.2.2. The role of capital and liquidity provision in Indonesia banking instability

Indonesia financial instability was characterised by the failure of Century Bank to fulfil requirement of both minimum saving account and capital. The story about financial instability in Indonesia started to surface in September 2008, when capital holding of Century Bank was merely 2.35% in this time.[278] It faced serious concerns of liquidity between 31 October and 3 November 2008 and proposed facilities of short liquidity assistance to Bank Indonesia. However, it failed to fulfil the requirement of this facility as based on capital assessment of Century Bank, its capital decreased significantly from -3.52% to -35.92% in these period of time.[279] In reaction, IDIC beefed up liquidity, which stemmed the concerns in the one bank institution so as to avoid either impact on other part of Indonesia banking system or contagion. It provided total temporary capital participation approximately Rp. 6.76 (in trillion rupiah) over different period.[280]

a. **The Story of Century Bank in Indonesia**

The story of Century Bank provides a clear example of the failure of prudential provision in Indonesia to regulate capital and liquidity provision effectively. The collapse of Century Bank is the most discussed a failed bank in Indonesia which was bailed out following the event of 2008. The failure of Century Bank occurred after the bank did not meet capital and minimum saving account requirements caused a run due to a decrease in trust. The failure to meet capital requirement were largely in relation to a decrease in asset quality. Central Bank which supervised the banks in 2008 failed to recognize this risk because of moral hazard which caused a rise of either alleged fictive credit or loan portfolio risk.[281] Maryono, the former principal director, said that a decrease in asset quality occurred since the credits were provided without safe security and were not repaid by debtors, resulting in poor quality in the majority of their loan portfolio.[282] Moral hazard of the Century Bank's owners allowed the banks to not only supply the majority of their credit to the companies that are owned by the same shareholder as

[278] BBC Indonesia, .2018. 'Kilas balik kasus Bank Century' .bbc.com <https://www.bbc.com/indonesia/berita_indonesia/2014/07/140716_bankcentury_101> 1 October 2018. Kurniawan, Ari and Shomad, A. (2019) 'Reflection on Century Bank: A Failed Bank in Indonesia.' International Corporate Rescue. Chase Cambria UK

[279] Research Team of Century Case, 'Skema Indikasi Korupsi Kasus Bank Century (Berdasarkan Hasil Audit BPK)' Public Accountability Review

[280] Research Team of Century Case, 'Skema Indikasi Korupsi Kasus Bank Century (Berdasarkan Hasil Audit BPK)' Public Accountability Review

[281] Research Team of Century Case, 'Skema Indikasi Korupsi Kasus Bank Century (Berdasarkan Hasil Audit BPK)' Public Accountability Review

[282] HukumOnline, 2018. 'Mantan Dirut Beberkan Persoalan di Bank Century' <https://www.hukumonline.com/berita/baca/lt535e40cddfa2c/mantan-dirut-beberkan-persoalan-di-bank-century> 2 October 2018.

the bank without sufficient collateral but also possibility to provide or offer fictive products. The former principal director of Century Bank also said that the bank showed bad management of either banking assets or its loan portfolio, notably not only ownership of other securities but also negative minimum saving account in Bank Indonesia.[283] He showed that the bank held not only negative minimum saving account in Bank Indonesia but also poor quality of ownership of its securities that were classified as an illiquid asset. Furthermore, he explained the bank did not secure or hold its time deposit securities adequately or safely. Hence, the bank faced difficulties to obtain cash promptly when required to either convert an illiquid asset into a liquid asset promptly or augment the bank's capital because of poor quality assets.

b. **Negative capital and illiquid asset as a prudential provision concerns in Indonesia**

Century Bank is an example of the problem of prudential provisions focused on negative capital, inadequate supervision on capital requirement and negative balances in minimum saving account in BI which was highlighted as a fundamental driver of being illiquid bank, bank run, and the failure of Century Bank. Bank Indonesia identified Century Bank as a failed Bank due to the following considerations:[284]

1. On 31 October 2008, Capital of CB was negative at around -3,53% and it was deemed that the capital could not be increased to around positive 8%. As a result, CB might possibly be an insolvent bank. This was because the owners could not enhance the capital or find new investors.
2. CB was an insolvent bank because of negative balances in minimum saving accounts in BI. They could not meet their contractual obligations as a bank and were unable to pay or provide funds to depositors of around Rp.401 billion rupiah on 19 November 2008. Also, CB had an obligation to provide funds of around Rp.458 billion rupiah on 20 November 2008.

Negative capital of Century Bank contribute to an increase of moral hazard and excess risk assumption. It allowed the owners to enhanced excessive risk taking and provide alleged fictive credit. When the bank suffered unexpected losses, the shareholders did not bear and carry the business risks. Century bank did not have a loss absorber and possibly could not use its liquid

[283] A.P. Saptohutomo, 'Saksi paparkan tiga kebobrokan pengelolaan Bank Century' <https://www.merdeka.com/peristiwa/saksi-paparkan-tigakebobrokan-pengelolaan-bank-century.html> 2 October 2018.

[284] Research Team of Century Case, 'Skema Indikasi Korupsi Kasus Bank Century (Berdasarkan Hasil Audit BPK)' Public Accountability Review

assets for counteracting the risk, thus theoretically not complying with the principle of capital theory.

Lack of capital or negative capital drove Century Bank to not only supply the majority of credit to a company that is owned by the same shareholders but also manage investment fund from investor or customer improperly and irresponsibly. Firstly, the business of Century Bank was relating to bad management of investment fund. Century Bank collaborated with Antaboga which is issuing company (issuer) of investment fund, but they had similar ownership.[285] Century Bank an agent focused on offering product of investment fund (Antaboga product) but based on investigation of Bank Indonesia, Antaboga product which was offered and sold did not have licence from the Capital Market and Financial Institution Supervisory Board (Bapepam-LK).[286] Furthermore, Century Bank did not manage properly and responsibly investment fund which is obtained from investor or customer properly. Funds obtained from investor did not invest properly as information provided to investor, such a time deposit, state obligation and Indonesian state owned enterprises[287] but the fund was managed secretly by Antaboga which is a manager of investment as well. Interestingly, the sales of product is not recorded in the Bank's balance sheet and the agreement between Century and Antaboga was not found. As a result, Bank Indonesia faced a difficulty to track and supervise the sale of their product. It could be assumed that there are concerns relating to disclosure requirement, moral hazard, untruthful reporting and inadequate supervision. However, there are documents that showed their activities. The document reveals the purchase of Antaboga investment product is transferred to official account of Century Bank legally.[288] Another document showed involvement of Century Bank in offering illegal product of Antaboga. This document is signed by principal Director of Antaboga, Hendro Wiyanto and Marketing Director of Century bank, Gondokusumo. [289]

[285] B1, 2010, Nasib nasabah Antaboga diperdebatkan, Beritasatu https://www.beritasatu.com/ekonomi/10666/nasib-nasabah-antaboga-diperdebatkan

[286] Bapepam-LK is responsible for granting licenses, setting rules and regulations, supervising market participants, and establishing capital accounting standards

[287] Detikfinance, 2009, Nasabah Beberkan Bukti Keterkaitan Bank Century dan Antaboga, Detik.com https://finance.detik.com/bursa-dan-valas/d-1083308/nasabah-beberkan-bukti-keterkaitan-bank-century-dan-antaboga

[288] Detikfinance, 2009, Nasabah Beberkan Bukti Keterkaitan Bank Century dan Antaboga, Detik.com https://finance.detik.com/bursa-dan-valas/d-1083308/nasabah-beberkan-bukti-keterkaitan-bank-century-dan-antaboga

[289] Detikfinance, 2009, Nasabah Beberkan Bukti Keterkaitan Bank Century dan Antaboga, Detik https://finance.detik.com/bursa-dan-valas/d-1083308/nasabah-beberkan-bukti-keterkaitan-bank-century-dan-antaboga

Secondly, the business of Century Bank concentrated on supplying the majority of credit to a company that is owned by the same shareholders as the bank without sufficient collateral. It could be assumed that they did not prioritize to provide the majority of credit to society and mitigate the risk properly. To do this, Century Bank focused on supplying credit to companies connected with the bank's shareholders. Former Governor of Bank Indonesia said that the owners possessed another ten subsidiary firms and it was assumed that the bank potentially supplied the majority of their credit to these firms without safe security.[290] Where these companies obtained more funding for growth and achieved success, the bank expected an increase in their earnings as the majority of their credit was supplied to these companies and vice versa. Consequently, Non-Performing Loan and a decline in asset quality increased when these companies or majority of debtors failed to repay their credit. The risk of decreased capital enhanced at the bank when large amount of credit was provided to these companies with close link to the owners.

The bank's capital show a decrease from -3.52% on 31 October 2008 to -35.92% on 23 November 2008. The research of Kurniasari showed that it is difficult to analyse calculation of minimum capital in line with capital provision based on the balance sheet of Century Bank, because firstly,[291] there is a difference between data of the bank's balance sheet and calculation of minimum capital requirement. For example, in the bank's balance sheet, several parts of asset and liability were detailed in Rupiah and foreign currency but in the calculation of risk weighted ratio, the balance sheet was detailed based on receiving party or issuing party. Secondly, when performing calculation to determine risk weighted ratio, there is a difference between monthly published financial reports and calculation of minimum capital requirement. It could be assumed that there are concerns relating to accuracy data, trust of data, unstandardized data, and no consistency of bank financial report, and potentially uncertain quality of result or uncertain result of capital calculation. Furthermore, she also revealed that the change of this capital structure occurred significantly in a month due to a huge increase of default asset. Consequently, lack of capital contributed to temporary capital participation by IDIC regarding information provided by Bank Indonesia. However, The Finance Ministry revealed its disappointment that Central Bank or Bank Indonesia which supervised banks, particularly Century Bank in 2008 had given untruthful or inappropriate information or data on

[290] Liputan6, October 2018, 'Kegagalan Bank Century Karena Pemilik' <https://m.liputan6.com/amp/255529/kegagalan-bank-century-karena-pemilik>

[291] Kurniasari, W., Juni 2012, "Analisis Neraca Kasus Pemberian Dana Talangan (Bailout) Bank Century", Jurnal InFestasi, Vol 8 No. 1, p. 97-106
https://journal.trunojoyo.ac.id/infestasi/article/view/1257/0

the it's up to date condition[292] It could be assumed that the supervisory authority merely follow or verify or validate the report provided by banks. Otherwise, it could be assumed that Bank Indonesia did not do adequate or strict supervision. When Bank Indonesia did proper supervision, they would provide proper or reliable data on the real bank condition. Inadequate supervision might be potentially caused by no disclosure requirements on the competent authorities. This potential problem focused on either no technical criteria, methodologies being used for review and evaluation; or lack of clear measurement procedure that will be discussed further in Chapter 5 and 7.

The possible consequence was an increase of loan portfolio risk and alleged fictive product but asset quality was poor and thereby potentially contributed to a decline in bank capital due to asset default which were categorised as an illiquid asset. This led to a decrease in trust, with queues of anxious depositors or investors rushing to withdraw their money but Century Bank did not have any fund or cash, resulting in failing to fulfil their obligation to pay their liability to depositors or investors. Maryono, the former principal director, showed that Century Bank faced three problems that led to liquidity difficulty,[293] firstly, it did wrong management of assets, notably securities of time deposit. Secondly, it had negative minimum saving account in Bank Indonesia. Finally, its securities was poor quality or no rating. Therefore, Century Bank faced not only a concern to augment the bank's capital but also a liquidity problem due to illiquid assets which are not be able to convert into cash or liquid asset quickly in order to cover the net liquidity outflows, resulting in the inflow of liquidity less liquidity outflow.

c. **Lesson from Century Bank**

The failure of Century Bank highlighted the shortcomings of the model of prudential provisions in Indonesia and the problem associated with moral hazard, inadequate supervision, and illiquid asset. Negative or less capital caused by a decline in asset quality because of not only moral hazard provided incentives for the bank or poor senior management practice to engage in supplying credit to companies with close link to the owners but also alleged fictive credit and fraud. The bank got attention as it did not supply credit prudently and did not manage investment fund from investor or customer properly and responsibly.[294] It could be assumed

[292] N. Lumanauw, (2018) 'Sri Mulyani: Bank Century Bukan Bermasalah Likuiditas Tetapi Bangkrut' Beritasatu.com
<http://www.beritasatu.com/hukum/181583-sri-mulyani-bank-century-bukan-bermasalah-likuiditas-tetapi-bangkrut.html >
[293] Tribunnews, April 2014, "Bank Century Punya Tiga Masalah Utama" .Tribunnews.com https://www.tribunnews.com/nasional/2014/04/28/bank-century-punya-tiga-masalah-utama
[294] Gaol, Helen Lumban, February 2010, "Menguak skandal bank Century", BBC Indonesia. BBC.com https://www.bbc.com/indonesia/laporan_khusus/2010/02/100213_bankcenturystory

that one of the prime motivation for the owner at the Century bank was the owner interest at the bank, notably building their business group, earning substantial profit for their groups, and gaining advantage as the owner of the bank. Either bad management or poor senior management practice on the interest of the owners produced potential increase in Non-Performing Loan (NPL), a decline in asset quality, and illiquid asset.

The factors merely discussed above show that negative capital and inadequate supervision could lead to moral hazard which led to loan portfolio risk, alleged fictive credit and fraud. Admati and Hellwig argued that the owners of bank are encouraged to take more excessive risk when they possess a thin layer of equity.[295] However, excessive risk assumption focus on credit distribution without safe security leads to poor asset quality.[296] Poor quality of ownership of its securities encourage an increase of potential illiquid asset when debtors failed to repay their credit. This can result in a decline in asset quality which potentially led to concerns which avoided the Century Bank from obtaining cash quickly when needed to either convert an illiquid asset into a liquid asset quickly or the capital of Century Bank. However, the concern of moral hazard might be tackled by supervisory bodies enhancing a good reputation based on bank capital.[297] The aim of the capital treatment relating banking activities is to impose and maintain discipline on banks in considering their risks of transaction.[298] Furthermore, capital requirement assists to ensure and enhance protection of bank solvency which might prevent or evade a risk of bank run.[299]

A good reputation based on bank capital might be hard to be built if there are potential concerns of not only accuracy data, trust of data, unstandardized data, and no consistency of bank financial report, and potentially uncertain quality of result or uncertain result of capital calculation but also disclosure requirement and inadequate supervision relating to either no technical criteria and methodologies being used for review and evaluation; or lack of clear measurement procedure that will be discussed further in Chapter 4 and 6. This drives the Indonesia banks to provide the possibility of untruthful reporting to a supervisory authority. For example, Indonesia banks might not report truthfully to Indonesia Financial Supervisory

[295] A. Admati and M. Hellwig, *The Banker's New Clothes: What's wrong with banking and what to do about it* (Princeton University Press, Princeton, 2013).
[296] HukumOnline, .2018. 'Mantan Dirut Beberkan Persoalan di Bank Century'. HukumOnline.com <https://www.hukumonline.com/berita/baca/lt535e40cddfa2c/
mantan-dirut-beberkan-persoalan-di-bank-century> 2 October 2018
[297] A.D. Morrison and L. White, 'Crises and Capital Requirements in Banking', *The American Economic Review* 95(5) (Dec. 2005) 1548-1572.
[298] A. Wilkinson and D. Turing, 'Regulation and Insolvent Bank', *Journal of Financial Regulation and Compliance* 4(4) (1996) 331.
[299] Douglas W. Diamond and R.G. Rajan, 'A Theory of Bank Capital', *Journal of Finance* 55(6) (2000) 2431-65.

Authority (IFSA), possibly due to capital or data manipulation. The problem might arise when Indonesia's authorities merely follow or verify or validate the report provided by banks. Otherwise they apply inconsistency of reviews, evaluation and measure as they do not have clear measurements, criteria, technical standard assessment procedure or methodology used for review and assessment. This could potentially lead to difficulty in reporting, scrutinizing or analysing the actual condition of Indonesia banks, resulting in uncertain quality of result or uncertain reputation on bank capital.

d. **The 34 provision 2016 and the 11 provision 2016 and Indonesia LCR provision**

The response to the failure of prudential provision regarding the case of Century Bank was to demand further scrutiny of capital and liquidity aspect, notably illiquid asset, inadequate supervision, and disclosure requirement. The 34 provision 2016 and the 11 provision 2016 are thus envisaged to enhance financial stability by improving quantity and quality of bank capital. The purpose of these provisions are envisaged to be the " ……creating the soundness and safety of the Indonesia banking system….".[300] One of the key measures of these provisions are that it requires improvement of capital requirement in line with International standard by improving quantity and quality of bank capital. This is designed of course to enhance the bank ability to absorb risks. However, as the Century Bank case, the provisions have not addressed the fundamental weaknesses in Indonesia prudential provision.

One of the fundamental flaw of these provisions is that first, capital focuses entirely on general supervisory review process including interaction between ICAAP and SREP without regulating specifically disclosure requirements on the competent authorities and no regulating disclosure requirement yet explicitly. This focus was too wide and general; there are either no technical criteria or methodologies being used for review and evaluation; or lack of clear measurement procedure and no disclosure requirement yet explicitly. Therefore, the capital provisions miss the potential significant weakness in supervisory review process and disclosure requirement. These weaknesses provide not only potential possibility of untruthful reporting to a supervisory body because of capital or data manipulation but also possibly difficulty in reporting, scrutinizing or analysing the actual condition of Indonesia banks. Second, the description of LCR focuses entirely on its calculation by dividing HQLA by the amount of its net cash outflow over a 30 days period of stress scenario. This description might drive or lead to potential concern which is an illiquid banks which will be discussed further in chapter 4 and 6.

[300] The provision no. 11/POJK.03/2016 and The Provision No. 34/POJK.03/2016

Therefore, more than a decade after the failure of Century Bank, Indonesia banks experienced yet another case in prudential provisions in which Muamalat Bank in 2018-2019 and Bukopin Bank in 2020 faced concern, including lack of capital and illiquidity concern. However, these case study will not discuss further completely in this thesis as the thesis limit the data from 2008 to 2017 and Muamalat Bank and Bukopin Bank were categorized as a failing bank, unlike Century Bank which was a failure bank and provided bail out by Government, but the thesis will discuss these bank concerns briefly. First, in 2018, Muamalat Bank faced concerns including lack of capital, high NPL which is over 5% exceeding the maximum level determined by regulator authority, and reluctance of existing shareholders to inject or provide more capital. Its capital level lower to around 11,58% and its net profit also lower approximately 94,1% year on year from Rp. 100,9 billion rupiah to Rp. 6,57 billion rupiah.[301] Its operational cost also increased from 94,38% by Quarter III 2018 to 98,83% in Quarter III 2019.[302] Second, in 2020, Bukopin Bank faced illiquidity concern. Its costomers cannot withdraw their money easily. The management of Bukopin Bank proves the difficulty or restriction of withdrawal transaction.[303] This concern shows that the customer experience lack of trust or distrust to not only Bukopin bank but also the supervisory authority. The capital level of Bukopin Bank also lower from 13,29% in 2019 to 12,59% by 2020 and its NPL level increased from 5,23% to 5,33% for these same period of time.

The cases of Century Bank, Muamalat Bank and Bukopin Banks in Indonesia show the importance of considering capital requirements and liquidity as part of prudential standards in order to prevent Indonesia banks from failure. Many of the symptoms of either the bank failure or failing banks in Indonesia were relating to lack of capital, moral hazard, high NPL, illiquidity concern, inadequate supervisory review, disclosure requirement and aspect of liquidity involving definition of liquidity. The failure of Century Bank and the failing bank, such as Muamalat Bank and Bukopin Bank revealed that the provisions and principle of capital and liquidity which imposed to regulate prudential provision have not worked well. The capital

[301] Saragih, H.P. (2019) 'Terungkap! Ini penyebab masalah kronis di Bank Muamalat' CNBC Indonesia CNBCIndonesia.com https://www.cnbcindonesia.com/market/20191115093424-17-115443/terungkap-ini-penyebab-masalah-kronis-di-bank-muamalat

[302] Sitanggang, L.M.S. (2019) 'Dari NPF naik hingga laba turun, begini kinerja Bank Muamalat di kuartal III 2019'. Kontan.co.id https://keuangan.kontan.co.id/news/dari-npf-naik-hingga-laba-turun-begini-kinerja-bank-muamalat-di-kuartal-iii-2019?page=all

[303] Arieza, U. (2020) 'Duit 'Nyangkut' di Bukopin dan Aksi Penyelamatan Kookmin Bank. CNN Indonesia CNNIndonesia.com https://www.cnnindonesia.com/ekonomi/20200701081544-78-519340/duit-nyangkut-di-bukopin-dan-aksi-penyelamatan-kookmin-bank

provision did not tackle inadequate supervision, weak reputation on bank capital and disclosure requirement comprehensively. The liquidity provision did not tackle the possibility of illiquidity concern as HQLA of Indonesia banks could not cover net liquidity outflow. The weakness of these provisions shall be discussed in detail in Chapter Four and Six. The weaknesses of capital and liquidity provision resulted in the possibility of failing bank and bank failure in Indonesia to recur in the future and influence the health, soundness and safety of Indonesia banks.

The UK regulates aspects of capital and liquidity more comprehensive and robust. The relevance of the UK provisions to mitigate the flaws of Indonesia regulatory pattern is revealed by not only similar legal regime of prudential provisions, particularly Indonesia capital and liquidity provisions but also similar path dependence through incremental evolution. The aspects of the UK capital and liquidity provisions which might provide the basis for Indonesia regulatory solutions include disclosure requirements on the competent authorities which important to maximise transparency and accountability in order to minimise occurrence of abusive practices,[304] disclosure requirement, and liquidity definition which ensure liquidity outflows less the inflows of liquidity. These parts of prudential provisions, particularly capital and liquidity components will be discussed further in the next chapter.

The further analysis of capital and liquidity provision will lead to the following discussion of capital and liquidity principle as a foundation of a prudential regulation. .

3.5. Capital and liquidity principle as a foundation of prudential regulation

3.5.1. Capital Adequacy

One of the important facets of bank monitoring is capital adequacy ratio. A bank's capital is understood as either financing the business infrastructure or providing a loss-absorber on its assets. Banks could mitigate risk of credit provided to borrowers by (a) restricting the default risk on individual credit via appropriate borrower selection, (b) lowering the overall loan portfolio risk by using diversification, (c) pooling the overall risk of the credit portfolio to make the whole default risk more foreseeable.[305]

[304] Commission (2003e) Explanatory Memorandum, Proposal for a Directive of the European Parliament and of the Council amending Council Directives 73/239/EEC, 85/611/EEC, 91/675/EEC, 93/6/EEC and 94/19/EC and Directives 2000/12/EC, 2002/83/EC and 2002/87/EC, of the European Parliament and of the Council, in order to establish a new financial services committee organisational structure, COM/2003/0659 final,5.11.2003.
[305] Mike Buckle&John Thompson, (2004) 'The UK Financial System: Theory and Practice' Manchester University Press p. 349

This might enable banking institutions to protect themselves against the possibility of loss risk by including a premium in their loan interest rate. Then, unpredicted losses of credit are protected by the profits of the banking institution in the first occurrence and eventually by the bank's capital. Therefore, the bank's capital degree is vital in evaluating its solvency in adverse situations. The primary principle is that the shareholders ought to bear and carry the business risks rather than the creditors or depositors. However, each country, referring particularly to the UK and Indonesia, could possibly adopt different levels and quality of capital to fit their circumstances as they have dissimilar market structures, levels of financial development, risks and banking size.

There are several meanings of the word 'capital'. In the banking context, the term is used principally to refer to funding which is not gained by borrowing.[306] It could be deemed as own funds of financial intermediary institutions, banks notably, either their retained earnings or ordinary share capital rather than deposits or borrowed money.[307] In simple terms, it describes a portion of the bank's assets which might not lawfully need to be re-paid to any person.[308]

It is aimed to protect depositors and certain parties, notably other bank creditors, from losses.[309] Having a larger capital cushion enables a bank to absorb the loss, lowering the debt holder's incentive to withdraw money in response to a fall in the bank's asset value.[310] Once a bank suffers a loss, the loss first diminishes capital.

Capital provision is the basis of prudential regulation of banks. It denotes the way in which a bank is funded, particularly regarding debt, equity and other financial instrument ratios, funding which it is required by provisions to hold or maintain, set against its risk weighted assets and the risk of not realising the full asset value.[311] It mitigates the loss risk from a loan portfolio, and the likelihood of creditors withdrawing their money, with effects on the banking system that could damage the larger economy.[312] It could lower the risk of adverse event impact on depositors and other financial institutions.[313]

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[306] Anat R. Admati(2012) 'Examining the Impact of the Proposed Rules to Implement Basel III Capital Standards'
[307] Bank of England (2013) 'Bank capital and liquidity' Q3 Quarterly Bulletin
[308] Elliott, D. J.(2010) 'A Primer on Bank Capital' The Brookings Institution, 2
[309] Richard Scott Carnell, Jonathan R. Macey and Geoffrey P. Miller (2009) 'The Law of Banking and Financial Institution'4th ed. . 252-53
[310] Krishnamurthy, P.(2014) 'Regulating Capital' 4Harv. Bus. L. Rev.1, 29-30
[311] Morrison & Foerster LLP, 2017 'Regulatory capital—purpose, quantity and quality' (lexis nexis).
[312] The join Forum (2001) 'Risk Management Practices and Regulatory Capital : Cross Sectoral comparison' BIS 10-11, 31, 34-38, available at <http://www.bis.org/publ/joint04.pdf> accessed 26 Sept 2017
[313] Morrison & Foerster LLP, 2017 'Regulatory capital—purpose, quantity and quality' (lexis nexis).

One of the capital provisions is capital requirements. The motivation for these is to give protection to the whole banking system from risks.[314] Several analysts have asserted that it is the most effective instrument to avoid financial turbulence.[315] Unlike deposit insurance, it cannot avoid the possibility of a bank run. However, it can lessen the probability of a run and panic by reducing or restricting coordination difficulties among debt holders.[316]

Several academic evaluations have demonstrated that capital can have perverse impacts.[317] In general, high level of capital can affect the banking system's ability to supply credit and liquidity and can increase costs.[318] Significant reviews have been conducted by several researchers to evaluate what effects such regulations would have in terms not only of portfolio risk and balance sheet implications but also regarding safety and soundness.[319]

Firstly, it could influence the balance sheet adversely.[320] Chiuri et al evaluated data on 572 banks in 15 developing states.[321] They found coherent data to indicate that capital provision has caused decreases in loan growth and total lending in these states. Based on aggregated US banking sector data, Elliot indicates that if there is an increase of 2% of the common equity ratio, financial intermediary institutions will be required to augment the lending spread by 39 basis points to uphold their pre-defined target of ROE.[322] . Furthermore, presuming stable RoE and debt cost, King emphasises that a rise in lending spread of 15 basis points could restore the amount lost through a 1% rise in the capital ratio.[323] Secondly, Blum and Hellwig contend that the creation of a rigid relationship between bank lending and capital as a result of enforced provision might augment fluctuations in the macroeconomy through these institutions lending

[314] Krishnamurthy, P. (2014) 'Rules, Standards, and Complexity in Capital Regulation' 43 Journal of Legal Studies, 5278

[315] Anat R. Admati and Martin Hellwig (2013) 'The Bankers' New Clothes: What's Wrong with Banking and What to Do about It'Princeton University Press ; Anat R. Admati, Peter M. DeMarzo, Martin F. Hellwig, and Paul Pfleiderer (2011) 'Fallacies, Irrelevant Facts, and Myths in the Discussion of Capital Regulation: Why Bank Equity Is Not Expensive' Stanford GSB Research Paper No. 2065

[316] Krishnamurthy, P. (2014) 'Rules, Standards, and Complexity in Capital Regulation' 43 Journal of Legal Studies , p. 29-30

[317] Claessens, S. and Kodres, L. (2014) 'The Regulatory Responses to the Global Financial Crisis' (2014) WP/14/46 International Monetary Fund, 22

[318] Claessens, S. (2014) 'Capital and Liquidity Requirements: A Review of the Issues and Literature' Vol 31 Issue 3 Yale Journal on Regulation, 745.

[319] João A. C. Santos, J. A.C (2010) 'Bank capital regulation in contemporary banking theory: A review of the literature.' Financial Markets, Institutions, and Instruments 41-84; David VanHoose (2007) 'Theories of bank behavior under capital regulation' 31 issue 12 Journal of Banking and Finance 3680–3697

[320] Hellmann, T. F., Murdock, K. C. & Stiglitz, J. E. (2000) 'Liberalization, Moral Hazard in Banking, and Prudential Regulation: Are Capital Requirements Enough?' 90 am. Econ. Rev. 147

[321] Chiuri, M. C., Ferri, G., & Majnoni, G. (2002) 'The macroeconomic impact of bank capital requirements in emerging economies: Past evidence to assess the future.' Journal of Banking and Finance, 26, 881–904.

[322] Elliot, D. (2010) 'Quantifying the effects on lending of increased capital requirements.' The Brookings Institutions. 21 September

[323] King, M. (2010) 'Mapping capital and liquidity requirements to bank lending spreads.' BIS Working Paper Series, 324

too much in good periods and not lending enough in difficult periods.[324] Bliss and Kaufman comment that capital requirement can have effects not only on individual banks but throughout the banking world, and could therefore have a knock-on effect on the wider economy.[325]

In addition, there is the impact of increasing the requirements, as, for example, suggested by Basel III, on the economic relationship between developing and developed countries, which could possibly affect the broader economy, specifically 'GDP' in countries such as Indonesia and the UK, for example.[326] It is argued that developing countries that are striving to further their economic development and competitiveness through their dealings with developed countries may be prevented from doing so by higher capital requirements. The actual economic effect on GDP is not certain but studies to assess and estimate these factors have been commissioned by some organisations.[327] The MAG, the Basel Committee and FSB, the IMF, and the Institute of International Finance have all produced studies forecasting that GDP would be adversely affected by implementation of Basel III.[328] Furthermore, bodies including the FSB, IMF, and World Bank have collaborated on research that indicated that these regulatory reforms would have unintended effects not only on developing economies but also emerging markets since they would limit international capital movement and trade finance.[329] Therefore, higher capital might inhibit economic growth, notably in developing countries, although banks in these countries were not at the root of the GFC.

Finally, capital requirements can have cost implications or cause increased risks since they create a liability banking structure that is at odds with normal market outcomes, particularly in relation to the optimal capital structure which enlarges the value of the banks.[330] Higher capital can augment funding costs because if banks do not have the necessary internal or external fund raising capability this may restrict their lending and might compel them to offload assets, with

[324] Blum, J. and Hellwig, M. (1995) 'The macroeconomic implications of capital adequacy requirements for banks.' European Economic Review 39: 739–749.
[325] Bliss, R., & Kaufman, G. (2003) 'Bank procyclicality, credit crunches, and asymmetric monetary policy effects: A unifying model.' Journal of Applied Finance, Fall/Winter, 13,23–31.
[326] Bliss, R., & Kaufman, G. (2003) 'Bank procyclicality, credit crunches, and asymmetric monetary policy effects: A unifying model.' Journal of Applied Finance, Fall/Winter, 13,23–31..
[327] Scott, H. S. (2016) 'Connectedness and Contagion : Protectiong the Financial System from Panics.' Cambridge, MA : The MIT Press, p. 179.
[328] Phil Suttle, (2011) , 'The cumulative impact on the global economy of changes in the financial regulator framework' Inst. Of Int'l Fin.
[329] FSB.(2012) 'Identifying the effects of regulatory reforms on emerging market and developing economies: A review of potential unintended consequences'
[330] Thakor, A. V. (2014) 'Bank Capital and Financial Stability: An Economic Tradeoff or a Faustian Bargain' 6 ann. rev. fin. econ.

potentially destabilising effects.[331] When capital increases, funding costs as a whole go up, resulting in increased incentive to take more, rather than less, risks.[332]

However, first, capital as a loss-absorber could safeguard banks from unexpected loss in their investments.[333] It could protect different categories of bank creditors from unexpected business losses by banks.[334] The existence of capital provisions assures not only depositors and bondholders but also other affected parties that the bank is not under any risk, and could potentially avoid bank runs.[335] Banks, therefore, have to provide assurance that they possess adequate capital so as to absorb unexpected amounts of default or unexpected losses.[336]

Secondly, it could alleviate a number of incentive difficulties. It could assist in aligning the shareholders' incentives with those of the banks' other liabilities holders.[337] It performs as an incentive instrument as much of any losses has to be absorbed by bank owners.[338] Lessening the bank insolvency risk mitigates and reduces the negative externalities of the failed bank, including their effects on the companies and taxpayers who fund government bank guarantees implicitly or explicitly.[339] Inadequate capital can cause too much shifting of the risk to either depositors or bondholders.[340] Acharya argued that incentivising risk taking might lead banks to engage in over speculation or investments linked to high risk activity, thus raising the overall economic aggregate risk.[341]

In addition, capital requirements could assist in internalising the negative externalities.[342] Several researchers have shown that higher capital could minimise and mitigate negative

[331] Caruana, J. (2014) 'How much capital is enough?' IESE Business School conference on "Challenges for the future of banking: regulation, supervision and the structure of banking" London, 26 November 2014, p. 4.
[332] Claessens, S. (2014) 'Capital and Liquidity Requirements: A Review of the Issues and Literature' Vol 31 Issue 3 Yale Journal on Regulation, p. 744.
[333] Jeff Madura (2010) 'Financial Markets and Institutions' 9th ed. p.492.
[334] Norton, J.J. (1989) 'Capital Adequacy Standards: A Legitimate Regulatory Concern for Prudential Supervision of Banking Activities?' 49 Ohio St. L.J. 1299, 1305-06.
[335] Norton, J.J. (1989) 'Capital Adequacy Standards: A Legitimate Regulatory Concern for Prudential Supervision of Banking Activities?' 49 Ohio St. L.J. 1299, 1314-15; Atik, J. (2011) 'Basel II: A Post-Crisis Post-Mortem.' 19 Transnat'l L. & Contemp. Probs. 731
[336] Scott, H. S. (2008) 'Int'l Finance – Transaction, Policy and Regulation' Foundation Press, 15th ed. p. 334-35
[337] Caruana, J. (2014) 'How much capital is enough?' IESE Business School conference on "Challenges for the future of banking: regulation, supervision and the structure of banking" London, 26 November 2014, p. 2.
[338] Marinč, M., Mrak, M., Rant, V. (2014) 'Dimensions of Bank Capital Regulation: A Cross-Country Analysis.' Panoeconomicus, 4, pp. 415-439
[339] Herring, R. & Schuermann, T. Capital Regulation for Position Risk in Banks, Securities Firms, and Insurance Companies , in Capital Adequacy Beyond Basel: Banking, Securities, and Insurance 15, 19 (Hal S. Scott ed., 2005)
[340] Caruana, J. (2014) 'How much capital is enough?' IESE Business School conference on "Challenges for the future of banking: regulation, supervision and the structure of banking" London, 26 November 2014, p. 2.
[341] Acharya, V.V.(2009) 'A theory of systemic risk and design of prudential bank regulation.' J. Financ. Stab. 5(3), 224–255
[342] Caruana, J. (2014) 'How much capital is enough?' IESE Business School conference on "Challenges for the future of banking: regulation, supervision and the structure of banking" London, 26 November 2014, p. 2

externalities arising from systemic risk.[343] Acharya emphasised that generation by externalities of incentive to boost systemic risk justifies the introduction of higher capital requirements to counter exposure to broad risk issues.[344] Other researchers have described capital provisions as a device used by the regulator so as to internalise the cost of bank failure.[345] They therefore perform as a safety net or instrument for addressing the possibility of unexpected financial risks and mitigating and reducing adverse repercussions for external parties, excluding those with a direct interest.[346] As noted in Basel III:

> "Provision internalizes the social cost of failed banks through compelling banks to reserve and keep more equity than they will once they merely consider the private insolvency costs."[347]

3.5.2. Liquidity

One of the potential financial intermediary concerns is a mismatching of the structure of assets and liabilities on the bank's balance sheet. A bank institution could be failing or a failure once it cannot not fulfil withdrawals of deposits through liquidity crisis. There are several approaches to providing liquidity: (a) to hold adequate funds or assets which can be liquefied without difficulty, (b) to hold a matching cash flow portfolio appropriately from maturity of assets, (c) to maintain sufficient sources of diversified deposits in terms of depositor mix and maturities.[348]

The regulatory bodies have the responsibility to ensure that bank institutions could maintain all these three combinations appropriately. There is no minimum overall ratio of liquidity that applies to all banks as the particular asset allocation to a type of liquidity is bound to be arbitrary. Elliot argued that it is hard to address the question of how much liquidity is acceptable, adequate and effective, or to set the right maturity transformation level, and that financial intermediary institutions face an exchange or trade-off between greater liquidity safety and the amount of gains, due to a lack of consensus on the appropriate maturity

[343] Acharya, V. V., Mehran, H. and Thakor. A.V. (2012) 'Caught between Scylla and Charybdis? Regulating Bank Leverage When there Is Rent-Seeking and Risk Shifting.' Centre for Economic Policy Research Discussion Paper 8822.
[344] Acharya, V.V.(2009) 'A theory of systemic risk and design of prudential bank regulation.' J. Financ. Stab. 5(3), 224–255
[345] Kashyap, A. and Stein, J. (2004) 'Cyclical implications of the Basel II capital standards. Economic Perspectives' Federal Reserve Bank of Chicago 28: 18–31
[346] Berger, Allen N., and Christa H. S. Bouwman. (2013) 'How Does Capital Affect Bank Performance during Financial Crises?' Journal of Financial Economics, 109(1): 146176.
[347] Schooner, H.M. & Taylor, M.W. (2010) 'Global Bank Regulation Principles and Policies' p.135
[348] Mike Buckle&John Thompson, (2004) 'The UK Financial System: Theory and Practice' Manchester University Press p.347-348

transformation metrics.[349] He also asserted that the financial system's complexity and the challenges associated with expectation of the likelihood and seriousness of future cash instability worsen the difficulty.

One of banks' functions is maturity transformation, so the term of their asset structure is longer than their liabilities. Therefore, a bank liquidity risk evaluation could be reached by managing the ladder of maturity, revealing the accumulation of mismatching of the balance sheet over a varying time up to a one-year period. Marketable or in demand assets could be indicated as maturing immediately but subject to a valuation discount in the ladder of liquidity. For instance, depositors who hold deposit certificates with remaining maturity of three months will be subject to a six per cent discount whereas those who hold remaining maturity of up to two years will be subject to nine percent discount. However, further discussion of liquidity requirements based on Basel III will be provided in the next chapter (chapter 3), where the circumstances, concerns and the potential disruptive impact of Basel will specifically be appraised, as well as the extent to which the International dimension, Basel, is implemented in Indonesia and the UK, particularly in terms of capital and liquidity.

Liquidity is the bank's ability not only to fund asset increases but also to fulfil its indebtedness obligations once they come due, without suffering loss.[350] Under this meaning, the assumption is that its obligations would be fulfilled at fair cost.[351] Liquidity also could be grasped as a measure of a trader's ability to perform a transaction quickly and with insignificant price effect.[352] Knies emphasised that a cash shock absorber is needed to link negative spaces between payment inflow and outflow in the circumstance where their timing cannot be entirely controlled and regulated,[353] so it ought to be grasped as a concept of flow (not stock) that also involves the ability to fulfil this flow, principally by converting assets to high-powered money.[354]

The liquidity concept is abstract and therefore not easy to describe with any true accuracy.[355] Because the thinking on liquidity at system level is either very complicated or not well-defined,

[349] Elliot, D. J. (2014) 'Bank Liquidity Requirements: An Introduction and Overview.' The Brooking Institution, p.6.
[350] Moussa, M. A. B. (2015) 'The Determinants of Bank Liquidity: Case of Tunisia' International Journal of Economics and Financial Issues Vol. 5, No. 1, 2015, pp.249-259
[351] BCBS (2008) 'Liquidity Risk: Management and Supervisory Challenges' p. 2.
[352] Brunnermeier, M. K. & Pedersen, L.H. (2009) 'Market Liquidity and Funding Liquidity' 22 Rev. Fin. Stud. 2201.
[353] Knies, K. (1876) 'Geld und Credit' Vol. 2, Berlin, Weidmann, Leipzig.
[354] Stern, T. (2014) 'Regulating Liquidity Risks within "Institutional Protection Schemes"' Beijing Law Review 5, 210-239
[355] Grossman, S. J. & Miller, M.H. (1988) Liquidity and Market Structure, 43 J. Fin. 617, 617.

establishing liquidity requirements is not simple from the viewpoint of creating buffers or incentives.[356] The liquidity concept is essentially linked both with banks' financial incomings and their outgoings. It is linked with assets a bank keeps in combination with the different arrangements for gaining funding from intermediary financial institutions, specifically the liabilities that have to be re-paid in due course.[357]

Some researchers divide the liquidity concept into two types.[358] The first of these, funding liquidity, denotes the ease with which either arbitrageurs and institutions or experienced investors can gain funding or cash from financiers.[359] It describes the ability to attract funding and acquire assets and then to fulfil the indebtedness once it falls due.[360] The IMF describes funding liquidity as the solvent institution's ability to meet payments in due course or in timely fashion.[361] It is argued by Drehmann and Nikolaou (In press) that there are two aspects to this type of liquidity as it depends on whether a single actor can or cannot meet the relevant financial obligations.[362] This pertains to the point of view of investor[363] or traders[364], relating to their ability to attract funding at short notice.[365] When their inflows are greater than or equal to their outflow, banks are not illiquid.[366] Their primary sources are cash or funds from not only the depositors and the interbank market but also the market or the central bank.[367]

The second type is market liquidity. This term refers to the gaps or dissimilarities between the fundamental price and transaction market value.[368] It would be high when the institution or bank is finding it easy to gain cash by trading its assets and it would be low when the trading

[356] Claessens, S. (2014) 'Capital and Liquidity Requirements: A Review of the Issues and Literature' Vol 31 Issue 3 Yale Journal on Regulation, 745. p. 22.
[357] Brunnermeier, M. K. & Pedersen, L.H. (2009) 'Market Liquidity and Funding Liquidity' 22 Rev. Fin. Stud. p. 2,201–38
[358] Brunnermeier, M.K. (2009) 'Deciphering the Liquidity and Credit Crunch 2007–2008' Journal of Economic Perspectives—Volume 23, Number 1—Winter 2009—Pages 91.
[359] Bonner, C.,·Van Lelyveld, I., Zymek, R. (2014) 'Banks' Liquidity Buffers and the Role of Liquidity Regulation.' J Financ Serv Res (2015) 48: p. 217
[360] BCBS (2008) 'Liquidity Risk: Management and Supervisory Challenges'; Keynes, J. M. (1936) 'The General Theory of Employment, Interest and Money.' London.
[361] IMF (2008) 'Global Financial Stability Report'
[362] Drehmann, M. & Nikolaou, K. (2010) 'Funding liquidity risk: Definition and measurement.' Journal of Banking & Finance
[363] Strahan, P. (2008) 'Liquidity Production in the 21st Century' NBER Working Paper 13798.
[364] Brunnermeier, M. K. & Pedersen, L.H. (2009) 'Market Liquidity and Funding Liquidity' 22 Rev. Fin. Stud. 2201.
[365] Nikolaou, K. (2009) 'Liquidity (Risk) Concepts—Definitions and Interactions.' ECB Working Paper Series No. 1008, p.13
[366] Nikolaou, K. (2009) 'Liquidity (Risk) Concepts—Definitions and Interactions.' ECB Working Paper Series No. 1008, p.13
[367] Nikolaou, K. (2009) 'Liquidity (Risk) Concepts—Definitions and Interactions.' ECB Working Paper Series No. 1008, p.13
[368] Brunnermeier, M. K. & Pedersen, L.H. (2009) 'Market Liquidity and Funding Liquidity' 22 Rev. Fin. Stud. 2201. 2.

value of the assets falls and it therefore becomes more expensive to adjust or reduce the balance sheet.[369] There are three dissimilar categories of market liquidity:[370] a) spread or range of bids or asked for prices that determine how much traders would lose were they to trade one asset, then purchase it back immediately; b) depth of market, reflecting how many items they could purchase or sell at the current bid value without the value differing; c) resiliency of market in terms of the time that might elapse before reversal of temporary price drops prices or reductions in values.

Liquidity risk has opposite correlation with liquidity, meaning that when the former is high, the probability of becoming illiquid is high, and thus liquidity is low.[371] Liquidity risk refers to potential inability of agents in the money markets to meet debt obligations quickly and without unreasonable loss. That is to say, it represents the probability that within a certain time frame the agent would not remain cash liquid.[372] The main reason for this scenario is the maturity mismatch which arises due to shrinkage in the money markets preventing short-term debt from being obtained on reasonable terms.[373] It arises when financial intermediary institutions are no longer able to meet their payment obligations, even though they might hold sufficient cash, as the assets are not of the short term type and cannot be converted to high-powered money readily.[374]

Banks are exposed to risk of funding liquidity through focusing on maturity transformation.[375] It is the risk of banks not possessing adequate collateral or money to make payments to their counterparties in due course or as they come due (could do so just by liquidating assets, but at too much cost).[376] The IMF describes funding liquidity risk as banks' inability to fulfil their obligations as they come due.[377] There is an assumption that when a financial intermediary institution is facing liquidity distress this would cause a funding withdrawal and an eventual run on the bank, as clients demand return of their cash and time

[369] Bonner, C.,·Van Lelyveld, I., Zymek, R. (2014) 'Banks' Liquidity Buffers and the Role of Liquidity Regulation.' J Financ Serv Res (2015) 48 p. 217
[370] Kyle A (1985) 'Continuous auctions and insider trading.' Econometrica 53(6):1315–1335
[371] Nikolaou, K. (2009) 'Liquidity (Risk) Concepts—Definitions and Interactions.' ECB Working Paper Series No. 1008, p. 14-15.
[372] Bonner, C.,·Van Lelyveld, I., Zymek, R. (2014) 'Banks' Liquidity Buffers and the Role of Liquidity Regulation.' J Financ Serv Res (2015) 48 p. 218
[373] McElroy, A. L. (2013) 'An Examination of Basel III and the new U.S. Banking Regulations' Wake Forest Journal of Business and Intellectual Property Law, vol 14 no 1. P. 20
[374] BCBS, (revised June 2011)'Basel III: A Global Regulatory Framework for more resilient banks and banking system' BIS, Basel, Switzerland , p. 35
[375] Bagehot, W. (1873) 'Lombard Street: A Description of the Money Market.' H.S. King.
[376] Brunnermeier, M. K. & Pedersen, L.H. (2009) 'Market Liquidity and Funding Liquidity' 22 Rev. Fin. Stud. 2201. p. 2,201–38
[377] IMF (2008) 'Global Financial Stability Report'

funding are not renewed or rolled over (specifically when deposit insurance arrangements are weak).[378] The reason for this situation arising relates to a traditional banking characteristic: maturity transformation whereby short term debt, involving deposits or funding, is employed to fund long term credit.[379] Unexpected withdrawal might cause disrupting liquidity runs,[380] and lead to either counterparty risk externalities or fire sales that influence other intermediaries who are themselves subjected to short term cash or debt.[381] Consequently, every decision that banks make on funding will have an impact regarding other banks' capacity to cope with risks to their liquidity, leading to an adverse effect on the outside world.[382]

Market liquidity also has associated risk. This relates to the inability to trade at reasonable value or price immediately.[383] If it is not possible to offload assets immediately in the financial market there is a danger that in order to trade such assets quickly, they would have to be sold at a heavily discounted value or price.[384] Simply put, liquidity only applies when such assets could be realised easily and immediately and at minimum loss.[385] Market liquidity risk exhibits empirically the same effects across market types, bonds, equities and dissimilar markets, and regions,[386] so is closely related to systemic risks.[387]

The absence of liquidity provisions under Basel II was one of the root reasons for the GFC of 2008.[388] In the crisis period, solvent banks did not have stable funding and most were unsuccessful in meeting their debt obligations due to a credit crunch, then they had to sell

[378] Jenkinson, N. (2009) 'Containing System-Wide Liquidity Risks: Some Issues and Challenges.' European Business Organization Law Review 10: 387–409
[379] Brunnermeier, M. K. & Pedersen, L.H. (2009) 'Market Liquidity and Funding Liquidity' 22 Rev. Fin. Stud. 2201. p. 2,201–38
[380] Douglas, D. and Dybvig, P. (1983) 'Bank Runs, Deposit Insurance, and Liquidity' Journal of Political Economy 91(3), 401-419
[381] Brunnermeier, M.K. (2009) 'Deciphering the Liquidity and Credit Crunch 2007–2008' Journal of Economic Perspectives—Volume 23, Number 1—Winter 2009—P. 77-100; Allen, Franklin, Babus, A. and Carletti, E. (2010) 'Financial Connections and Systemic Risk' NBER WP No. 16177
[382] Perotti, E.,& Suarez, J. (2011) 'A Pigovian Approach to Liquidity Regulation' the 12th Jacques Polak Annual Research Conference Hosted by the International Monetary Fund, p. 2.
[383] Nikolaou, K. (2009) 'Liquidity (Risk) Concepts—Definitions and Interactions.' ECB Working Paper Series No. 1008, p. 18
[384] Brunnermeier, M. K. & Pedersen, L.H. (2009) 'Market Liquidity and Funding Liquidity' 22 Rev. Fin. Stud. 2201. p. 2,201–38
[385] EBA (2013a) 'Report on Appropriate Uniform Definitions of Extremely High Quality Liquid Assets (Extremely HQLA) and High Quality Liquid Assets (HQLA) and on Operational Requirements for Liquid Assets under Article 509(3) and (5).' London: CRR., p.18.
[386] Stern, T. (2014) 'Regulating Liquidity Risks within "Institutional Protection Schemes"' Beijing Law Review 5, 215
[387] Stern, T. (2014) 'Regulating Liquidity Risks within "Institutional Protection Schemes"' Beijing Law Review 5, 215.
[388] Lee, E. (2013) 'Basel III: post-financial crisis international financial regulatory reform' Journal of International Banking Law and Regulation.p. 11

assets.[389] The capital or interbank markets are not stable or predictable cash sources and their money might become expensive or not available at all when a GFC arises.[390] Several researchers have contended that this situation enforced regulators or authorities to deal with liquidity difficulties as one of the primary reasons for systemic risk.[391]

The liquidity difficulties experienced by several banks during the GFC revealed that the banks and the markets are both dependent on liquidity as liquidity crises can cause pressure on financial intermediary institutions.[392] This occurs due to inability to roll over short term liabilities, when the necessity to exchange or trade assets on short notice therefore becomes a possibility.[393] They would then be subjected to serious risk of a run due to the liquidity mismatch, with the resulting unexpected cash withdrawal possibly bringing down the financial intermediary institution, even though its balance sheet may not have been insolvent prior to the run.[394]

The Basel III introduced the concept of a globally harmonised liquidity requirement: either LCR[395] or the NSFR.[396] These possess two key advantages of, firstly, providing regulators with adequate time to evaluate the position regarding a bank's liquidity and to set up a proper response in times of distress and, secondly, forcing financial intermediary institutions to hold and keep protective liquidity cushions in order to restrict not only funding liquidity risks but also liquidity mismatches.[397] The LCR needs banks to own adequate, high quality liquid assets (HQLA) to enable them to cope with situations that create short term distress.[398] The principal reason for the 30 day period is that this provides financial regulators with adequate time to tackle market difficulties, and also provides institutions time to refinance themselves without

[389] McElroy, A. L. (2013) 'An Examination of Basel III and the new U.S. Banking Regulations' Wake Forest Journal of Business and Intellectual Property Law, vol 14 no 1. P. 8.
[390] Lee, E. (2013) 'Basel III: post-financial crisis international financial regulatory reform' Journal of International Banking Law and Regulation.p. 11
[391] BCBS (2010) 'Guidance for National Authorities Operating the Countercyclical Capital Buffer' BIS.
[392] Vodova, P. (2013) 'Determinants of commercial bank liquidity in Hungary' www.Slu.cz, p180-188.
[393] Anat R. Admati, Peter M. DeMarzo, Martin F. Hellwig, and Paul Pfleiderer (2011) 'Fallacies, Irrelevant Facts, and Myths in the Discussion of Capital Regulation: Why Bank Equity Is Not Expensive' Stanford GSB Research Paper No. 2065 p. 52.
[394] Armour, J., et al (2016) 'principle of financial regulation: Liquidity regulation' Oxford University Press.
[395] BCBS (2011) 'Basel III: A Global Regulatory Framework for more Resilient Banks and Banking Systems' paras. 40, 41. For technical insights on the LCR, see BCBS (2013) 'Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools'
[396] BCBS (2011) 'Basel III: A Global Regulatory Framework for more Resilient Banks and Banking Systems', para. 42. For a technical survey on the final structure of the NSFR, see BCBS (2014b). 'Basel III: the net stable funding ratio'
[397] Nicolo, G. D. (2016) 'Liquidity Regulation: Rationales, Benefits and Costs' NationAl InstItute eConomIc Review No. 235, p. 23.
[398] McElroy, A. L. (2013) 'An Examination of Basel III and the new U.S. Banking Regulations' Wake Forest Journal of Business and Intellectual Property Law, vol 14 no 1. p. 13.

recourse to the central bank or LOLR.[399] In addition, the intent of the NSFR is to lessen maturity mismatches between banks' long-term and short-term liquid funding.[400] It requires that financial intermediary institutions choose appropriate methods to fund their loan operations, notably that they are based on short-term debt availability and could survive a year-long distress period.[401]

Higher liquidity requirements could lead to several different effects. As indicated by De Nicolò et al, imposing higher liquidity demands in terms of the amount of capital needed lowers not only bank lending and efficiency but also welfare. This arises as banks are compelled to retain profits or earnings to augment bond holdings or lessen obligations, rather than supplying more lending.[402] If there are high associated costs, this could hinder the bank's primary functions, that is, either maturity transformation or risk pooling.[403] Dermine emphasised not only the potential inefficiencies but also related high welfare cost of liquidity requirements because of their hindering the banks' primary function in terms of welfare maturity transformation, in line with DNGL's quantitative outcomes.[404]

In general, it could cause the banking system to supply too little in loans and force up general economic costs.[405] The biggest US financial intermediary institutions were very adamant concerning watering down the provision, asserting that without changes it will boost credit costs considerably and weaken economic recovery.[406] Requiring financial intermediary institutions to hold and keep excessive levels of liquid assets would subject them to unnecessary liquidity premium payments.[407] JP Morgan Chase & Co spearheaded an attempt to convince policymakers of the potential damage as a result of the LCR :

[399] McElroy, A. L. (2013) 'An Examination of Basel III and the new U.S. Banking Regulations' Wake Forest Journal of Business and Intellectual Property Law, vol 14 no 1. P. 21
[400] BCBS (2014b). 'Basel III: the net stable funding ratio' p. 38
[401] BCBS (2014b). 'Basel III: the net stable funding ratio' p. 42.
[402] De Nicolo, G., Gamba, A. and Lucchetta, M. (2014) 'Microprudential regulation in a dynamic model of banking' Review of Financial Studies, 27, 7, pp. 2097–138
[403] Claessens, S. (2014) 'Capital and Liquidity Requirements: A Review of the Issues and Literature' Vol 31 Issue 3 Yale Journal on Regulation, p. 745.
[404] Dermine, J. (2013) 'Bank regulations after the global financial crisis: good intentions and unintended evil' European Financial Management, 19, 4, p. 658–74.
[405] Claessens, S. (2014) 'Capital and Liquidity Requirements: A Review of the Issues and Literature' Vol 31 Issue 3 Yale Journal on Regulation, p. 745.
[406] McGrane, V. (2012) 'Regulators Steadfast over Rules' Wall Street Journal.
[407] Nicolo, G. D. (2016) 'Liquidity Regulation: Rationales, Benefits and Costs' NationAl InstItute eConomIc Review No. 235, p. 22

> "the [Basel III] presumes the vast majority of deposits made by consumers will leave any particular bank within 30 days. Consequently, banks will no longer supply loans for such deposits in order to fulfil short-term liquidity requirements." [408]

However, higher liquidity requirements could sustain systemic stability. They could decrease and mitigate the negative externalities arising not only from asset fire sales and liquidity hoarding but also deleveraging, bank failure and credit restriction, which might occur once banks fall into liquidity difficulties.[409] In general, it is likely that augmenting the liquidity buffer could potentially restore investor confidence, prevent fire sales, diminish banks' dependence on central banks, and provide authorities with adequate time to respond.[410] In relation to decreasing the risk of either bank runs or fire sales, several researches have provided a rationale for liquidity provision.[411] Perotti-Suarez state that it diminishes and mitigates the dependence of externalities on widespread short-term capital sources, thereby simultaneously lessening the probability of bank failure.[412] In addition, it lowers funding shock risk. In addition, Banerjee and Hio explain empirically how financial intermediary institutions adjust their balance sheet structure as a reaction to liquidity provision.[413] Their research found that financial intermediary institutions augmented their funding or capital from more stable funding sources while lowering their dependence not only on short-term intra financial loans but also other short-term wholesale sources. Therefore, it could lead to the substitution of non-stable sources with stable sources.[414]

3.5.3. Capital and liquidity : differences and interactions

Liquidity and capital are commonly considered separately. However, they interact or relate to each other not only in direct ways but also indirect ways; as noted by Goodhart: "An illiquid bank could be insolvent quickly and insolvent financial intermediary illiquid".[415]

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[408] Borak, D. (2011) 'Liquidity, the Other Basel III Bombshell' American Banker.
[409] De Haan, L & Van den End, J. W. (2013) 'Bank liquidity, the maturity ladder, and regulation' Journal of Banking and Finance 37 3931
[410] Bonner, C. & Hilbers, P. (2014) 'Global liquidity regulation - Why did it take so long?' Working Paper No. 455. P.3.
[411] Allen, F. and Gale, D. (2004) 'Financial intermediaries and markets.' Econometrica 72, 1023–61; Schnabel, I. and Shin, H. (2004) 'Liquidity and contagion: The crisis of 1763.' Journal of the European Economic Association 2, 929–968; Cifuentes, R., Ferrucci, G., and Shin, H. (2005) 'Liquidity risk and contagion.' Journal of the European Economic Association 3, 556–566; Farhi, E., Golosov, M., and Tsyvinski, A. (2013) A theory of liquidity and regulation of financial intermediation. Review of Economic Studies 76, 973–992
[412] Perotti, E.,& Suarez, J. (2011) 'A Pigovian Approach to Liquidity Regulation' the 12th Jacques Polak Annual Research Conference Hosted by the International Monetary Fund, p. 2.
[413] Banerjee, R. and Hio, M. (2014) 'The impact of liquidity regulation on banks.' BIS Working Papers, 470.
[414] Adrian, T., & Shin, H. S. (2010) 'Liquidity and Leverage.' Federal Reserve Bank of New York Staff Reports No. 328.
[415] Goodhart, C. (2009) 'The Regulatory Response to the Financial Crisis' chapter 7: Liquidity Risk Management. Edward Elgar Publishing

The concept of capital is essentially linked with liquidity in terms of mitigation of bank risks.[416] This is normally justified through its function in limiting moral hazards by mitigating excessive risk taking.[417] It could be a loss-absorber, as banks could use their liquid assets for counteracting the risk that other funding supplies might be eroded.[418] While they form a portion of banks' liabilities and thus constitute supplies of funding, liquid assets are implicated as well through their use for funding.[419] Having a greater amount of capital may signal more risk taking on the balance sheet, particularly on the asset side. [420]

However, Admati et al argued that capital denotes the particular nature of banks' funding and specifically how equity and liability are interlinked through their appearance in the bank's balance sheet, whereas liquidity refers to the asset type and asset combination that the bank has to hold and reserve. They also claimed that if the bank's balance sheet records less debt and high equity, liquidity might be less of a concern as creditors will be less likely to withdraw their money and there might thus be less danger of the bank becoming insolvent.[421]

Nevertheless, if banks face acute risks of run due to liquidity mismatch, it is hard to determine how much liquidity they would require to survive and absorb the shock in a certain time period because it is unclear how many creditors would withdraw their cash and cause adjustment of the bank's balance sheet in the coming days or months.[422] If banks cannot satisfy the demands and responsibilities that fall due, they are deemed illiquid.

Liquidity and capital requirements exert dissimilar direct effects on the balance sheet. These adjustments could affect banks' responses directly via two primary interactions :[423]

- Interactions of balance sheet: adjustments to the balance sheet in reaction to capital adjustment requirements would have effects on management of liquidity and vice versa. For instance, if a bank buys goverment bonds in reaction to a rise in liquidity regulation,

[416] Bonner, C. (2014) 'Liquidity regulation and bank behavior' Tilburg: CentER, Center for Economic Research, p.9.
[417] Lucas, R. E., and N. Stokey, (2011) 'Liquidity Crises. Understanding sources and limiting consequences: A Theoretical Framework' Economic Policy Paper Fed Minneapolis 11.
[418] Farag,M.,Harland,D.,and Nixon,D.(2013) 'Bank capital and liquidity' Bank of England Quarterly Bulletin, Q3
[419] Bonner, C. & Hilbers, P. (2014) 'Global liquidity regulation - Why did it take so long?' Working Paper No. 455. p. 22
[420] Jorda O, Richter B, Schularick M, Taylor A. M (2017) 'Bank capital redux: Solvency, Liquidity, and Crisis.' Federal Reserve Bank of San Francisco Working Paper 201706. p. 2.
[421]Anat R. Admati, Peter M. DeMarzo, Martin F. Hellwig, and Paul Pfleiderer (2011) 'Fallacies, Irrelevant Facts, and Myths in the Discussion of Capital Regulation: Why Bank Equity Is Not Expensive' Stanford GSB Research Paper No. 2065 p.2
[422] Bonner, C. & Hilbers, P. (2014) 'Global liquidity regulation - Why did it take so long?' Working Paper No. 455. p.22.
[423] BCBS (2016) Literature review on integration of regulatory capital and liquidity instruments, Working Paper No 30, BIS, p.4.

that could lower RWA and thus augment the ratio of capital, to satisfy any increase of capital requirements.

- Additional connections: adjustments regarding composition of the balance sheet would cause adjustment of earnings obtained as well as the asset and capital quality. In turn, these adjustments could generate further adjustments to the balance sheet.

Their interactions largely perform through four ways.[424] Firstly, regarding asset quality, this might be improved by banks reacting to higher requirements of risk weighted capital and liquidity. Secondly, regarding fire sale, once a bank faces funding difficulties, its occurrence might be reduced by raising liquidity requirements. Next, regarding profitability of banks, introducing new requirements on capital and liquidity could have an impact on the profitability of banks, specifically in relation to net interest income. Finally, regarding bank solvency, the two can assist in protecting not only the bank and its claimholders but also stakeholders from dissimilar risk types which might weaken the bank's solvency.[425]

There are several competing analyses on the interaction of capital and liquidity regulation. However, it is possible to categorise these analyses into two general types. First, there is the viewpoint that regulation of capital substitutes for regulation of liquidity. Admati et al argued that if designed appropriately, capital requirements could replace liquidity.[426] It could regulate liquidity as well through creating incentive for banks to hold and reserve more low RWA that largely comprise assets of good liquidity quality.[427]

In addition, it will lower risks of liquidity. Admati and Hellwig contend that as long as banks are not insolvent, denoting that the bank's equity value remains positive during periods of distress or difficulty, the central bank will be able to offer liquidity to assist financial intermediary institutions in dealing with liquidity difficulties and thus regulation of liquidity may not be vital.[428] However, it is argued that it is hard to keep bank equity values stable and positive once a bank faces distress, which enhances the system's vulnerability to adverse aggregate volatility. If volatility arises, liquidity with adequate HQLA or buffer might be vital

[424] BCBS (2016) Literature review on integration of regulatory capital and liquidity instruments, Working Paper No 30, BIS, p.28.
[425] Morris, S and H S Shin (2010) 'Illiquidity component of credit risk' mimeo
[426] Anat R. Admati, Peter M. DeMarzo, Martin F. Hellwig, and Paul Pfleiderer (2011) 'Fallacies, Irrelevant Facts, and Myths in the Discussion of Capital Regulation: Why Bank Equity Is Not Expensive' Stanford GSB Research Paper No. 2065
[427] Bonner, C. (2014) 'Liquidity regulation and bank behavior' Tilburg: CentER, Center for Economic Research, p. 16
[428] A. Admati and M. Hellwig, *The Banker's New Clothes: What's wrong with banking and what to do about it* (Princeton University Press, Princeton, 2013)

to deal with short term distress or volatility in a certain time period, and could result in keeping the bank's equity positive.

Assuming that equity capital could be a subtle way to protect banks from failure, the principal question relates to the equity capital required in order to ensure they do not fail. Admati and Hellwig contend that a bank's equity capital ought to be at least 20 to 30 percent of the total assets.[429] The BCBS (2010a) recommended that the risk weighted capital ought to be around 10 to 12 percent.[430] A further question is whether harmonisation of these equity capital levels would be effective in protecting banks from failure in both developed and developing countries, specifically in the UK and Indonesia.

The second viewpoint is that regulation of capital and liquidity is not inexpensive, and thus capital could create incentive for a bank to shift or change risk to the asset side. There is a possibility that increasing the capital level would make banks less profitable, thereby creating incentive for banks to adopt or use riskier approaches and to limit expensive liquid assets, so they would adjust and improve their balance sheet to lower costs.[431] The GFC 2008 indicates that regulation of capital does not replace liquidity regulation.[432]

However, Kashyap, Tsomocos and Vardoulakis showed that regulation of capital could substitute or complement regulation of liquidity through several other approaches in which the two work to prevent bank run.[433] Firstly, they stated that requirements of capital basically perform on the liability side without limiting the bank's asset choices directly, and, therefore, the banks' dependence on deposit assets could be reduced once banks are forced to possess higher equity. On the other hand, they also revealed that regulation of liquidity, notably through LCR or NSFR, performs in a different way. LCR requires banks to substitute or replace illiquid assets directly with liquid assets,[434] whereas NSFR requires banks to tackle the use of long-term liability to fund illiquid assets.[435]

One of the criticisms is that capital and liquidity would be effective to protect individual banks from failure but not in assuring financial stability as a whole due to fallacy of

[429] A. Admati and M. Hellwig, *The Banker's New Clothes: What's wrong with banking and what to do about it* (Princeton University Press, Princeton, 2013)
[430] BCBS. (2010a). Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems. Basel Committee on Banking Supervision, Basel
[431]Hellmann, T. F., Murdock, K. C. & Stiglitz, J. E. (2000) 'Liberalization, Moral Hazard in Banking, and Prudential Regulation: Are Capital Requirements Enough?' 90 am. Econ. Rev. 147
[432] Bonner, C. (2014) 'Liquidity regulation and bank behavior' Tilburg: CentER, Center for Economic Research, p.9 .p.23
[433] Kashyap, A K, Tsomocos D P, and A P Vardoulakis (2015) 'How does macroprudential regulation change bank credit supply?' revision of National Bureau of Economic Research working paper 20165.
[434] McGrane, V. (2012) 'Regulators Steadfast over Rules' Wall Street Journal.
[435] Mark Pengelly, (2010) 'Uncertain Ratios' Risk 23.3

composition.[436] Once a bank faces financial volatility, the need for capital could cause fire sales. In the event of financial shock, banks might determine to shed or sell assets to satisfy capital requirements.[437] If banks perform more once others perform more, prices of asset sales could drop further and the capital position will worsen, then potentially cause a further asset sale and drops in prices or reductions in values. Once the prices in an asset sale fall, it could potentially cause not only increased risk and higher margins but also higher costs of external funding and further fire sales.[438] Nevertheless, the requirements of capital and liquidity are not designed or intended for a macroprudential perspective that is dissimilar from a microprudential perspective.

The second criticism relates to the role of capital and liquidity as buffers. They might not be effective in the event of financial shock as the main goal of the regulator might not be similar to the market perspective.[439] Once asset valuation becomes uncertain in the times of financial volatility, the market perspective, unlike that of the regulator, might be to require a higher buffer to mitigate the shocks and economic costs, but new equity would not be inexpensive. Requirements of capital and liquidity can be costly and possibly cause excessive risks since the banks' liability structure is not similar to outcomes of the "normal" market, particularly in terms of the structure of higher capital which augments bank value.[440] In the event of volatility, this could possibly cause pressure at the level of the individual bank and potentially lead to systemic risks.

These criticisms can be applied to implementation of Basel III, notably liquidity and capital requirements, in Indonesia and the UK. Several questions arise relating to not only the interaction between Basel III and these countries' national laws but also the impacts in these jurisdictions. First, how will these interactions set the background for the analysis of both normative and institutional aspects of liquidity provision and supervision in these jurisdictions? Second, what might be the legal consequences of transforming Basel, notably its liqudity and capital provisions, into the UK and Indonesian provisions? To what extent has this been introduced in each jurisdiction?

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[436] Brunnermeier, M.K. (2009) 'Deciphering the Liquidity and Credit Crunch 2007–2008' Journal of Economic Perspectives—Volume 23, Number 1—Winter 2009—Pages 91.
[437] Claessens, S. (2014) 'Capital and Liquidity Requirements: A Review of the Issues and Literature' Vol 31 Issue 3 Yale Journal on Regulation, p. 746.
[438] Krishnamurthy, A. (2010) 'How debt markets have malfunctioned in the crisis.' Journal of Economic Perspectives 24(1), 3–28
[439] Claessens, S. (2014) 'Capital and Liquidity Requirements: A Review of the Issues and Literature' Vol 31 Issue 3 Yale Journal on Regulation, p. 746
[440] Thakor, A. V. (2014) 'Bank Capital and Financial Stability: An Economic Tradeoff or a Faustian Bargain' 6 ann. rev. fin. econ.

International provisions of Basel III will influence the content of national provision, particularly in the UK and Indonesia that implement dissimilar liquidity requirements due to the absence of International harmonisation. Bonner et al revealed that without liquidity provision, liquidity buffers of banks are determined by a mix of country particular and bank particular aspects.[441] Once both the LCR and frameworks of liquidity are implemented through national provision, regulators ought to consider the variety in requirements for and response to liquidity provision accross not only jurisdictions but also banks, and thus tailor the new requirements of liquidity to fit the circumstances so that they will achieve the desired impact.[442]

Although capital and liquidity are undoubtedly inter-related, it is argued that each country, referring particularly to the UK and Indonesia, could possibly adopt different levels and quality of either capital or liquidity to fit their circumstances as they have dissimilar market structures, levels of financial development, risks and banking size. Distinguin, Roulet and Tarazi showed, using data of the US and European commercial banks, that measures of liquidity and solvency could be positively or negatively interrelated, relying on how liquidity is calibrated and on the bank type.[443] A study of bank capital reveals that banks made adjustments to their ratio of capital based on the risks which they were taking, and were well-capitalised compared to the benchmark introduced by BCBS.[444] Therefore, if their capital levels, particularly in developed countries such as the UK, are similar to those used in developing countries, notably Indonesia, this might have a negative impact on the Indonesian economy, but also developing countries might learn how to design, impose and fit their level and quality with their characteristics, such as market structures, levels of financial development, risks and banking size, thereby justifying different provisions and measures.

3.6. Conclusion

This chapter has highlighted regulatory structure, particularly firstly relating to banking law in Indonesia. This chapter has noted that the term 'bank' in Indonesia provides considerable flexibility not only to cover or perform activities which have different forms but also to allow bank institutions which de facto could not receive deposit and supply credit to gain benefits of the particular unregulated activities in reality, but this might be considered risky due to the

[441] Bonner, C.,·Van Lelyveld, I., Zymek, R. (2014) 'Banks' Liquidity Buffers and the Role of Liquidity Regulation.' J Financ Serv Res (2015) 48 p. 216

[442] Bonner, C., & Eijffinger, S. C. W. (2015), The Impact of Liquidity Regulation on Bank Intermediation, Review of Finance, 2016, 1945–1979 9124; Bech M, Keister T (2012) On the liquidity coverage ratio and monetary policy implementation. BIS Q Rev:49–61

[443] Distinguin, I., Roulet, C. and Tarazi, A. (2013) 'Bank regulatory capital and liquidity: evidence from US and European publicly traded banks' Journal of Banking and Finance, 37, pp. 3295–317.

[444] Schoenmaker, D. (2015) 'Regulatory capital: Why is it different?.' Accounting and Business Research, 45:4, 468-483, p. 472.

absence of a common definition or understanding of other form in order to improve social welfare. This absence allows either non-bank institutions or the shadow banking system to make and develop various products of financial innovation and also allows them to grow, mostly unregulated, and to provide competition with bank institutions directly in their part of the traditional market which might contain implicit threats or risks.

This chapter also discussed the role of regulatory bodies in both countries involving the IFSA, Bank Indonesia, IDIC, FCA, PRA, Bank of England, and FSCS. In general, the IFSA is the single regulator for the financial services sector in Indonesia. Under the IFSA Act 2011, the IFSA is required to pursue three statutory objectives:[445] to ensure all business activities in financial sectors to (1) be reliable, fairness, transparent and accountable; (2) be able to realize a financial system that grows sustainably and stable, and (3) be able to protect the interest of consumers and society. twin peaks model in the UK is an institutional framework where each of two regulatory bodies have task to secure one of the two primary goals of provision including consumer protection and prudential provision. [446] These supervisory structure is deemed as reaction to the development or change of banking system in the UK and Indonesia. Furthermore, the chapter considered the prudential provision, particularly capital and liquidity provisions in Indonesia which are made by regulatory bodies to protect bank from failure. The chapter noted that the case of Century Bank highlighted the negative capital and illiquid asset in instigating financial instability in Indonesia. This case emphasized ineffectiveness of prudential provision, particularly capital and liquidity in Indonesia. This revealed the weakness of these provisions relating to supervisory review process and no provisions of disclosure requirement yet, and the definition of liquidity. The UK regulates aspects of capital and liquidity more comprehensive and robust which might provide the basis for Indonesia regulatory solutions including disclosure requirements on the competent authorities, disclosure requirement, and liquidity definition which ensure liquidity outflows less the inflows of liquidity which will be discussed further in the next chapter.

This chapter also noted that capital and liquidity principle show that different jurisdiction, such as the UK and Indonesia might possibly adopt different levels and quality of either capital or liquidity to fit their circumstances as they have dissimilar market structures, levels of financial development, risks and banking size. The following chapter would analyze

[445] Article 4, The IFSA Act 2011

[446] Akinbami, F. and Ngwu, F. N. 2016. Overhauling the institutional structure of financial regulation in Nigeria: The unfinished reform. Journal of Banking Regulation Vol 17, 4, 311-331. Macmillan Publishers. www.palgrave.com/journals

substantive facets of prudential provisions in these countries with considering Basel 3 as an International dimension of capital and liquidity and financial ratios of the bank's balance sheet and the level and direction of development of banking system which already discussed in Chapter 2.

Chapter 4 Substantive facets of prudential provision in Indonesia and the UK

4.1. Introduction

The previous chapter noted that the regulatory regimes in the UK and Indonesia contain prudential norms for banking activities. Any attempt to evaluate the framework of prudential provision in the UK and Indonesia regulatory regime will be ineffective without identifying the substantive aspects of such provision. Generally, current prudential provisions in these countries will consider the following facets: capital requirements for different risk categories, liquidity risk, the process of supervisory review and market discipline. The author aims to analyze the weaknesses of micro prudential provisions. The focus of this chapter is on ineffectiveness of aspects of capital and liquidity. A comparison will be created with micro prudential regulatory pattern in the UK where they had similar business model, similar prudential regulatory pattern, better bank's performance and better indicator of stability. This chapter is based on an analysis of current prudential provisions, International standards, papers and reports. A comparison of legal analysis between Indonesia and the UK is employed to reflect similar incremental evolution, particularly the trend or rather the process of change faced by some Indonesian banks, whereby they are slowly moving away from a traditional model based on deposits and loans, towards a business model, notably securitised bond and wholesale funding that resembles that of large UK banks.

The main flaws of capital and liquidity provisions are due to inadequate supervisory review, no aspect disclosure requirement, and weak liquidity definition. There need to be better supervisory review, disclosure requirement and liquidity provision to ensure that liquidity outflow less the inflow of liquidity. Liquidity definition is not robust as it enables a bank institution to maintain liquidity that cannot cover the net liquidity outflow. Indonesia capital provision is not consistent and does not reflect its three pillars of Basel 3 structure comprehensively. The supervisory review and evaluation process is regulated by the 11 provision 2016 but preliminary consideration of Indonesia capital provisions does not underline the significance of supervisory review. Although Indonesia capital provision reflect the main value of the supervisory process in line with Basel 3, the structure of capital provision has inconsistency between the principles guiding the implementation of the whole framework and preliminary consideration. With development of complex products, rised use of wholesale funding and securitized bond, the IFSA increasingly found it hard to control, manage, monitor their activities and ensure the soundness, safety and health of a bank institutions. Simple, weak, and ineffective micro prudential provisions, inconsistent in the framework of capital provision,

no explicitly disclosure requirement, and weak liquidity definition regulatory approach led to the increased possibility of illiquidity concern, inconsistency of supervisory reviews, supervisory and regulatory problems, uncertain quality of result of capital, no transparency and accountability.

This chapter would possess policy effect for regulatory bodies or policy makers and practitioners on state, Indonesia and international level. Changes in the framework of IFSA provisions will see an emphasis on importance, consistency, and robustness of supervisory review and liquidity aspect which could contribute to protect banks from failure. By first reviewing the flaws of aspects of capital and liquidity provisions in light of Century Bank in previous chapter and then make comparison between the UK and Indonesia regulatory pattern, this chapter provides a new insight into prudential provision.

Section 4.2, analyses main feature of International standard, Basel 3. Then, this section conduct analysis of several aspects of prudential provisions, notably a) capital requirements, b) risk coverage, c) supervisory review process and disclosure requirement, and d) liquidity provisions. The chapter would provide a critical discussion of not only the relevance of International standards in the context of the Indonesia banking system but also third pillar of Basel 3. These discussions highlight not only the adoption of regulatory structure of Basel 3 in the context of Indonesia capital and liquidity facets but also analysis of Basel 3. The facets of International dimensions were transposed into the prudential regulatory regime in these countries through the adoption of capital and liquidity provision in Indonesia and the adoption of the CRD and CRR in the UK.

Section 4.3 considers substantive aspects of capital and liquidity in both countries. The discussion of capital provision include definition, credit risk, IRB, the supervisory review model, and disclosure requirement. Furthermore, the UK and Indonesia structures for liquidity are also inspired by the Basel III measures formulated by the Basel Committee to manage liquidity risk in banking institutions. Improvements to the liquidity structure as developed by the Committee involve two minimum models, one for liquidity through development of the LCR[447] and the other for funding through development of the NSFR[448]. The goal of the LCR is to protect against a 30 days period of high stress scenario through maintaining HQLA, while NSFR aims to decrease risk of funding stress through mandating to keep sufficiently stable funding sources for up to one year. A further section of this chapter will analyse the similarities

[447] BCBS (2016) Literature review on integration of regulatory capital and liquidity instruments, Working Paper No 30, BIS, p.4.
[448] BCBS, Basel III: the net stable funding ratio, October 2014

and differences in the substantial facets of capital and liquidity provisions in these countries, leading into the substantive critical analysis of whether the Indonesian prudential regulatory regime would benefit from adopting the UK provisions and what the drawbacks might be, which will form the subject of Chapter Six. The final section of this chapter will provide conclusions.

4.2. Basel 3 as an International dimension of capital and liquidity

4.2.1. The provision of Basel 3

Basel 3 could be categorized under six components. These components involve a) leverage ratio, b) enahancing capital requirements and reviewing capital definition, highlighting the transparency, consistency and quality of capital basis, c) countercyclical buffer, d) expanding risk coverage, e) supervisory review process and disclosure requirement, and f) liquidity provisions. Furthermore, Basel III identifies two models of threats which could lead to failure of bank institutions including:[449]

(i) Capital or solvency risk. The asset value lowers below liability

(ii) Risk of illiquidity. One of the potential financial intermediary concerns is a mismatching of the structure of assets and liabilities on the bank's balance sheet because of the nature of both illiquid assets and liquid liabilities. A bank institution could be failing or indeed fail once it is unable to fulfil withdrawals of deposits through a liquidity crisis. There are several approaches for providing liquidity: (a) to hold either adequate assets that are converted easily into case or adequate cash or ready money, (b) to hold a matching cash flow portfolio appropriately from maturity of assets, (c) to maintain sufficient sources of diversified deposits in terms of depositor mix and maturities.[450]

It is likely that these two models of threats reflect the concerns of Century Bank that is already discussed in previous chapter. It faced problems of negative capital and illiquidity. Therefore, Basel III might address the concerns of capital requirement and liquidity in Indonesia.

The Head of the BIS revealed that Basel 3 is appropriate (better) for not only Latin American but also for all other developing states. He expressed his view based on the following reasons

[449] BCBS, 2010 (revised June 2011)'Basel III: A Global Regulatory Framework for more resilient banks and banking system.' BISBasel,.

[450] Mike Buckle&John Thompson (2004) 'The UK Financial System: Theory and Practice' Manchester University Press. 347-348

including a) it would provide a good program to continue to augment not only disclosure requirement and risk management but also supervisory practices, b) the improvement of both new liquidity standard and capital requirements would contribute to enhance resilience of banking system, c) applying macro prudential provision would be specifically useful for enhancing the supervision of system wide threats, d) the structure of Basel 3 would lower possibilities for capital arbitrage in particular areas, e) it would promote a level playing field.[451]

Under Basel 3, banks have to provide minimum common equity ratio, the Tier 1 capital and total capital ratio, approximately around 4.5%, 6.0% and 8.0% of RWA respectively.[452] It is likely that the UK and Indonesia banks impose requirements which go beyond International standard. The UK and Indonesia banks maintain relatively high Tier 1 capital provision which calculated based on risk weighted assets, approximately 17.1% and 22.7% in 2017. One of the critique of Basel 3 is relating to aspect or item of capital. Capital redefinition to not include elements which do not resemble or represent capital remotely is a positive change or move. Dowd et al contend that altering the capital definition assists strengthening their core capital level with dodgy debt equity mixtures. Nevertheless, capital redefinition and enhancing capital level do not address the difficulty which Basel III, like Basel II, is capital based provision in which it is likely more like purchasing insurance to make payment for the loss or damage rather than evading the loss.[453] However, Slovik contends that there is a concern relating to the calculation of the capital ratio regarding risk weighted asset, as in either Basel 1 or Basel 2 which encourages improvement created to evade regulatory prerequisites and shifts concentration of bank institutions away from their primary economic roles.[454] He further contends that tighter capital level regarding RWA might further play a role in these skewed inducement. Although Indonesia banks hold relatively high capital level which might contribute to make banking systems even more resilient, they might face concerns similar to the case of Century Bank which occurred in 2008 if they shift their concentration away from their essential economic functions and supervisory body does not provide strict, close and adequate supervision.

[451] Caruana, J. 2010. 'Why Basel III matters for Latin American and Caribbean Financial Markets', ASBA-FSI High – Level Meeting on the Emerging Framework to Strengthen Financial Stability and Regulatory Priorities in the Americas, Antigua, Guatemala, 19 November, http://www.bis.org/speeches/sp101125.pdf. Moosa, Imad. A. 2015. Good Regulation, Bad Regulation: The Anatomy of Financial Regulation. Palgrave Macmillan,p. 137
[452] BCBS, 2011, Basel III: A global regulatory framework for more resilient banks and banking systems. BIS.
[453] Dowd, K., M. Hutchinson, S. Ashby and J. M. Hinchcliffe (2011) Capital inadequacies: The Dismal Failure of the Basel Regime of Capital Regulation', Policy Analysis, No. 681, July.
[454] Moosa, Imad. A. 2015. Good Regulation, Bad Regulation: The Anatomy of Financial Regulation. Palgrave Macmillan,p. 132

The Basel Committee has introduced new liquidity standards to increase bank resilience or prevent possible disruption of short-and-medium term funding. The provisions of liquidity under Basel 3 involve (a) financial intermediary institutions have to maintain a high quality liquid asset stock which is adequate to allow them to subsist a 30 days period of a high stress scenario and (b) a longer term structural liquidity proportion to encourage the activities of funding with sufficient stable funding sources. These are the LCR and the NSFR respectively. The goal of the LCR is to ensure that bank institutions hold a sufficient unencumbered level of HQLA to protect against a 30 days period of a high stress scenario as determined by supervisors[455]. The NSFR is designed to protect banks with sufficient stable funding sources for up to one year. [456] Financial intermediary institutions could satisfy these standards by altering their profile of funding that makes them less susceptible to liquidity distress.

Furthermore, Indonesia has implemented new liquidity standards which are proposed by Basel 3 through the Indonesia LCR provision 2015 and the Indonesia NSFR provision 2017. These standards might increase bank resilience or prevent possible disruption of short and medium term funding. However, the case of Century Bank and Bukopin Bank in 2020 which faced illiquidity concern might reveal the concern of liquidity standards in Indonesia. This might be caused by the weakness of Indonesia liquidity provision.

Providing liquidity provision is a step forward as low liquidity hinders activities or transactions and might stimulate a bank run on deposits.[457] The concern is that the proposed provisions of liquidity are complicated. This might relate to the calculation of liquidity ratio which might be difficult to measure. Moosa argued that the ratio of liquidity is hard to measure. He also revealed that the ratio of NSFR is based on liabilities rather than assets that is not appropriate. It is unclear how the both NSFR and LCR are to be measured or reconciled. The former ratio is asset based but the current or latter ratio is liability based.[458] Instead, a simple proportion of asset based liquidity could be employed to complement the proportion of leverage. A proportion of liquidity might be established in terms of funds, recent or total liabilities, with clear cut list of the essential liquid resources. Another valuable indicator is the gap of resources, the dissimilarity between deposits and credits.[459]

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[455] BCBS, 'Basel III: International Framework for Liquidity Risk Measurement, Standards and Monitoring', December 2010, 3 (BCBS, International Framework).
[456] BCBS, Basel III: the net stable funding ratio, October 2014
[457] Moosa, Imad. A. 2015. Good Regulation, Bad Regulation: The Anatomy of Financial Regulation. Palgrave Macmillan,p. 132
[458] Moosa, Imad. A. 2015. Good Regulation, Bad Regulation: The Anatomy of Financial Regulation. Palgrave Macmillan, p.135
[459] Moosa, Imad. A. 2015. Good Regulation, Bad Regulation: The Anatomy of Financial Regulation. Palgrave Macmillan, p.135

Another elements of International standard are the supervisory review process (Pillar 2) and public disclosure (Pillar 3). Walter [460] reveals these objective in the following below, a) enhancing risk governance and management, b) improving the management of cross border bank resolutions, c) augmenting market discipline. Indonesia has already implemented supervisory review process but it is simple and there is no provision of public disclosure. As already discussed in previous chapter, based on the case of Century Bank, Indonesia might have a concern relating to supervision and disclosure requirement. Basel 3 might address these concerns but the simple provision of supervisory review process and no explicit provision of disclosure in Indonesia might enhance the possibilities of similar case which might potentially recur in the future.

The BCBS looks to ignore the difficulties relating to Pillar 2 and 3 that are recognized in the study or literature. It is unclear how supervisory bodies settle the needed capital above the minimum level. It is unclear whether the conservation capital buffer is computet under Pillar 2 or 1. Thus, under Basel III, three capital tranches have to be settled including (a) countercyclical buffers (CCB) as needed by the new scheme, (b) complementary capital as needed by Pillar 2 and (c) regulatory capital level as needed by Pillar 1. These are likely a triple mission impossible which generates an amount which denotes nothing for all intentions and objectives.[461]

The disclosure issue (Pillar 3) has created considerable discussion and responses from expert or practitioner. Atkins contend that it would make an uneven playing field between financial intermediary institutions and their non bank players, who would be allowed to engage in their activities unencumbered by provisions of supervisory capital and the excessive cost of compliance which they would produce.[462] Thomson contend that making disclosure associated with operational risk can damage or threaten financial intermediary institutions once trying to make negotiation of insurance policies which can be employed as a strategy or approach of risk mitigation.[463] Edelson contends that the requirement of disclosure would make a condition where the information they reveal or disclosure can be subject to misunderstanding or

[460] Walter, S. (2010) 'Basel II and Revisions to the Capital Requirement Directive', www.bis.org/speeches/sp100503.htm.
[461] Moosa, Imad. A. 2015. Good Regulation, Bad Regulation: The Anatomy of Financial Regulation. Palgrave Macmillan,p. 137 p. 135
[462] Atkin, H. I. 2003. Letter to Basel Committee on Banking supervision, http://www.bis.org/bsbs/cp3/wellsfago.pdf
[463] Thomson, T.S. 2003. Letter to Basel Committee on Banking Supervision, http:www.bis.org/bcbs/cp3/jpmorgan.pdf.

misinterpretation which can merely be handled by disclosure or revealing more information and the outcome problem would be expensive.[464]

Furthermore, Basel 3 introduced leverage ratio as a either 'backstop' or 'supplementary' measure to the risk based requirement. The purposes consist of (a) tackling model risk, (b) proposing additional protection against endeavor to 'game' the risk based requirements, and (c) providing a base under the build-up of leverage in the bank institutions. As described in chapter 2, Century Bank held poor asset quality that contributed to a decline in a bank capital due to asset default which were categorized as an illiquid asset, but calculation of its minimum capital in line with capital provision is difficult to be analysed accurately based on the calculation of risk weighted ratio on the balance sheet of Century Bank. Its concerns might be relating to accuracy data, trust of data, unstandardized data, no consistency of bank financial report, and untruthful or inappropriate information or data on the it's up to date condition. Consequently, the ratio of capital could be manipulated. Therefore, leverage ratio introduced by Basel 3 might address an Indonesia concern. The ratio of leverage is more objective, real, easily understandable and easier to estimate or calculate than the ratio of risk based capital. The ratio of capital could be manipulated but the ratio of leverage is resistant from manipulation.[465] Implementation of leverage ratio in Indonesia might assist to monitor or manage the risk of insolvency, but it should be regulated with a clear provision and measure which would be either merely the common equity component or total Tier 1 capital.

The leverage introduction is a step forward. However, ther are difficulties with how that is to be performed under Basel III. Blundell-Wignall and Atkinson contend that the ratio of leverage might be the single most significant restructuring but the concern is that it is deemed as either a 'back stop to risk based framework or a 'supplementary'. They not only reveal that it ought to not be design of a back stop measure but also encourage its use as the principal instrument of capital control. They also reveal that ratio of leverage and risk weighting might not be placed well together as the ratio of leverage and capital are calculated corresponding to two dissimilar capital models.[466]

To propose that the proportion of leverage is a complementary instrument to the proportion of capital is rather odd, provided that once a proportion of leverage is in place, it denotes a

[464] Edelson, D.B. 2003. Letter to Basel Committee on Banking Supervision, http:www.bis.org/bcbs/cp3/citigroup.pdf

[465] Moosa, Imad. A. 2015. Good Regulation, Bad Regulation: The Anatomy of Financial Regulation. Palgrave Macmillan, p. 133

[466] Blundell-Wignall, A. and P. Atkinson (2010) 'Thinking Beyond Basel III: Necessary Solution for Capital and Liquidity', Financial Market Trends, 1, 1-23

corresponding proportion of capital. Moreover, the proportion of leverage is more tangible, easier or simple to compute and more easily comprehensible than proportion of risk based capital level. Although considerable empirical evidence reveals a negative correlation between insolvency of bank and the proportion of leverage, there is no such indication on how insolvency is associating with proportions of risk based capital level.[467] The BCBS states clearly that one rationale for the leverage introduction is that it is likely to game the risk based capital regulation.[468] If the level of capital could be manipulated while a proportion of leverage is resistant from manipulation, and as the proportion of leverage is indicative of the capital level, the rational point to perform will be to substitute the later with the previous or former, indicating abandon capital based requirement in favour of leverage based provision. However, that was the issue before the BCBS arise with its first setting of capital schemes in the early 1980s.

Moreover, another part of International dimension is countercyclical capital buffer which is designed to a) maintain capital to provide buffer at individual bank institutions which could be employed in stress conditions; b) reach wider macroprudential goal of safeguarding the banking system from periods of growth of excess credit; c) limit any excess procyclicality. It is rather odd to plan Basel II in such a method as to create it procyclical then attempt to lower procyclicality by introduction of CCB. The Basel II procyclicality arose from the capital calculation on the RWA basis which denotes that one of the proclaimed advances over rised sensitivity of risk might be counterproductive. Hence, several researchers contend that procyclicality could be lowered by computing the capital level from total unadjusted assets that will make the proportion of leverage and capital matching or compatible.[469] For instance, Goldstein submits that one method in which component of CCB can be introduced into capital regulation is to create capital a role of the alteration in assets, not level of RWA.[470] Designing countercylicality sounds more reasonable than introducing procylical system by design and subsequently searching for measures of countercyclical.[471] Several researchers argue against

[467] Evanoff D.D and Wall L. D. 2001. SND Yield Spread as Bank Risk Measures, Journal of Financial Services Research, 19, 121-46.
[468] BCBS, 2010, The Basel Committee's Response to the Financial Crisis: Report to the G20, Basel: Bank for International Settlement, October
[469] Moosa, Imad. A. 2015. Good Regulation, Bad Regulation: The Anatomy of Financial Regulation. Palgrave Macmillan, p. 134
[470] Goldstein, M. 2008. The Subprime and Credit Crisis, Paper based on transcript of speech presented at the global economic prospects meeting, Peterson Institute for International Economics, 3 April.
[471] Moosa, Imad. A. 2015. Good Regulation, Bad Regulation: The Anatomy of Financial Regulation. Palgrave Macmillan, p. 134

the introduction of a countercyclical buffer.[472] Ambler contends that the purpose of ensuring that build up of capital in good times could be used up in the bad times is not achieved by a fixed buffer.[473] He also revealed that it conflict with the long battle against bank institutions misrepresenting their reports by instruments of secret reserves. Furthermore, Dowd, et al revealed that the framework of countercyclical buffer is unclear that it amounts to little more than restatement of the concern to be addressed.[474] They also proposed that the Basel Committee circumvented a difficult query of how this framework are applied by reverting it to the national regulators.

It is likely that Century Bank which are already discussed in previous chapter did not represent a banking concern in Indonesia relating to excess credit growth. Furthermore, the growth of credit[475] might not reflect the risk of excess credit which might not be a current primary concern in Indonesia but countercyclical capital buffer might be relevant to limit this risk in the coming period time if there is a growth of excess credit significantly in the bank's balance sheet. However, regulatory bodies might consider to use proper strategy for setting countercyclical buffer which will be discussed further in the chapter five and six as increase of capital might provide several impacts which already discussed in previous section such as macroeconomic effect and a rise in bank funding cost.

Finally, another part of International dimension is expanding risk coverage which is aimed to ensure that all material threats are covered in and integrated into the method of calculating capital level, specifically those associated with not only derivative and complete transaction but also trading activities. The rules consist of enhancing capital for counterparty credit exposures deriving from transaction of security, repos and derivatives of bank institutions. This purpose is to give incentives to not only augment the risk management of counterparty credit exposure but also move OTC derivative contract to central counterparties. Moosa argued that this aims sound good but risk coverage has concerns and alternative action possibilities. To manage risk of counterparty in derivatives, a more effective action possibilities is either to need a full financial back up of dealings or to compel the derivatives exchange on organized tradings.[476] The concern might relate to judge the systemic significance of individual banks

[472] Moosa, Imad. A. 2015. Good Regulation, Bad Regulation: The Anatomy of Financial Regulation. Palgrave Macmillan,p. 134
[473] Ambler, T. (2011) 'How Basel III Treatens Small Business', Briefing Paper, Adam Smith Institute. www.adamsmith.org/research/reports/how-basel-iii-threatens-small-businesses
[474] Dowd, K., M. Hutchinson, S. Ashby and J. M. Hinchcliffe (2011) 'Capital Inadequacies: The Dismal Failure of the Basel Regime of Capital Regulation', Policy Analysis, No. 681. July
[475] Infra. Chapter 2
[476] Moosa, Imad. A. 2015. Good Regulation, Bad Regulation: The Anatomy of Financial Regulation. Palgrave Macmillan, p. 133

when dealing with systemic risk.[477] As already discussed in previous chapter, the cause of the failure of Century Bank is not relating to derivatives or complex transaction. However, expanding risk coverage might be considered and relevant to be implemented if bank balance sheet shows the significant growth of the complex transaction in order to maintain more capital against the complex securitization or transaction relating to interconnectedness and possible systemic risk in Indonesia.

Indonesia might still implement international standards and adopt it relating to the national interest although it has several flaws. However, Indonesia regulatory bodies might consider or endeavor to address the weakness of banking system with learning from experience of other countries, such as the UK to complement or improve the effectiveness or quality of banking provisions which will be discussed further in section 4.3 and 4.4 of this chapter. Not all provisions might be able to be adopted but Indonesia might consider to adopt the approach that is suitable with national interest and might be able to address the weaknesses of Indonesia prudential provisions and rationally or potentially to be implemented in Indonesia which will be discussed further in chapter 6

4.2.2. The culture of Basel and decision on Basel III

Blundell – Wignall and Atkinson contend that several essential concerns with Basel 1 and 2 have not been addressed by Basel 3.[478] These concerns involve model structure, tax arbitrage, the necessity for more capital, and regulatory. However, Moosa reveals more concerns including allowing financial intermediary institutions to employ internal patterns to compute capital regulation, the implementation concerns, dependence on rating agencies and the discriminatory and exclusionary Basel 2 aspects.[479] Provision ought to cover cover financial intermediary institutions and non banks as financial intermediary institutions handle or manage hedge fund and insurance firms to move assurances, that allow them to enhance leverage proportion and lower capital level. Moreover, either Basel 3 or its predecessors has no provisions for resolution regimes that abandon a lot to be wanted in regard to the TBTF concern. Hence, Llewellyn proposes that there are needs or requirement to be Pillar 4 that will include

[477] Moosa, Imad. A. 2015. Good Regulation, Bad Regulation: The Anatomy of Financial Regulation. Palgrave Macmillan, p.133

[478] Blundell – Wignall, A. and Atkinson, P. (2010) 'Thinking Beyond Basel III: Necessary Solution for Capital and Liquidity', Financial Market Trends, 1, 1-23.

[479] Moosa, Imad. A. 2015. Good Regulation, Bad Regulation: The Anatomy of Financial Regulation. Palgrave Macmillan, p. 135

planning of resolution and intervention as segment of whole regulatory approach and regulatory system.[480]

However, the most significant concern remains risk based method to the capital calculation. For instance, with a capital proportion of 8% and RWA of 0.2, the requirement of capital might be 1.6% which enable financial intermediary institutions to leverage 62.5 to 1.[481] Hence, there was a rush to maintain triple A CDOs even though they were made from risky subprime credits. Under the similar provisions, a sovereign bond either rated AA or AAA possess a zero weight, that is why Greece obtained it easy to have a loan of or borrow and why financial intermediary institutions were eager about providing loan to Greece.[482]

Kurowski expresses Basel II very expressively in the following below:

"It is not possible not to see currently that financial regulatory bodies in the BCBS, attempting to keep away a financial intermediary institution and a financial instability, built an incredibly flawed Maginot Line. It was created with inferior data, notably feasibly weak views of credit rating and arbitrary RWA. It also was created on the totally incorrect limit, for two rationales. Firstly, it was created where the threats are recognized high, and where thus no financial intermediary institution or financial instability has ever arisen, as all those who build a living there, specifically as they are unsafe, could never develop into a systemic threat. Secondly, it was created where it keeps away exactly those customers whose financial necessities we most suppose our financial intermediary institutions to attend, such as those of small transactions and businessperson, those who can give us our next appropriate job generation and who possess no alternative entry to capital markets."[483]

Then he shifts to Basel III to express the following below:

"The BCBS stresses reconstructing with the similar flawed substances on the similar wrong condition and it will look that we are enabling them to do so. I am attempting to prevent them… are you going to assist me or do you prefer to swim in the calm liquids of automatic team with those who are expected to comprehend better? The implicit foolishness of the Basel provisions

[480] Llewellyn, D. T. 2010. 'The Global Banking Crisis and the Post Crisis Banking and Regulatory Scenario', Research Papers in Corporate Finance, University of Amsterdam, June.
[481] Moosa, Imad. A. 2015. Good Regulation, Bad Regulation: The Anatomy of Financial Regulation. Palgrave Macmillan, p. 136
[482] Moosa, Imad. A. 2015. Good Regulation, Bad Regulation: The Anatomy of Financial Regulation. Palgrave Macmillan, p. 136
[483] Kurowski, P. 2010. 'Comment', 15 September, http://blogs.reuters.com/financial-regulatory-forum/tag/basel-iii

can, observing the harm or loss these are producing, mirror an economic offense against humanity?"[484]

Dowd critiques what he describe 'provisions arising from a highly procedure of politicized committee' as the product of political skill, unreasonable concession and arbitrary verdict.[485] This procedure essentially cause inconsistent cure, while enforcing large application incurs cost on regulated companies. Furthermore, it cause guidelines that endeavor to make standardization of practices in a part where a way is always altering and where the growth of the best way needs competition in practice of risk management.[486]

Dowd critiques capiral provision by describing the following below.

"To the extent that it possessed any effect at all, provision of capital will appear to be completely counterproductive. It seems to have saddled banks with ineffective and considerable compliance problem, hindered the growth of best way in risk management, destabilized market competition and undermined the global banking system."[487]

International standards might improve the soundness and safety of a bank institution and stability of banking system in Indonesia. Although adopting all standards of international dimension are adopted by Indonesia banks comprehensively, this might not assure the financial stability in Indonesia due to its flaws or concerns. Acharya criticized the use of Basel 3 based on the following objections including a) it is essentially flawed, like its predecessors, as an approach of planning macroprudential provision, b) it does not use restrictions of asset level leverage, c) it fails to identify that risk weights change the bank incentives to be exposed to different categories of asset; d) it uses static risk weights on classes of asset and is not successful to capture any time variances in the relative asset risk.[488]

The Basel 3 provisions are doubtful and problematical, they do not tackle the essential inadequacy of Basel II yet. Hence, Basel III might be significant increase forward compared to the previous, Basel II. Kay reveals that the additional provision of Basel 3 would not be relevant to the next bubble.[489] Similarly, Amber contends that 'we ought to not be too convinced or

[484] Kurowski, P. 2010. 'Comment', 15 September, http://blogs.reuters.com/financial-regulatory-forum/tag/basel-iii

[485] Dowd, K. (2009a) 'Moral Hazard and the Financial Crisis', Cato Journal, 29, 141-66

[486] Dowd, K. (2009a) 'Moral Hazard and the Financial Crisis', Cato Journal, 29, 141-66

[487] Dowd, K. (2009b) 'The Failure of Capital Adequacy Regulation', in P. Booth (ed) Verdict on the Crash Causes and Policy Implications, London: Institute of Economic Affairs.

[488] Acharya. V.V. (2010) 'The Dodd-Frank Act and Basel III: Intentions, Unintended Consequences, Transitiion Risks, and Lessons for India'

[489] Kay, J. (2009b) 'The future of financial services regulation, London: Centre for the Study of Financial Innovation.

confident that Basel 3 would assure stability of banking system due to the similar method as Basel 2.[490] Moreover, K. Dowd et al contend that it has much the similar possibilities of failure, like its predecessors because of the flaws of its provisions, notably reliance on not only banking risk modelling and regulatory capture but also risk based provision.[491]

Although Basel III has been implemented, speculations about Basel IV have already appeared. For instance, KPMG expresses that Basel 4 might be surfacing from the mist even before Basel III is applied fully.[492] Based on the report of KPMG, the leading Basel IV indicators involve the following (a) several states are already starting to implement or enforcing requirement which exceed Basel III, (b) common matters among market analysts and regulatory bodies about the outcome RWA accuracy and the use of internal model, (c) requiring better easiness in regulatory requirements from several leading regulatory bodies, and (4) a paper flows from BCBS which seem to further than Basel III. These improvements, based on the report of KPMG, might be likely to bring about three alteration which may model and develop the future Basel IV basis including (a) limiting the benefits to financial intermediary institutions of employing internal models to compute their capital level, (b) calls fro financial intermediary institutions to satisfy a higher minimum proportion of leverage, (c) better disclosure by financial intermediary institutions. If anyting, these develop well but they ought to never occur under the BCBS banner as a international part of provision. Furthermore as financial intermediary institutions always win, it is uncertain that these provisions would really be applied in a system or practice which is unacceptable to them. In relation to discussion in previous chapter, section 3.4.1, the reformed version of Basel III, namely Basel IV, was published by BCBS in December 2017. It would be implemented in 1 January 2022. Further legislative proposals of the CRD V package were adopted by the Commission in May 20219. The review of the CRD was expected to tackle not only several shortcomings of provisions but also contribute to maintaining the ability of the banking system to encourage the economy.[493].

[490] Ambler, T. (2011) 'How Basel III Treatens Small Business', Briefing Paper, Adam Smith Institute.
[491] Dowd, K., M. Hutchinson, S., Ashby and J. M. Hinchcliffe (2011) 'capital Inadequacies: The Dismal Failure of the Basel Regime of Capital Regulation', Policy Analysis No. 681.
[492] KPMG. 2013. 'Basel 4 – Emerging from the Mist',
http://www.kpmg.com/LU/en/Issuesandinsight/articlespublications/Documents/Basel-emerging-from-the-mist.pdf.
[493] Stamegna, C. (2019) 'Amending capital requirements: The CRD V package.' European Parliamentary Research Service

4.3. The substantive facets of prudential provision: Capital Requirements and liquidity for banks in the UK and Indonesia

4.3.1. Capital requirement in Indonesia and the UK

4.3.1.1. Definition and general prudential principle

The CRD/CRR is similar to the frameworks of the 11 provision 2016 and the 34 provision 2016 that start with an extensive definition list of the significant concepts supporting the whole structure of capital provisions. The aim of definition is to ensure that general terms will create a strong basis for implementation of capital structure in line with International regulation, Basel III. Several highly relevant definitions under Indonesia's provisions could be found in the related parts of the CRD/CRR and Indonesia capital provisions under the 11 and 34 provisions 2016 or their explanation. For example, the concepts of trading book and banking book are described in article 1 (15) and article 1 (16) of the 11 and 34 provision 2016 respectively. Similarly, the CRR describes the concept of trading book in detail in Article 4 (86) and other provisions associated with trading book in Part III, Chapter 3 Article 102-106 includes the requirements, management, inclusion and requirements for prudent valuation.

The preliminary consideration of minimum capital requirement under the 11 provision 2016 and the 34 provision 2016 reflects the increase of quantity and quality of capital in line with Basel III but does not reflect its three pillars structure comprehensively. The preliminary consideration of the 11 provision 2016 includes below

d. Preliminary consideration of these provisions set out the need for banks to boost their ability to absorb losses caused by financial instability. This could be performed through strengthening quality and quantity of bank capital to mitigate the risk banks are facing.
e. It sets out the need to augment quantity and quality of capital in line with International standard, Basel III. The core component of capital or Tier 1 have to be dominated by capital instrument which is categorized as high quality including either common stocks or common equity Tier 1.
f. It includes adjustments of the requirements of components and instruments of banks' capital and of the capital ratio. Another core component of capital include additional Tier 1 and Tier 2.
g. It states the need for additional capital in line with the risk profile as a buffer. A bank which is categorized as systemic bank must fulfil capital surcharge. It is aimed to provide buffer to cover or mitigate risks which are caused by either condition of instability or excessive growth of bank credit.

However, preliminary consideration of the two provisions 2016 does not highlight the importance of supervisory review, but section IV (2) in Article 44-46 the 11 provision 2016 regulates the supervisory review and evaluation process. These provisions reflect the main value of the supervisory process in line with International standards, but there is inconsistency in the framework of capital provision between preliminary consideration and the principles guiding the implementation of the whole structure.

Another key principle which describes the overall bank obligation pertaining to minimum capital requirement is detailed in Part three, particularly Section 1 entitled "Own funds requirements for institutions", Article 92 the CRR. This is similar to Article 2 the 11 provision 2016 under the Indonesian capital framework. Banks must provide minimum capital relating to their risk profile. This indicates several risk categories with regard to the minimum capital amount which ought to be provided and the legal provisions related to capital calculation in line with the several risks. This involves the appropriate capital amounts that are provided by a bank institution to be able to cover the aggregated exposures for each of the risk categories. Article 2(3) prescribes the sum of capital requirements in line with banks' risk profile[494], notably 8% of Risk Weighting Asset (RWA) for a bank with a level 1 risk profile, 9%-10% of RWA for bank with level 2 risk profile, 10%-11% of RWA for a bank with level 3 risk profile, 11%-14% of RWA for a bank with level 4 or level 5 risk profile. Article 2 (4) the 11 provision 2016 also specifies the common rule which gives the IFSA the authority to determine more capital than the minimum capital requirements identified for these several risk categories.

4.3.1.2. Credit risk – standardised approach

The part of the substantive 11 and 34 provision 2016 is dedicated to the regulatory treatment of credit risk that remains to be the major bank risk in Indonesia. There is no change in the essential framework of mechanisms for assessing banks' minimum capital requirement. Therefore, the minimum ratio of risk-based capital is maintained at 8 percent and could be more with regard to the bank's risk profile. Article 34 the 11 provision 2016 specifies that there are two approaches that could be used to calculate RWA for credit risk: Standardised approach (SA) and Internal Rating based (IRB) approach. These approaches and Indonesia's minimum capital ratio are similar to the UK approaches and capital ratio. Under Article 107 of the CRR, banks could employ either the SA or the IRB after obtaining approval from the competent authorities. Based on Article 92 (1c) the CRR, banks have to meet a total capital ratio of 8%.

[494] Based on explanation of Article 2 (1) the 11 provision 2016, risk profile is described as a risk profile of bank institutions as arranged or regulated in a provision about assessment of banks' soundness level.

The SA is ruled in Article 111-141 Chapter 2 of the CRR. The CRR provision and principles are similar to the Indonesia provisions under article 34 the 11 provision 2016 and the IFSA circular letter No. 42/SEOJK.03/2016 (the 42 IFSA letter 2016) about the guidelines of RWA calculation based on risks for credit risk using SA approach, but also Annex 1-IV the IFSA circular letter. The IFSA lays down the application of the SA in the first stage for banks to calculate RWA for credit risk, the so-called 'default' mechanism. It could be assumed that in Indonesia, the use of SA in the first stage represents the best or primary choice of RWA calculation compared with the approach of IRB. The SA expresses the level of RWA in whole percentages of 0,20,50,100, and 150 per cent, relying on the credit quality of the counterparties. Therefore, to represent underlying risk exposures with greater accuracy, the Annex I of IFSA circular letter provides a list of portfolio categories.

Besides, the IFSA circular letter creates the possibility of using external credit rating to determine quality of credit, provided that the IFSA recognises the issuing institution with regard to the IFSA circular letter about the institution's external credit rating and rankiing recognised by the IFSA (under section 1, general rules, no 5). The IFSA's circular letter about the guidelines of RWA calculation based on credit risk using SA approach is simple and too general, with no explanation or clear objective, just procedures of RWA calculation. It also prescribes several techniques and methods to mitigate credit risk (section IV about method and techniques of credit risk mitigation). These techniques and methods are backed by several criteria and principles which consider the impact of mitigation of credit risks with several primary aspects, notably collateral, warranty, credit insurance, certainty and timelines.

The SA approach in Indonesia is largely characterized by particular provisions but this model involves significant discretions. It allows banks to make exemptions of particular exposures, notably calculating consolidation of RWA of credit risk for banks which own a subsidiary or calculating credit risk for banks that own a sharia unit. But, some aspects, such as the level of exposure that is calculated and determining risk level, have to meet or be in line with calculation of RWA using the SA approach, and employ ranking and methods and techniques of mitigation of credit risk under the IFSA circular letter about the guidelines of RWA calculation based on risks for credit risk using SA approach.

4.3.1.3. IRB approach for credit risk

The CRD/CRR allow for the possible use of internal risk as a measurement approach for determining regulatory capital. This is similar to Indonesia's provision under the 11 provision 2016. With regard to risk of credit, the provision prescribes this alternative regulatory model, allowing the capital calculation in line with the banks' own methods for assessing or estimating

the needs of internal capital. The underlying basis is that they mostly create possible internal system use to estimate the borrower's overall quality in several ways, and that in their lender capacity banks obtain more information on the latter than a third party. However, banks must obtain authorization from the IFSA before using the internal rating approach.

The use of IRB has been warmly welcomed as an alternative approach to calculate RWA for credit risk. The incentive for financial intermediary institutions to employ the IRB that depends on the patterns developed by the financial intermediary institutios themselves, is that it makes lower charges of capital.[495] The use of IRB is effectively self provision that provides financial intermediary institution (merely large bank institutios) the chance to manipulate their patterns and generate the desired capital level that is exactly what they desire.[496]

The flexibility of the IRB approach relating to financial conglomerates in Indonesia or consolidation with subsidiary companies which have sophisticated management of risk requires substantial resources which might only be committed to or available to large actors. Moreover, there are limitations concerning bad corporate governance, default and credit history pertaining not only to supply of credit to companies that are owned by the same shareholder but also new financial products that have an effect on the accuracy of estimation of IRB approach.[497] Another concern is the fear relating to the failure of bank regulators to recognize e complexities of internal approaches and risks.[498]

There are several criticisms relating the use of IRB approach. Rebonato contends against its use to fulfil regulatory prerequisite. Regulatory bodies ought to not compel bank institutions to provide resources to develop its application to compute number of doubtful value for intention of provisions. His suggestion is either keep it simple or allowing bank institutions to determine whether they would like to develop this approach or not.[499] Furthermore, there is query which has been raised relating to whether or not the IRB approach is good.[500] Richard said that 'several managers of risk feel happy with digits their approaches generated but if you query them to

[495] Moosa, Imad. A. 2015. Good Regulation, Bad Regulation: The Anatomy of Financial Regulation. Palgrave Macmillan, p. 106
[496] Moosa, Imad. A. 2015. Good Regulation, Bad Regulation: The Anatomy of Financial Regulation. Palgrave Macmillan, p. 105
[497] Dragomir, Larisa, (2010) 'European Prudential Banking Regulation and Supervision: the legal dimension' Routledge,p. 135 - 138
[498] Dragomir, Larisa, (2010) 'European Prudential Banking Regulation and Supervision: the legal dimension' Routledge, p. 135-138
[499] Rebonato, R (2007), The Plight of the Fortune Tellers: Why we need to manage financial risk differently, Princeton (NJ): Princeton University Press.
[500] Moosa, Imad. A. 2015. Good Regulation, Bad Regulation: The Anatomy of Financial Regulation. Palgrave Macmillan, 112-115

assurance the precise and accurate result, then they answers they could not'.[501] A primary concern with the approach of mathematical employed by banks is that they do not pay attention to human nature and history. The economist revealed that financial institutions promptly set up themselves racking up regular defeats which the said of computer ought to arise merely once in years millions.[502]

The IRB model gives a clearer legal base for the measurement of internal credit risk and tasks of prudential supervision. Implicitly, it emphasizes the accuracy and significance of banks' own qualitative and quantitative review of individual assets. It reflects a strategy of regulation which delegates the entire process of regulatory capital to the regulated banks themselves. It is not unconditional due to the need for explicit approval provided by regulatory authorities. Therefore, new methods of responsibility of supervision are created in the role of regulators concerning approval of such approaches and the reliability of banks' own quantitative and qualitative assessment.

4.3.1.4. The supervisory review models

Four primary principles have been established by The Committee, Basel for models of supervisory review, namely Internal Capital Adequacy Assessment Process (ICAAP), holding capital above its requirement, Supervisory Review and Evaluation Process (SREP), and early intervention of supervision. ICAAP involves the process of a bank institution to show and ensure that they have enough capital in line with not only existing operating conditions but also their overall risk profile. The primary elements of its procedure include (a) comprehensive risk assessment; (b) supervision of board and senior management; (c) monitoring and reporting; (d) assessment of sound capital and (e) review of internal control. Furthermore, SREP includes the process of supervisory bodies to review and evaluate the assessment of banks' internal capital adequacy. There are several combinations of periodic assessment including (a) off-site assessment; (b) assessment of work performed by external auditors; (c) inspection; (d) periodic reporting ; and (e) discussions with bank management. The rules on supervision are laid down throughout Indonesia's capital provisions[503]. The ICAAP and SREP are regulated under Section IV, Article 43-46 of Indonesia capital provisions.[504] These models of review are similar to the UK methods set out in Chapter 2 Section 1 Article 73-110 the CRD.

[501] Wood, D. 2008, 'A Model Model?', OpRisk & Compliance, March, 35-7.
[502] Economist, The , 2012, 'The mathematics of Markets', 14 January
[503] The IFSA provision No. 11/POJK.03/2016
[504] The IFSA provision No. 11/POJK.03/2016

The ICAAP and SREP are important and significant parts of the capital structure under the CRD and Indonesian capital provisions[505] which complement the quantitative capital requirements. The CRD highlights the twin functions to be performed by supervisory authorities: review and enforcement which are both similar to Indonesia's capital provisions.[506] Under Indonesia's provisions, the function of review ensures banks' capital is in line with its overall risk profile.[507] If there are differences between SREP and self-assessment by the bank, SREP would be valid to calculate capital.[508] The function of enforcement requires supervisory bodies to make interventions promptly through implementation of appropriate prudential level where they detect deficiency of capital level that is not in line with the bank's risk profile.

Indonesia's capital provision also includes a direct obligation for competent supervisory bodies to take important actions to intervene at an early stage, in case of deficiency of banks' capital level under minimum capital requirement. These include obliging the banks: to boost capital in order to meet minimum capital requirement in line with risk profile; to fix the quality process of risk management; and to lower risk exposure.[509] The function of enforcement also involves limitation of the particular bank's activities, limitation of capital distribution, and restriction on opening new branch offices if the trend of decrease of the bank's capital could potentially cause it to fall under the bank's minimum capital level.[510]

The ICAAP, owned by the banks themselves, is the process for evaluating the internal capital required against the bank risk. Banks must have an ICAAP in line with the size, characteristic, and complexity of bank business.[511] It involves a complex role for banks to assess systematically and consistently the internal processes of bank governance, minimum capital level, monitoring and reporting, and individual risk management systems. [512]

Therefore, although Indonesia's capital provisions[513] do not prescribe the process of supervisory review explicitly, it involves a complex process for creating greater cooperation through dialogue between banks and supervisory bodies, and the so called SREP. It highlights the role of supervisory bodies in not only determining the bank capital requirement but also assessing the ICAAP and performing enforcement. Therefore, the essence of the relationship

[505] The IFSA provision No. 11/POJK.03/2016 and The IFSA provision No. 34 /POJK.03/2016
[506] The IFSA provision No. 11/POJK.03/2016
[507] Article 45 (1) The IFSA provision No. 11/POJK.03/2016
[508] Article 45(1) The IFSA provision No. 11/POJK.03/2016
[509] Article 45 The IFSA provision No. 11/POJK.03/2016
[510] Article 46 The IFSA provision No. 11/POJK.03/2016
[511] Article 43 (1) The IFSA provision No. 11/POJK.03/2016
[512] Article 43 (2) The IFSA provision No. 11/POJK.03/2016
[513] The IFSA provision No. 11/POJK.03/2016

between banks and supervisory bodies is the interaction between SREP and ICAAP despite no further guidance having yet been developed by the IFSA.

4.3.1.5.Disclosure Requirement (Market Discipline)

Disclosure requirement was introduced by BCBS not to only augment disclosure consistency and provide a harmonised template but also to promote market discipline. The inclusion of disclosure requirements imposed on banks in Part Eight of the CRR shows the importance of implementation of market discipline in the UK. The disclosure would enable market participants to assess the financial performance of bank institutions more accurately based on reliable information. The disclosure requirements that involve a solid regulatory structure encouraging the market's role of assessing and validating the conduct and business of individual bank institutions would stimulate increased market discipline. This could potentially be a strong incentive for bank institutions to conduct business safely and also maintain an adequate capital level. Therefore, market discipline could potentially boost prudential provision and assist supervisory authorities to maintain the safety and soundness of the financial system.

Indonesia does not yet have provisions which regulate disclosure requirements. The capital provision in Indonesia merely regulates supervisory review models.[514] Although the IFSA introduced consumer protection provision in the financial service sector[515], this provision merely regulates the bank's obligation to provide information about their products and services, but not provision of information about relevant characteristics of the bank's business. Therefore, it could be assumed that Indonesia has not developed or adopted comprehensive disclosure requirements in line with Basel III so as to induce increased market discipline.

In contrast, the UK banks have to disclose publicly the data associated with universal primary metrics of their risk to market participants, notably not only capital, [516]credit risk adjustment CVA)[517] and risk management[518] but also risk exposure,[519] leverage[520] and the indicator value for determining the GSIB[521]. This Article also introduced a draft of implementation of technical benchmarks using uniform templates which was submitted by EBA to the Commission in July 2013. Furthermore, Article 433 CRR lays down the frequency of their publications on an annual basis but if higher frequency is required, publications have

[514] BCBS (2015) 'Standard: Pillar 3 disclosure requirements – updated framework.' BIS. P.
[515] The IFSA provision No. 1/POJK.07/2013
[516] Article 438, the CRR
[517] Article 442, the CRR
[518] Article 435, the CRR
[519] Article 439, the CRR
[520] Article 451, the CRR
[521] Article 441, the CRR

to include the relevant characteristics of bank's activities, notably operational scale, involvement in dissimilar financial sectors, presence in different states' range of business and participation in international market and payment systems.

While the disclosure requirements concentrate on provision measures, they also enable market participants to consider primary data, notably capital and exposure of their risk. Market discipline through disclosure requirement focuses on the achievement of an informationally efficient market but it does not involve a similar impact for banking provision, such as capital provision.[522] The disclosure requirement might potentially have an impact on the banking market mechanism. The disclosure of negative information could potentially lead to massive deposit withdrawals due to excessive market responses. On the other hand, the disclosure performed by the wholesale banking market might be more efficient in absorbing or preventing publication of negative information.[523]

4.3.2. Liquidity provision in Indonesia and the UK

4.3.2.1. The guidance of Basel Liquidity Requirement in Indonesia and the UK

In Indonesia, liquidity requirements have been implemented through the IFSA provision no 42/POJK.3/2015 about LCR for commercial banks (the Indonesia LCR provision 2015) and also the IFSA provision no 50/POJK.3/2017 about NSFR for commercial banks (the Indonesia NSFR provision 2017), while the EU implements liquidity requirements through a relevant provision combination of EBA monitoring tools, and an EU Commission Delegated Act[524] and CRD IV[525].

Banks which satisfy compliant LCRs have to maintain stock of high quality assets (HQA) equal to 100 percent or more outflows of their net cash over a 30 day period of high stress scenario. [526] HQA involve liquid assets convertible into cash equal to their carrying values. [527] Cash, domestic currency government debt, central bank reserves and marketable securities with 0 percent Basel II risk weightings can be taken as examples of HQA meeting Basel's

[522] Hirte, H. And Heinrich, T. A. (2002) 'Principles and Technical Instruments for Prudential Regulation' in G. Alpa and F. Capriglione (eds) Diritto bancario communitario, Torino: UTET. P. 471.
[523] Hadjiemmanuil, C. (1996a) 'Financial Reporting and Auditing in the Regulated Sector' Journal of International Business Law 3: 103, 106.
[524] Commission Delegated Regulation (EU) 2015/61 of 10 October 2014 to supplement Regulation (EU) No. 575/2013 of the European Parliament and the Council with regard to liquidity coverage, OJ 2015 L 11/58, 1, 17 January 2015.
[525] Rec. 98-102 and Part 6 CRR
[526] BCBS, 'Basel III: International Framework for Liquidity Risk Measurement, Standards and Monitoring', December 2010, (BCBS, International Framework) p. 5.
[527] BCBS, 'Basel III: International Framework for Liquidity Risk Measurement, Standards and Monitoring', December 2010, (BCBS, International Framework) p. 7.

multifactor benchmark. [528] Based on Basel III, they are assets which are more likely to make cash without incurring large discounts in price because of fire sales, even in times of market risk assets, low credit, and financial stress; these are not difficult to value and are not strongly related to risky assets, are trade-listed and can be exchanged in liquid and active markets. [529]

The LCR's effectiveness in satisfying demand for liquidity during any distress relies on creating ex ante of an accurate regulatory judgement about the quality and quantity of assets needed. This inference includes considerable estimation about the seriousness of future distress and presumes that the possible value of HQA would remain stable during the time period =of market disruption. The LCR has to predict accurately the net cash outflow over a 30 days period of stress which will derive from combined idiosyncratic and market-wide shocks. Supervisors ought to scrutinise any potential mismatches or gaps within the 30 days period of stress and ensure that banks hold adequate available liquid assets to satisfy any gaps of cash outflows and inflows throughout the period of stress. [530]

Basel III also proposed that the NSFR should be implemented by January 2018. Stable funding sources refers to the percentage of the amounts and categories of equity and liability assets required to be available or reliable funding sources for up to one year under circumstances of extended instability. [531] The stable funding sources element includes not only preferred stock and capital but also liabilities with maturities of more than one year and stable deposits. [532] Under the final NSFR released by the Basel Committee in October 2014, the NSFR introduced three additional requirements; at least 10 percent of the loan value has to be provided in stable funding sources to back interbank loans with residual maturities of six months; 85 percent stable funding resources have to be provided to back the initial margin on the derivative agreement; and the ability of institutions to offset derivative assets with derivative liabilities was reduced. [533]

The Committee has proposed other measurements to monitor institution liquidity. The metrics concentrate on not only wholesale funding dependency and maturity mismatching but

[528] BCBS, 'Basel III: International Framework for Liquidity Risk Measurement, Standards and Monitoring', December 2010, (BCBS, International Framework) p. 9.
[529] BCBS, 'Basel III: International Framework for Liquidity Risk Measurement, Standards and Monitoring', December 2010, (BCBS, International Framework) p. 7.
[530] BCBS, 'Basel III: International Framework for Liquidity Risk Measurement, Standards and Monitoring', December 2010, (BCBS, International Framework) p. 3.
[531] BCBS, 'Basel III: International Framework for Liquidity Risk Measurement, Standards and Monitoring', December 2010, (BCBS, International Framework) p. 25-6.
[532] BCBS, 'Basel III: International Framework for Liquidity Risk Measurement, Standards and Monitoring', December 2010, (BCBS, International Framework) p. 20-22.
[533] BCBS, 'Basel III: International Framework for Liquidity Risk Measurement, Standards and Monitoring', December 2010, (BCBS, International Framework) p. 20-22

also the amount of available unencumbered assets. [534] The primary goal is to provide supervisory authorities with significant information needed to evaluate a bank's liquidity risk. Moreover, they might employ additional metrics or tools to capture a specific part of liquidity risk in line with their jurisdictions. Both the NSFR and LCR need authorities to create accurate estimation about the funding stability and the liquidity and quality of bank institution assets. The LCR seems more justifiable than the NSFR as it is difficult to imagine or assume a bank institution having liquidity instability lasting up to one year.[535]

4.3.2.2. The implementation of Basel Liquidity Requirements in Indonesia and the UK

The Indonesia implementation of the Basel III LCR and NSFR was introduced by the IFSA on 23 December 2015 and on 13 July 2017, respectively, through the Indonesia LCR provision 2015 and the Indonesia NSFR provision 2017. Both the LCR and NSFR in Indonesia apply to BUKU 3, BUKU 4, and foreign banks.[536] In contrast, the EU introduced the implementation of LCR and NSFR on 26 June 2013 under Regulation No. 575/2013 of the European Parliament and of the Council with regard to liquidity coverage and stable funding. The specific measurements for LCR and NSFR are explained in Article 411 et seq. of the CRR and the more elaborate method is regulated in Recital 100 et seq. of the CRR.

HQLA must fulfil fundamental requirements, operational requirements, diversified requirements, and requirements relating to market characteristics [537] in order to qualify an asset as a HQLA under the Indonesia LCR provision 2015. A bank institution would be allowed to convert HQLA into cash as needed to satisfy demand or withdrawal by short-term creditors during a liquidity crisis that could potentially influence or impact bank business even if it declined below 100%.[538] The requirement and use of liquid assets in Indonesia is mostly similar to the EU implementation. Under 416 (1) CRR, liquid assets have to meet conditions which are generally liquid: reliable funding sources in sales markets, readily marketable and not a financial company obligation. They involve cash, transferable assets of high quality liquidity and credit, other transferable assets of extremely high quality liquidity and credit, facilities of standby credit provided by central banks, excluding emergency liquidity assistance and not collateralised by liquid assets, transferable assets guaranteed by the BIS, IMF, central

[534] BCBS, 'Basel III: International Framework for Liquidity Risk Measurement, Standards and Monitoring', December 2010, (BCBS, International Framework) p. 31
[535] Scott, H. S. (2016) 'Connectedness and Contagion : Protectiong the Financial System from Panics.' Cambridge, MA : The MIT Press, p. 179.
[536] Article 5 the Indonesia LCR provision 2015 and Article 4 the Indonesia NSFR provision 2017
[537] Article 8 the Indonesia LCR requirement 2015
[538] Article 3 (3) the Indonesia LCR requirement 2015

government, the European financial stability facility, and central banks. Under Article 412 (3) and 414 CRR, in times of distress, covered institutions might be allowed by competent authorities to use liquid assets but when they do not fulfil or expects not to fulfil the requirements, they should provide and report not only the relevant information to competent authorities but also a plan for the timely compliance restoration.

The provision of LCR and NSFR might impact on debt markets and bank business models and operations of monetary policy considerably. The LCR might have a direct effect on demand on banks' liquidity and their alternative to short term central bank security,[539] while the NSFR includes adjustments in composition of banks' structural funding sources, indirectly influencing not only money markets but also participation in monetary policy operations. Particularly, the NSFR requirement might encourage a decrease in volume of the money market and enhance the attraction of longer-term central bank refinancing operations.[540] Besides, the Basel III liquidity requirements would increase demand on the liquid asset price and lead to further rise in funding costs. It is likely that the liquidity requirements will not be inexpensive and might have more effect ultimately on bank lending business than capital requirements.[541]

Provision of liquidity might decline lending between banks or financial institutions, resulting in worsening of a weak alternative for institutions during financial distress. A current study showed that in a response to liquidity provision, bank institutions have reduced their lending to financial or bank institutions, but not to non-financial institutions. [542] The LCR's critics have expressed concern that the provision encourages more risky debt without any decrease of contagion threat as it locks up safe debt.[543] However, two primary advantages of the LCR and NSFR have also been revealed. They provide policymakers or regulators with adequate time to evaluate the bank's liquidity position and plan to respond suitably in the face of financial distress. They also enforce bank institutions to maintain preventive liquidity cushions to mitigate not only funding liquidity risk but also liquidity mismatches. [544]

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[539] Bech M, Keister T (2012) 'On the liquidity coverage ratio and monetary policy implementation' BIS Q Rev

[540] Nicolo, G. D. (2016) 'Liquidity Regulation: Rationales, Benefits and Costs' NationAl InstItute eConomIc Review No. 235, p. 23.

[541] Scott, H. S. (2016) 'Connectedness and Contagion : Protectiong the Financial System from Panics.' Cambridge, MA : The MIT Press, p. 188.

[542] Banerjee, R. and Hio, M. (2014) 'The impact of liquidity regulation on banks.' BIS Working Papers, 470

[543] Mobile Collateral v. Immobile Collateral, Gary Gorton and Tyler Muir, Apr. 27, 2015. www.stern.nyu.edu/sites/default/files/assets/documents/Mobile%20Collateral%20versus%20Immobile%20Collateral.pdf. Also Anderson, R. W. and Joeveer,, K. (2014) 'The economics of collateral' available at: www.ssrn.com/abstract=2427231

[544]Nicolo, G. D. (2016) 'Liquidity Regulation: Rationales, Benefits and Costs' NationAl InstItute eConomIc Review No. 235, R.23

4.4. Substantive aspects of prudential provision between Indonesia and the UK/the EU: divergence or convergence?

It is argued that although there are some similarities in substantive facets of prudential provisions, particularly in capital and liquidity, between the UK and Indonesia, differences in the implementation of these provisions have gradually emerged in these countries.

Both regulatory frameworks reject a zero-moral hazard. It is unlikely that moral hazard can be avoided. The structures of prudential provision show that both countries are aware of the potential risk of moral hazard that can threaten the health of financial institutions. Although Indonesia and the UK face potentially dissimilar banking risks which could possibly impact on banking stability, both countries are making efforts to mitigate moral hazard. It could affect the stability of the banking system and huge costs would be involved in dealing with a troubled bank. Therefore, higher capital level , as part of micro prudential provision, is vital to protect banks from failure. CRD IV is similar to the 11 and 34 provisions 2016 which oblige banks to maintain minimum capital in line with the International standard to mitigate moral hazard.

The scope of the framework of the Indonesia capital requirement is smaller than that of the UK structure. The framework of the EU capital requirements applies to all banks and investment companies, whereas Indonesia's framework applies to all banks but does not include investment firms. It could be argued that while Indonesia's supervisory body focuses on prioritising regulation of banks, some banks are engaged in investment firm business. For example, in 2018, Bank Rakyat Indonesia (BRI) announced the acquisition of Danareksa Sekuritas (a securities firm), with around 65% equity and as the main shareholder.[545] However, it is hard to recognise and monitor banks that also operate as investment firms if they are part of a horizontal financial conglomerate. If banks and investment firms merge their capital, concentration and interconnectedness, they can possibly grow bigger with less or improper supervision. This raises the potential risks of instability and huge cost outlay in having to deal with a troubled bank. Therefore, bank institutions require particular attention from the Indonesia regulator, OJK (the IFSA), to control the use or flow of funding sources, but it is important to regulate capital in respect of investment firms as well as banking institutions. Although both the UK and Indonesia provision highlight the significance of capital requirement, the UK regulation structure is more complete and more robust.

[545] Hastuti, R.K. 2019. Ini alasan BRI akuisisi Danareksa Sekuritas dan Modal Ventura. CNBC Indonesia https://www.cnbcindonesia.com/market/20190325183311-17-62825/ini-alasan-bri-akuisisi-danareksa-sekuritas-dan-modal-ventura

The financial regulator in Indonesia, OJK, has implemented components of Basel III, particularly capital provision. The 11 and 34 provision 2016 prescribes that banks must maintain minimum capital of 8% to 14% according to the different bank categories. The minimum capital ratio in Indonesia, 8%, is similar to the UK bank capital ratio. It is interesting to note that in practice, capital levels held by banks in Indonesia and the UK are dissimilar. Based on chapter 2, banks in Indonesia maintain higher capital, with average Tier 1 capital of around 19.25%, compared to those in the UK, approximately 15,65%. In relation to work in chapter two, the ratio of RWA to total asset in Indonesia is high, around 70.61% compared to the UK approximately 33,14%. These ratios of RWA to total assets might reveal that Indonesia banks have higher exposure to risk than the UK, and Indonesia bank institutions have higher capital level than the UK banks. .

Several studies in relation to section 3.5.1 in Chapter 3 , have shown that capital can potentially have several impacts. In general, it can affect the banking system's ability to supply credit and liquidity and can increase costs.[546] Significant reviews have been conducted by several researchers to evaluate what effects such regulations would have in terms not only of portfolio risk and balance sheet implications but also regarding safety and soundness.[547] The frameworks of the UK and Indonesia capital requirements have been underpinned by several impact studies. In Indonesia, Suharningsih, Chawwa, and Indriani conducted a research on the impact of an increase in capital provision on banks' interest rate spread using accounting-based assessment. They revealed that an increase of 1% in the capital ratio could be covered by raising the interest rate spread by 6 basis points. [548] Besides, Wayan and Ni luh showed that capital ratio has a positive effect on profitability.[549] Regarding the Euro area economy, an analysis of empirical work of the ECB revealed that higher bank capital ratio has several adverse effects on loan supply. The CRD IV/CRR has greater impact for bank institutions with lower average risk weights and for less capitalised bank institutions.[550]

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[546] Claessens, S. (2014) 'Capital and Liquidity Requirements: A Review of the Issues and Literature' Vol 31 Issue 3 Yale Journal on Regulation, 745.

[547] João A. C. Santos, J. A.C (2010) 'Bank capital regulation in contemporary banking theory: A review of the literature.' Financial Markets, Institutions, and Instruments 41-84; Stolz, S (2002) 'The relationship between bank capital, risk-taking, and capital regulation: A review of the literature' (Manuscript, Kiel Institute for World Economics 2002); David VanHoose (2007) 'Theories of bank behavior under capital regulation' 31 issue 12 Journal of Banking and Finance 3680–3697

[548] Surjaningsih, N, Chawwa, T, Indriani, R (2015) 'The Impact of an increase in capital adequacy regulation on the interest rate spread of banks using accounting-based analysis' working paper Bank Indonesia, WP/5/2015.

[549] Wayan dan Ni Luh. (2014) 'Pengaruh Rasio Kecukupan Modal Dan Rasio Penyaluran Kredit Terhadap Profitabilitas Dengan Moderasi Rasio Kredit Bermasalah.' E-Jurnal Akuntansi Universitas Udayana 7.1 (2014): 192-206.

[550] European Central Bank (2015) 'The impact of the CRR and CRD IV on financing: Eurosystem response to the DG FISMA' consultation paper. P.3

Bank capital is closely connected with other aspects of bank performance, such as lending and profitability, but Indonesia's loan distribution and bank profitability show increases from 2015 to 2017, although Indonesia banks maintain capital in excess of Basel III requirements.[551] There are several assumptions relating to this analysis: supervisors would like to maintain the health of financial institutions through over or exaggeration of capital level or strict supervision. The next assumption is that bank institutions may understand the quality of their capital, but they are unsure about their capital calculation relating to their RWA. Otherwise, the supervisors and banks may lack the skill to perform capital calculation or determine the capital level. Another assumption is that there is no standardisation of NPL calculation, which has led to different approaches for determining the NPL level in Indonesia and the UK as well as in other countries, leaving Indonesia bank supervisors unsure about whether banks' NPL levels truly reflect the banking risks. Alternatively, bank supervisors may understand the NPL level, with their concern over NPL but they are unsure about the data provided by banks or the quality of bank's capital, so they encourage banks to hold capital levels far above the Basel III requirements.

Figure 4.4.2.[552]

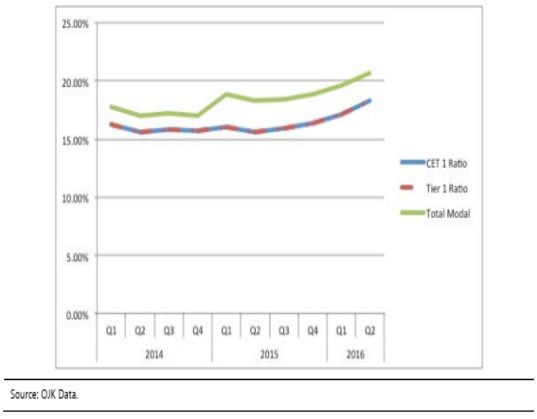
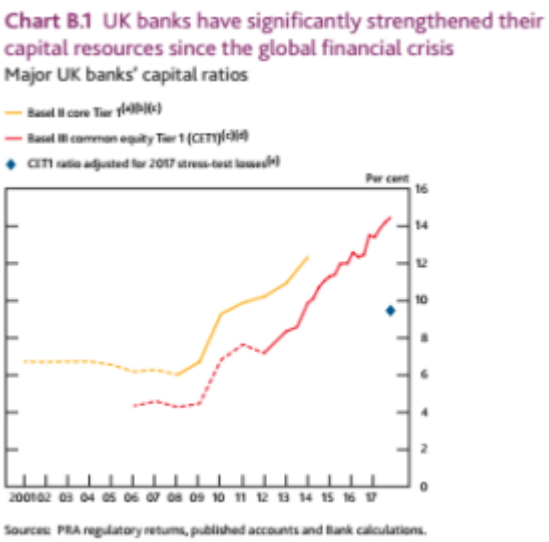


Figure 4.4.3.



[551] The IFSA, The IFSA, 'Indonesia Banking Statistics' (2017) vol 15 No.07 Otoritas Jasa Keuangan. Furthermore Regarding data of banking statistic in June 2017, Banks in Indonesia are grouped into 4 categories; total banks of class 1 are 23 with Tier 1 between IDR100 bilion – 1 trillion; total bank of class 2 are 61 with Tier 1 IDR 1 trillion – 5 trillion; total bank of class 3 are 26 with Tier 1 IDR 5 trillion-30 trillion; total bank of class 4 are 5 with Tier 1 more than IDR 30 trillion

[552] Capital ratio of Indonesia bank institutions. BCBS,(2016) RCAP Assessment of Basel III risk-based capital regulations – Indonesia, BIS. p.53

In the case of higher bank capital in Indonesia, it could be assumed that banks in Indonesia could not effectively minimise the costs and boost their potential business. Furthermore, it also could be argued that high capital in Indonesia could potentially cause the further problem of moral hazard. For example, shareholders understand the minimum bank capital recommended by Basel III and regulated by the 11 and 34 provision 2016. They might start to supply credit carelessly and then stay calm despite potentially facing higher NPL because they think that their bank capital level is considerably higher than the minimum capital required by Basel III and the 11 provision 2016. When higher NPL occurs, the capital level they hold will lower the degree of NPL until the bank capital indicates the level of 8% based on their side of the capital calculation. As a result, supervisors will face a new difficulty in monitoring bank activity and determining capital level precisely and shareholder strategy.

Therefore, although banking regulatory structure in the UK and in Indonesia emphasises the importance of capital degree in line with minimum capital introduced by Basel III, the impact of Indonesia's higher capital level in association with other aspects of bank performance is considerably bigger than that faced by UK banks. The thesis will come back to the discussion of the possible impact of adoption of the UK capital level later in Chapter 6; for now, it is important to note that the difference in the level of capital owned by banks in the UK and Indonesia is a significant matter for bank institutions in terms of scaling their business or augmenting their asset and profits but also for supervisors seeking to mitigate moral hazards.

The capital requirements of the IRB or Standardised model for credit risk could be applied in Indonesia and the UK. However, the Indonesia models differ from the more comprehensive UK approaches. These models under the 11 provision 2016 are likely to provide the legal basis for the application of standardised and IRB models with one simple provision under Article 34. A further provision provided by the IFSA is the 42 IFSA letter 2016 as the guideline for the use of the standardised model. Neither the 11 provision 2016 nor the 24 IFSA letter 2016 have provisions for the use of credit risk mitigation technique, treatment of securities exposures, and treatment of credit risk adjustment under the Standardised model and IRB model, whereas the UK approaches are regulated under the CRR. Indonesia's provisions tend to lack comprehensive techniques for improving the application of the IRB or standardised models. There might be inaccuracy, ineffective and less optimal capital calculation as a result of using these approaches. The UK financial market is more complex and bigger in structure than the Indonesia financial market. The interconnectedness of banks' balance sheets, GSIBs and various financial innovations reflect the growing complexity of the banking market. Therefore, the structure of the UK financial market has been rationalised in relation to the use of credit

risk mitigation technique, treatment of securities exposures and treatment of credit risk adjustment under the standardised model and IRB model. Indonesia's financial structure and provisions emphasise the national interest concerning the possible application of these techniques.

Indonesia capital provisions emphasise the regulatory treatment of credit risk that is the major threat for bank institutions. Employing a standardised method which is relatively simple and less risk sensitive is one option to mitigate credit risk. This approach is similar to the UK standardised method for credit risk. It is important to understand or develop the use of calculation methods to determine capital requirement against or to mitigate credit risk. The approach of capital calculation allows such institutions or private entities to determine the asset quality or the quality of counterparty credit risk. There has been scepticism and problems have arisen relating to this standardised approach to credit risk. The use of private entities not only seems to raise doubts about the accountability of such institutions but would also require adequate incentives which could limit their consideration of their rating's effect on the overall financial system.[553] Conflict of interest would be a potential problem if clients were to capture the agencies. However, the UK's rules on the standardised approach are laid down in a single document, CRD/CRR, whereas Indonesia's regulators divide their method into capital provision as a basis of regulation for credit risk and circle letter of IFSA as the guideline for calculation of credit risk using the standardised approach. The rules made by the IFSA could change with introduction of different provisions and titles which might lead to inconsistency, incoherence and consequent difficulty in identifying, recognising, and understanding the intercorrelated meaning and rules in different provisions, notably in the 11 and 34 provisions 2016 and all the IFSA letters for the guide or instruction. Although both regulatory structures highlight the importance of a standardised approach, the CRD is better structured and more coherent.

Both regulatory frameworks provide the legal basis for closer association of the measurement system for internal credit risk and tasks of prudential supervisors. They regulate the alternative techniques of capital provision, particularly IRB which permits capital calculation in line with the bank's own approach for estimating needs of internal capital. It is designed not only to evaluate all aspects of borrower quality via several methods but also to hold or obtain more information on the latter in the capacity of lenders rather than third parties.

[553] Hirte, H. And Heinrich, T. A. (2002) 'Principles and Technical Instruments for Prudential Regulation' in G. Alpa and F. Capriglione (eds) Diritto bancario communitario, Torino: UTET. p. 468 referring to Walker, G. (2001) 'The New Capital Accord' Financial Regulation International 4 (4).

There is an acute concern regarding IRB that supervisors will fail to recognise the complexities of the internal methods and risks, thus "handing the regulatory reins effectively over to regulated bank institutions themselves" without maintaining the consistent accountability. [554] However, Indonesia's regulatory framework for IRB is simpler and shorter than the UK framework. There are still no further rules or guidelines or IFSA letter to regulate the implementation of IRB in Indonesia. There are several assumptions relating to the IRB framework in Indonesia: firstly, regulators in Indonesia attempt to fulfil or capture the rules and implementation of the International standard but banks have not been ready to implement the IRB approach or they have not prepared for IRB application, so it is likely that the short IRB provision is the first step or foundation to more comprehensive regulation or its later implementation. Secondly, the regulators might be aware that banks may lack experts with the expertise or knowledge or competency to implement the IRB approach. Otherwise, regulators might lack expertise relating to the assessment of complexities of internal models and risks. Alternatively, the regulator, IFSA, may prioritise the implementation of a standardised approach which is relatively simple and less risk-sensitive over the IRB method, believing that the standardised approach is now in line with the national interest. Although both regulatory frameworks emphasise the importance of IRB methods, in Indonesia they have not been fully developed, particularly regarding provision of IRB for credit risk.

Both the UK and the Indonesia regulatory framework implement a similar supervisory review process including interaction between ICAAP and SREP. It is impossible to neglect banking supervision. To make efforts to satisfy regulatory obligations and objectives, the UK and Indonesia both apply norms to regulate their supervisory strategy, including not only the rules and standards for the evaluation of the banks' internal risk-control tools but also the tasks and powers of supervisory authorities. Their supervisory strategies have undergone significant changes, from merely compliance control to a more dynamic process-oriented method, through the continuous assessment of an internal risk-check approach. Both countries emphasise the importance of dialogue between banks and supervisors to enhance the supervisory process, the classic command and check mechanisms no longer being considered sufficient. This is designed to achieve a sound and prudent management system and to avoid assuming risk which surpasses the capacities or ability of the bank to check and monitor to mitigate or absorb losses. Further, instability or disruption and costs are potentially attached to clearing up a failure of

[554] Tarbert, H.P. (2000) 'Are International Capital Adequacy Rules Adequate? The Basle Accord and Beyond' University of Pennsylvania Law Review 148, p. 1835.

bank supervision. Supervisory strategy such as early intervention ought to prevent possible difficulties or aggravation of existing problems.

However, there are difference between the UK and Indonesia, particularly in terms of disclosure requirements on the competent authorities, which can be of significant concern. It is important to maximise transparency and accountability in order to minimise occurrence of abusive practices.[555] Under article 143 of the CRD, the UK imposes general disclosure requirements whereas Indonesia has not yet done this. Indonesia norms define briefly and simply the tasks and powers of supervisory authorities. Under article 45 (1), the different calculation of capital between supervisory authority and a supervised bank institution could potentially be a problem due to no technical criteria and methodologies being used for review and evaluation. It is possible to make two related assumptions: firstly, the UK banks have more complex activities or businesses compared to their Indonesian counterparts. The UK banks also have more complex market participants which want consistency and reliable results of supervision from competent authorities. They want to ensure their funds are safe, secure and protected. If the supervision is weak, they will worry about their funding. On the other hand, Indonesia's authorities merely follow or verify or validate the report provided by banks as they do not have clear measurements, criteria, or methodology. There are several possible risks here, including wrong decision or strategy and the concern of moral hazard and inconsistency of supervisory reviews and evaluation and measurements. Supervisory capture of assessment could possible occur when there is no transparency and accountability. Under Article 45, SREP would be valid if there were differences in the result of capital calculation, but either uncertain quality of result or a good result of capital calculation could potentially be provided by a competent authority, resulting in inconsistency of supervisory reviews, evaluations and measures due to there being no technical standard assessment procedure and methodologies used for review and assessment.

In addition, the lack of clear measurement procedure could affect the authorities' decision if those authorities lack the capacity and ability to assess information collected from the company or to make an evaluation as to the quality of the company's process for satisfying the objectives of regulators. Excessive time consumption and huge cost would also be possible risks if a supervisor were to make a wrong decision due to unclear direction. The case of

[555] Commission (2003e) Explanatory Memorandum, Proposal for a Directive of the European Parliament and of the Council amending Council Directives 73/239/EEC, 85/611/EEC, 91/675/EEC, 93/6/EEC and 94/19/EC and Directives 2000/12/EC, 2002/83/EC and 2002/87/EC, of the European Parliament and of the Council, in order to establish a new financial services committee organisational structure, COM/2003/0659 final,5.11.2003.

Century Bank in Indonesia, as has been discussed earlier in chapter 3, can be taken as an example of no disclosure requirements on the competent authorities. Financial supervisors lowered the capital requirement quickly when it was about to become a failed bank. There were several assumptions; the authority wanted to resolve the Century Bank's difficulties with a bail out, so they reduced the requirement to make the bank eligible to obtain a financial safety net. Otherwise, Indonesia's authorities faced a problem in assessing the actual condition of Century Bank due to data or capital manipulation or the authority not allowing for an adequate supervisory process. Although both the UK and Indonesia provisions highlight the importance of the supervisory process, the UK legislation is more comprehensive and robust through its imposition of disclosure requirements on the competent authorities.

Figure 4.4.4

1.8 Issuance by Collateral Type and Country of Collateral: 2Q 2019

	ABS	CDO/CLO	CMBS	RMBS	SME	WBS/PFI	TOTAL
Belgium							-
Denmark							-
France	0.2			15.0			15.2
Germany	5.2						5.2
Greece							-
Ireland	-		0.2	0.6			0.8
Italy	2.6		0.5	1.6	2.3		7.0
Netherlands	-		0.3	7.1			7.4
Portugal							-
Spain	2.9						2.9
UK	0.9		1.1	9.8	0.2		12.1
Other EU							-
Other Europe	0.2						0.2
PanEurope	-	9.7	0.3				10.0
Multinational							-
European Total	11.9	9.7	2.5	34.2	2.5	-	60.7

Sources: Bloomberg, Dealogic, Deutsche Bank, JP Morgan, Macquarie, Refinitiv, AFME, SIFMA

There are differences relating to disclosure requirements between Indonesia and the UK. Regulation is conducted under CRD/CRR. Based on Figure 4.4.4 which highlighted different products of financial innovation, it could be assumed that the UK would like to promote market discipline as a funding strategy in order not only to encourage an informationally efficient market but also to obtain and augment investor trust, resulting in boosting of the cash inflow. In contrast, it is likely Indonesia has not regulated this into the IFSA provision. However, the Indonesia Banking Statistic which includes quantitative terms and reports on the profile of

Indonesia's banking industry which includes qualitative both demonstrate the feature of disclosure requirement as being in line with Pillar 3 disclosure requirements, Basel III. The bank industry in Indonesia faces several potential risks. Firstly, there is no harmonisation of information, due to the absence of detailed provisions. It could be assumed that not all bank institutions would submit similar information to the IFSA about their condition, notably regarding their capital or their exposure to risk. Furthermore, the market cannot access data on particular banks. Consequently, the market has little trust regarding the condition of bank institutions in Indonesia and Indonesia banks would have difficulty in gaining inflow cash or funding from investors. Although the cases of UK and Indonesia highlight the significance of disclosure requirement in practice, the legislation is more robust and comprehensive regulating disclosure requirement in the UK compared to Indonesia, where there is no provision.

Finally, both the EU and Indonesian LCR provisions employ similar total net liquidity outflow over a period of 30 days. They ensure that covered institutions could expect to maintain the adequate liquid assets needed to cover the total amount of net cash outflows over a 30 days period. If they merely used single day within 30 days, they might not predict accurately the amount or assets needed to cover the total amount of net liquidity outflows up to the whole 30 days period. However, The LCR in Indonesia requires all covered banks to maintain or fulfil the LCR with a minimum of 100 percent continually, calculated by dividing HQLA by the total amount of its net cash outflow over a 30 days period of stress scenario. This is similar to the Basel III, but it is likely that the EU LCR under Article 412 (1) CRR is substantially more severe than the Indonesian LCR. The EU LCR ensures covered institutions are liquid institutions with adequate liquid assets as the sum of the values of liquid assets could cover the net liquidity outflows (liquidity outflows less the inflows of liquidity). For example, if the sum of the value of liquid assets is £60 million and the net liquidity outflows total £59,5 million, the positive result, £0,5 million, can still cover the net liquidity outflows. In contrast, under the calculation of Indonesia's LCR by dividing HQLA by the total amount of its net cash outflow, the positive result cannot cover the net liquidity outflow and cannot ensure banks are liquid institutions. For instance, the value of HQLA is £25 million and the total amount of its net cash outflow is £50 million, so the result of this division is positive 0,5 from £25: £50 (equal to 1:2). Therefore, Indonesia should make additional LCR provision to prescribe the minimum result of the Indonesia LCR calculation, 1:1, not merely positive. This will be discussed further in the Chapter 6 and 7.

4.5. Conclusion

This chapter considered Basel 3 as an International dimension of capital and liquidity including the provision and the culture of Basel 3 and verdict on Basel 3. Then this chapter not only consider the substantive aspects of prudential provision through the author's examination of Indonesia's capital requirements and liquidity provision but also make comparison of these aspects between the UK and Indonesia.There are dissimilarities between the two countries' prudential normative structures. The EU structure allows more scope for application of capital requirements to all banks and investments, whereas Indonesia's legislative framework applies only to bank categories.

Indonesia banks hold more capital, with average Tier 1 capital of around 19,25% compared to those in the UK, approximately 15,65%. Furthermore, the ratio of RWA to total asset in Indonesia is high, around 70.61% compared to the UK approximately 33,14%. These ratios of RWA to total assets might reveal that Indonesia banks have higher exposure to risk than the UK, and Indonesia bank institutions have higher capital level than the UK banks. The methods for calculation of capital ratio in the two countries are similar. They could use either a standardised approach or IRB methods for credit risk. The CRR prescribes the use of credit risk mitigation technique, treatment of securities exposures and the treatment of credit risk adjustment under the SA or IRB approaches, whereas Indonesia has not developed the use of these techniques. The SA is ruled by the UK under single CRR, whereas Indonesia's regulatory framework uses several provisions to regulate the SA. Alternatively, both countries could use the IRB approach to capital calculation for credit risk, but in Indonesia the IRB method has not yet been developed.

Both countries employ similar supervisory strategy not only to analyse banks' internal risk control tools through ICAAP and lay down the tasks and powers of supervisory authorities through SREP but also to assist supervisory authorities in recognising and evaluating trends of liquidity risk through a common set of intraday and longer-term monitoring metrics. In order to enhance the transparency and accountability of the supervisory review, the UK legislative framework imposes disclosure requirements on the competent authorities, while Indonesia regulatory authorities have not developed disclosure requirements yet. It is likely that disclosure implementation in the UK and Indonesia differs in characteristics and nature under their regulatory frameworks. Furthermore, in order to protect banks from failure, both regulatory frameworks consider the implementation of LCR and NSFR but use dissimilar methods of LCR calculation. The UK's prudential normative structure is found to be more comprehensive, well structured, robust and coherent than the Indonesian regulatory framework.

The analysis of the differences in this Chapter will be used to further assess the possibility of adoption of the UK provisions into Indonesia provision in Chapter 6.

However, both countries believe that moral hazard would potentially occur in a banking business and could threaten the health of the financial institution, and therefore they do not adopt "zero or free risk" policy. Rather, they are concerned with preventing a bank failure and mitigating the possible effect and systemic risk of a bank failure. They have made similar efforts to boost the quality of ex ante regulations, particularly regarding capital and liquidity provisions, in order to enhance the health of their financial institutions. Their primary efforts include strengthening micro prudential regulation and supervision, particularly of capital and global liquidity standards. Nevertheless, these micro prudential regulations and supervisions are not adequate to maintain financial stability at both the bank and system-wide level. The next chapter will analyse the macroprudential provision in the UK and Indonesia that complement the micro prudential regulation and supervision. Finally, while the cases of UK and Indonesia both highlight the fulfilment of the three pillars of Basel III associated with micro prudential provisions, the UK provisions are more comprehensive and robust than those of Indonesia.

Chapter 5 Substantive facets of macro prudential provisions in Indonesia and the UK

5.1. Introduction

The previous chapter highlighted not only Basel 3 as an International dimension of capital and liquidity but also the substantive facets of prudential provision in the UK and Indonesia. These provisions are aimed to address idiosyncratic risk. The reform provisions in the UK and Indonesia signal a main change in the existing regulatory structure from a micro prudential approach to macroprudential model. Generally, the current macroprudential provisions in these countries attempt to mitigate crosscutting systemic risk and the time dimension of risk. They include tools to mitigate spill over from shock, tackle main amplification mechanisms of systemic risk and tackle risks from excessive expansion of credit in the financial system. In this chapter, the author will concentrate on macroprudential tools in Indonesia and the UK including macroprudential instruments for capital regulation, addressing maturity mismatch (liquidity), and lending. The literature review revealed that it is hard to calculate the relative potency of instruments, their particular impacts, and their effectiveness in lowering the possibility of future financial distress.[556] Pramono et al recommend the implementation of CCB which is one of macroprudential tools to assisst to address potential systemic risks from excessive growth of credit in Indonesia[557] but Bank Indonesia implement 0% for CCB level and it seems therefore suitable to study the UK macroprudential regulatory pattern in this chapter to draw out interest points. Then, this chapter will discuss whether there is similarity or difference between the UK and Indonesia macro prudential regulatory pattern. The chapter is based on a study of existing macroprudential principle, International standards, current papers and reports.

Section 5.2 analyses the tools or intervention method relating to macroprudential approaches in Indonesia and the UK to respond to or address risks which involve cross sectional and time dimensions. This include tools to mitigate spill over from shock, tackle main amplification mechanisms of systemic risk and tackle risks from excessive expansion of credit in the financial system. Although there are several instruments within the macroprudential approach, this chapter will not discuss tools associated with monetary policy or other regulatory and fiscal measures. This chapter will instead focus on classifying the

[556] Metzing, P. C. (2016) 'Macro-prudential financial regulation of banks after the crisis of 2008.' Newcastle University Business School.

[557] Pramono, Bambang & Hafidz, Januar & Adamanti, Justina && Muhajir, Maulana Haris, and Alim, Muhammad Sahirul. 'The Impact of Countercyclical Capital Buffer Policy on Credit Growth in Indonesia', (December 2015) Working paper/4/2015 Bank Indonesia, p.18

instruments of macroprudential provision under three broad categories in relation to mitigation of bank failure. The first set of tools addresses regulating capital requirements, notably through the Countercyclical Buffer (CCB) and sectoral buffer, to restrict spill over from distress and mitigate structural vulnerabilities. It is important for bank institutions to have higher capital cushions for use as additional resources of loss absorbency associated with systemic risk in the case of financial losses. This same subchapter will also discuss the leverage ratio. The second set of tools addresses limiting maturity mismatches, including such as net stable funding requirement and reserve requirements. The final set of tools addresses regulating lending, notably loan to value (LTV), loan to income, and debt service to income (DTI). At times, these tools could restrict the loan issuance through certain ratios, notably LTV, and also could tackle risks from excessive expansion of credit.

Section 5.3 ~~three of the chapter~~ analyses the similarities and differences between macroprudential provisions in Indonesia and the UK, and lead into the substantive critical analysis of whether the Indonesian macroprudential regulatory regime would benefit from adopting the UK provision and what the drawbacks might be, which will be the subject of the next chapter. The final section of this chapter will provide the conclusions.

5.2. Macroprudential Tools in Indonesia and the UK

A regulatory authority is required to have a robust regulatory regime that includes macroprudential regulations against procyclicality. Macroprudential regulation includes macroprudential policy instruments that could be described as a set of measurement tools used by the regulatory authority to observe, predict and prevent systemic risk and also to lower the costs of systemic instability.[558]

Several researches show that macroprudential policy tools could be effective in handling systemic risk when they are used properly and well targeted.[559] Some researchers argued that countries that employ a combination of macroprudential instruments have succeeded in meeting their wider objectives of financial stability, notably through preventing excessive liquidity mismatches or uncontrolled credit supply.[560] However, the review of literature revealed that the relative potency of instruments and their specific effects are hard to calculate,

[558] Delgado, F. L.and Meza, M.. (2011) 'Developments in Financial Supervision and the Use of Macroprudential Measures in Central America' IMF, Working Paper 11/299

[559] IMF (2013b) 'The Interaction of Monetary and Macroprudential Policies' SM/13/1

[560] Claessens, S. and Ghosh, S. R. (2012) 'Macro-Prudential Policies: Lessons for and from Emerging Markets' in Proceedings of the 2012 EWC/KDI Conference on Financial Regulations on International Capital Flows and Exchange Rates. Also, Lim, et al (2011)'Macroprudential Policy: What Instruments and How to Use Them? Lessons from Country Experiences' IMF, Working Paper 11/238

and also their effectiveness in lowering the possibility of future financial turbulence remains hard to calculate.[561] Therefore, several macroprudential policy instruments may mitigate or tackle potential concerns of incentive, procyclicality and systemic risk, but no single instrument could handle every concern equally.[562]

Each country, including the UK and Indonesia, might have dissimilar macroprudential instruments. The measurement instrument provides opportunity for regulatory authorities to identify or spot systemic risk effectively in the early stages. They could be implemented based on a country's characteristics or on which of the instruments are economically and politically more suitable. For instance, the use of tools may differ according to variety in the banking size or credit cycle in different countries. For analysis purposes, the thesis will separate the wide range of instruments used particularly in the UK and Indonesia into three primary categories of macroprudential measures, namely capital, liquidity and lending or credit.

5.2.1. Macroprudential instruments for capital regulation

Some of the regulatory agencies' tools relate to instruments that minimise or restrict spill-over from shock and mitigate structural vulnerabilities. These include capital regulation which is also employed to achieve macroprudential objectives. This tool regulates an increase of capital requirement as additional loss absorbency to minimise systemic risk in general through countercyclical buffers and to reduce or mitigate risks stemming from specific sectors through sectoral buffers, notably commercial or residential property. These buffer instruments tackle similar risks but are complementary in either mitigating systemic risks which stem from a specific sector or protecting the financial system as a whole against systemic risks.[563]

The countercyclical buffer instruments under the new capital regime have been introduced by the Basel Committee as time-varying macroprudential tool. These instruments could be employed to tackle the cyclical vulnerabilities in systemic threats.[564] The sectoral buffer is intended to limit growth of credit exposure in specific sectors, whereas the countercyclical buffer is purely aimed to be time varying and is activated once aggregated credit grows excessively.[565] The use of these capital buffers occurs or changes once there are signals of

[561] IMF (2013b) 'The Interaction of Monetary and Macroprudential Policies' SM/13/1
[562] Metzing, P. C. (2016) 'Macro-prudential financial regulation of banks after the crisis of 2008.' Newcastle University Business School. 13-275
[563] Korhonen, P. (2013) 'Do macroprudential tools require micro-data?' Proceedings of the Porto Workshop on "Integrated management of micro-databases", BIS , 20-22 June, Vol. 37, pp 183-85
[564] Yellen, J.L. (2011) 'Pursuing Financial Stability at the Federal Reserve' Chicago IL: Federal Reserve Bank of Chicago.
[565] BCBS, 2010 (revised June 2011)'Basel III: A Global Regulatory Framework for more resilient banks and banking system.' BISBasel , . 57

either a credit driven asset price boom or of infrequent and strong credit expansion. Therefore, these changes or adjustments denote a dynamic capital buffer.

The primary intention of the CCB is to safeguard financial intermediary institutions from the financial cycle impacts.[566] It is intended to safeguard the banking sector during excessive credit growth periods that have frequently been related to increase or growth in systemic threat.[567] Basel III employs the CCB to account for either the credit extension procyclicality or the systemically significant capital surcharge which attempts to tackle the problem of too big to fail (TBTF) institutions.[568] During the boom times, capital prerequisites will rise and during downturn they will weaken.[569] The cyclical variant is aimed to calm the boom, mitigate the bust, and boost capital during the boom period to give an extra cushion to cover unexpected lossess during the downturns.[570] In the UK, the sectoral buffer and CCB are implemented not only in all building societies and bank institutions but also large investment companies. [571] The use of these instruments could augment the banking resilience in two ways; firstly, by enhancing capability of firms to absorb loss directly and enhancing the banking system's ability to withstand the stress period; secondly, through indirect impact on the amount of financial facility provided by the banking system via the financial cycle, thereby lowering the severity of distress periods. [572]

Although several studies have been conducted on the need for more CCB tools, research on the effects of CCB activation as applied by Basel III is very limited.[573] Aiyar et al examined the effect of the bank specific capital requirement in the UK that was employed to bring about countercyclical change under Basel I.[574] They show that once a lender set emerges to whom

[566] BCBS (2010) 'Guidance for National Authorities Operating the Countercyclical Capital Buffer' BIS
[567] BCBS (2010) 'Guidance for National Authorities Operating the Countercyclical Capital Buffer' BIS
[568] Claessens, S. and Kodres, L. (2014) 'The Regulatory Responses to the Global Financial Crisis' (2014) WP/14/46 International Monetary Fund, 22 p. 16.
[569] Aiyar, S., Calomiris, C., Hooley, J., Korniyenko, Y., & Wieladek, T. (2012) , Does Macro-Prudential Regulation Leak? Evidence from a UK Policy Experiment, Bank of England Working Paper No. 445, , p. 182.
[570] Aiyar, S., Calomiris, C., Hooley, J., Korniyenko, Y., & Wieladek, T. (2012) , Does Macro-Prudential Regulation Leak? Evidence from a UK Policy Experiment, Bank of England Working Paper No. 445, , p. 182.
[571]HM Treasury, (November 2016) 'Consultation outcome: Financial Policy Committee powers of direction in the buy to let market' from www.gov.uk/government/publications
[572] HM Treasury, (November 2016) 'Consultation outcome: Financial Policy Committee powers of direction in the buy to let market' from www.gov.uk/government/publications
[573] CGFS. (2010) 'Macroprudential instruments and frameworks: a stocktaking of issues and experiences.' CGFS Papers No 38. Committee on the Global Financial System, Basel.; Borio, C., Drehmann, M., Gambacorta, L., Jiménez, G., & Trucharte, C. (2010) 'Countercyclical Capital Buffers: Exploring Options' BIS Working Paper 317. BIS Basel
[574]Aiyar, S., Calomiris, C., Hooley, J., Korniyenko, Y., & Wieladek, T. (2012) , Does Macro-Prudential Regulation Leak? Evidence from a UK Policy Experiment, Bank of England Working Paper No. 445, 368-386.

such prerequisites do notapply, effects of policy leakage may ensue that might cause loss.[575] In addition, they reveal that the CCB's effectiveness relies on banks' current capitalisation levels to encourage analysis of their first bank balance sheet's characteristics.[576] In a parallel paper, they investigated how distress to minimum capital prerequisites is transferred globally, and they identified a significant negative impact on cross border lending.[577] Furthermore, CCB has been employed in particular in Spain, where the data indicate several areas of ineffectiveness; importantly, it did not stop a banking catastrophe from happening.[578]

However, the CCB, by means of the CCB prerequisites, could lead to temporary calm during macroeconomic stress periods, causing smaller rises in lending or loan rates and less serious real economic contractions.[579] Benes and Kumhof show that CCB could cause significant rises in welfare and it also lowers the need for CCB adjustments or alteration in policy interest rates.[580] They show that the welfare benefits that could arise from well designed countercyclical macroprudential provisions, at over 0.20% of steady state consumption, are large by literature standards.The welfare benefits obtained from employing the policy rate in a countercyclical way are similar to or possibly a little bigger than those discovered elsewhere.[581] In addition, to strengthen banks' resistance against an increase of systemic weaknesses, the CCB activation augments regulatory capital prerequisites, which could contribute to the sector's global resistance or resilience.[582] Drehmann and Gambacorta studied the CCB's impact on bank lending and found that the buffer could calm boom, slowing down credit increases.[583]

CCB is ruled in Article 3 the 34 IFSA provision 2016. This provision lays down an additional capital buffer from 0% to 2,5% which is determined by an authorised authority.

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[575] Aiyar, S., Calomiris, C., Hooley, J., Korniyenko, Y., & Wieladek, T. (2012) , Does Macro-Prudential Regulation Leak? Evidence from a UK Policy Experiment, Bank of England Working Paper No. 445, 368-386

[576] Christoph Basten and Cathérine Koch (2015) 'Higher Bank Capital Requirements and Mortgage Pricing: Evidence from the Countercyclical Capital Buffer (CCB)' BIS Working Papers No 511, p. 6.

[577] Aiyar, S., Calomiris, C., Hooley, J., Korniyenko, Y., & Wieladek, T. (2012) , Does Macro-Prudential Regulation Leak? Evidence from a UK Policy Experiment, Bank of England Working Paper No. 445, 368-386.

[578] Saurina, Jesus, 2009, "Loan Loss Provisions in Spain. A Working Macroprudential Tool," Revista de Estabilidad Financiera, 17, pp. 11-26; Jiménez, Gabriel, Steven Ongena, José Luis Peydró and Jesús Saurina, 2012, "Macroprudential Policy, Countercyclical Bank Capital Buffers and Credit Supply: Evidence from the Spanish Dynamic Provisioning Experiments," Barcelona GSE Working Paper No. 628

[579] Jaromir Benes a, Michael Kumhof b,n, (2015) 'Risky bank lending and countercyclical capital buffers' Journal of Economic Dynamics & Control 58 p. 59

[580] Jaromir Benes a, Michael Kumhof b,n, (2015) 'Risky bank lending and countercyclical capital buffers' Journal of Economic Dynamics & Control 58 at 58–80

[581] Jaromir Benes a, Michael Kumhof b,n, (2015) 'Risky bank lending and countercyclical capital buffers' Journal of Economic Dynamics & Control 58 at 59

[582] Christoph Basten and Cathérine Koch (2015) 'Higher Bank Capital Requirements and Mortgage Pricing: Evidence from the Countercyclical Capital Buffer (CCB)' BIS Working Papers No 511, p. 1

[583] Drehmann, M., & Gambacorta, L. (2012) 'The effects of countercyclical capital buffers on bank lending' Applied Economics Letters, 19(7), 603-608

Interestingly, Bank Indonesia also regulates the countercyclical buffer for banks. It could be assumed that regulatory overlaps between the IFSA and BI might occur in relation to regulating or setting the amount of CCB. In general, the UK has also laid down a countercyclical buffer that is ruled in the Chapter 4 CRD IV and the CRR. Article 440 in the CRR regulates disclosure of information associated with Chapter 4 of the CRD. Regulation of CCB under the CRD includes requirement to maintain specific CCB relating to the geographical distribution of banks'credit exposures, setting and calculation of CCB, and recognition of rates of CCB in excess of 2,5%. The CRD also lays down specific CCB equal to the calculation of total risk exposure amount regulated by Article 92 (3) the CRR.

BI has powers of direction associated with macroprudential instruments, whereas the FPC has authorities of direction including directing the FCA and or the PRA to set a structure of leverage ratio and restriction on the ratios of DTI and LTV. [584] It also has responsibility for policy decision on the rate of the UK CCB. An increase in the rate of CCB would raise the capital level once the FPC judgement indicated or considered this as the best method to prevent risks or threats of financial shocks. The rate of CCB will reduce once risks of instability are considered to have lowered or once the amount of CCB is considered to be more adequate for loss absorbency. [585] The FPC also has an authority of direction associated with enhancing the sectoral buffer on exposure to particular sectors including commercial property, residential property and also other parts of the financial sector.

Basel III set out another macroprudential instrument, the leverage ratio, in an effort to encourage global harmonisation. It introduced the maximum leverage ratio to control or manage risk which is dissimilar to the capital requirements. Leverage, which is a simpler tool to implement, is a non risk weighted based ratio whereas the capital standard has risk based requirements.[586] Jarrow reveals that the same instruments are used for monitoring or managing risk of insolvency.[587] The Basel Committee introduced themethodology guideline for calculating the leverage ratio in December 2010. It provided an approach for calculating the

[584] HM Treasury, (November 2016) 'Consultation outcome: Financial Policy Committee powers of direction in the buy to let market' from www.gov.uk/government/publicationsAlso, Bank of England leverage ratio policy decisions

[585]HM Treasury, (November 2016) 'Consultation outcome: Financial Policy Committee powers of direction in the buy to let market' from www.gov.uk/government/publications. Bank of England CCB policy decisions

[586] Barth, A., and Seckinger, C., (2018) 'Capital regulation with heterogenous banks – Unintended consequences of a too strict leverage ratio.' Journal of Banking and Finance 88, 455-465.

[587] Jarrow, Robert.(2013) 'A leverage ratio rule for capital adequacy' Journal of Banking and Finance 37, 973.

ratio of leverage regarding not only the descriptions of eligible regulatory capital: the measure of capital, but also total exposure: the measure of exposure. [588]

Indonesia had not yet implemented the leverage ratio in 2017, but in December 2019, the IFSA provided the leverage provision[589] and a consultative paper on revision of the provision of obligation to fulfil the leverage ratio. In contrast, the UK started controlling the leverage ratio of its financial institutions from 2016. There are several plans of different ratios;[590] firstly, all PRA banks have to apply the minimum leverage in order to mitigate the risk if internal rating approaches are not successful in generating or providing suitable risk weighted capital. The target of additional buffer of leverage ratio is the risk distribution within the financial system for global systematically important banks. The final plan employs the countercyclical buffer of leverage ratio in order to introduce additional flexibility by providing a buffer of systemic risk. In 2018, the calculation methodology migrated to a binding measure regarding appropriate calibration and review. The CRR also lays down calculation of the leverage ratio under Part Seven Article 429. Article 511 (3l) and Paragraph Introduction (95), stating that an appropriate indicator of the leverage ratio in calculating an institutuion's risk excessive leverage should be identified to maintain or protect the resilience of different business models. When credit growth is unsustainable or significant, the authorities boost the level of CCB and lower it once it is growing moderately.

5.2.2. Macroprudential instruments for addressing maturity mismatch (liquidity)

Basel III also proposed that the NSFR be implemented by January 2018. The NSFR is designed to protect banks with sufficient stable funding sources for up to one year. [591] Lallour Mio reveals that the NSFR's implementation in 12 of the largest US banking institutions will lead to an increase in long-term funding sources, approximately $1.4tn by the end of 2007.[592] Stable funding sources are calculated as the percentage of the amounts and categories of equity and liability assets required to be available or reliable funding sources for up to one year under

[588] Leverage ratio is here used in the sense of a capital-to-asset ratio. It is sometimes expressed as a leverage multiple, which is simply the inverse of the leverage ratio (D'Hulster, 2009). Regarding the BCBS (2012b, p. 21) "[. ...] once a bank institution is denoted as having more leverage, or being more leveraged, this denotes a multiple as opposed to a ratio, notably 3%. Therefore, a bank institution with a high leverage level would possess a low ratio of leverage"

[589] The IFSA provision No. 31/POJK.03/2019 about obligation of leverage ratio (the 31 IFSA leverage provision 2019)

[590] Financial Policy Committee (2015a) "The Financial Policy Committee's powers over Leverage ratio tools" Bank of England, A policy statement.

[591] BCBS (2014b). 'Basel III: the net stable funding ratio'

[592] Lallour, A., & Mio, H. (2016) 'Do we need a stable funding ratio? Banks' funding in the global financial crisis.' Bank of England Staff Working Paper No. 602

circumstances of extended instability. [593] Stable funding sources include not only preferred stock and capital but also liabilities with maturities of more than one year and stable deposits. [594] Under the final NSFR released by the Basel Committee in October 2014, three additional requirements were included: at least 10 percent of the loan value has to be provided in stable funding sources to back interbank loans with residual maturities of six months; 85 percent of stable funding resources has to be provided to back the initial margin on derivative agreement; and institutions have reduced ability to offset derivative assets by derivative liabilities. [595]

The Basel Committee has introduced new liquidity standards to increase bank resilience or prevent possible disruption of long term funding, in the form of the Net Stable Funding Ratio (NSFR). In Indonesia, stable funding requirements have been implemented through the IFSA provision.[596] There are only three types of banks that have to satisfy the NSFR requirements, namely BUKU 4, BUKU 3 and foreign banks. Therefore, other banks, such as BUKU 2 and BUKU 1, do not have to meet the stable requirements. It is likely a binding provision. Bank must calculate Available Stable Funding (ASF) and Required Stable Funding (RSF) to satisfy NSFR, but the IFSA has authority to determine different NSFR if banks do not meet the stable requirements. Banks must oversee, report and publish NSFR, but there are no specific provisions that regulate particular items and components reported to the IFSA. There are several administrative penalties if they disobey the Indonesia NSFR provision 2017. In general, the Indonesia NSFR provison 2017 is similar to the UK NSFR provisions under the CRR and CRD IV. One of these is the obligation of banks to meet and maintain and report stable funding requirements. However, there are several differences between Indonesia and the UK NSFR provisions that will be discussed in this chapter, particularly in Chapter 6 (subchapter 4) below on why these differences are significant.

5.2.3. Macroprudential instruments for lending

This section concentrates on macroprudential instruments which affect the bank lending side. Cerutti et al show that stricter macroprudential provision is related to lower growth of credit, particularly in credit of households.[597] Similarly, Akinci and Ohmstead-Rumsey report that tightening of macroprudential instruments is related to lower growth of bank credit,

[593] BCBS (2014b). 'Basel III: the net stable funding ratio'
[594] BCBS (2014b). 'Basel III: the net stable funding ratio'
[595] BCBS (2014b). 'Basel III: the net stable funding ratio'
[596] The IFSA provision no 50/POJK.3/2017 about NSFR for commercial bank (the Indonesia NSFR provision 2017)
[597] Cerutti, Eugenio, Stijn Claessens, and Luc Laeven.(2015) 'The Use and Effectiveness of Macroprudential Policies: New Evidence.' Journal of Financial Stability, 203224.

inflation of house prices and growth of housing credit.[598] The IMF reveals that macroprudential instruments to limit build up of a boom involve restricting not only ratio of loan to value (LTV) and affordability criteria but also ratio of loan to income (LTI).[599]

First, the macroprudential instrument for credit is the LTV ratio which is used to determine the amount that could be borrowed against the house value.[600] When the ratio of LTV is higher, the issuing bank will face higher risks. For instance, when the value of the collateral is at £250,000 and the mortgage value is £190,000, the ratio of LTV is 76%. The borrower needs to pay the other 24% with his/her own equity which is necessary to ensure his/her equity does not come from debt elsewhere. If the ratio of LTV is 85%, the risk is higher than with 76%. If the house is financed by 100% debt, the possibility of mortgage default will increase when there is an increase in the annual interest rates. Therefore, in order to avoid the scenario or event of borrower defaults, banks have to check and ensure the background of the mortgage carefully through conducting due diligence.

The second macroprudential instrument is the ratio of LTI. It compares the specific amount that could be borrowed for a mortgage to the overall borrower income and denotes that the limit of the specific amount of mortgage will depend on the borrower income.[601] Aikman et al assert that restricting LTI and affordability criteria is imposed not only to ensure individual mortgage borrowers can repay their debt when interest rates increase but also to limit the unsustainable build up in household debts and the demand of aggregate externalities which were caused by the financial downturn.[602] The FPC's recommendations to the FCA and PRA in June 2014 ensure that bank institutions are restricted to providing no more than 15% of their total new mortgage number at the LTI ratio of 4.5 or higher.[603] Nevertheless, the limitation only applies to bank institutions with lending value of real estate exceeding GBP 100 million per year.[604] The limitation on the high LTI amount prevents the growth of high risk mortgages which are

[598] Akinci, Ozge and Jane Ohmstead-Rumsey (2017) 'How Effective are Macroprudential Policies? An Empirical Investigation' Journal of Financial Intermediation, 1-25.
[599] Aikman, D, Bridges, J., Kashyap, A., and Siegert, C (2018) 'Would macroprudential regulation have prevented the last crisis?' Staff Working Paper No. 747, Bank of England, p. 29
[600] Metzing, P. C. (2016) 'Macro-prudential financial regulation of banks after the crisis of 2008.' Newcastle University Business School.p. 104
[601] Metzing, P. C. (2016) 'Macro-prudential financial regulation of banks after the crisis of 2008.' Newcastle University Business School. p. 104
[602] Aikman, D, Bridges, J., Kashyap, A., and Siegert, C (2018) 'Would macroprudential regulation have prevented the last crisis?' Staff Working Paper No. 747, Bank of England, p. 28
[603] Financial Policy Committee (2014a) 'Record of the Financial Policy Committee Meetings 17 and 25 June 2014' Bank of England. Available at:
http://www.bankofengland.co.uk/publications/Documents/records/fpc/pdf/2014/record1407.pdf.
[604] Metzing, P. C. (2016) 'Macro-prudential financial regulation of banks after the crisis of 2008.' Newcastle University Business School.

served by a few of the banks that dominate the mortgage business and which could possibly become systemic prior to a collapse that could potentially trigger big systemic risks. Another macroprudential instrument is the DTI ratio which is used to determine or measure the ratio or level of the overall borrower indebtedness. Gelain et al contend that the most effective macroprudential instrument to lower the volatility in debt and house prices is limit of DTI. [605] It compares the particular amount of all of the household mortgage indebtedness that has to be satisfied to the overall borrower incomes. It restricts the mortgage proportion which could be provided by bank institutions to borrowers with relatively high indebtedness. The restriction aims to prevent unlimited growth of such a real estate market in a country.[606]

The recommendation of the FPC on October 2014 in response to the announcement of the Chancellor was that powers of direction should be provided to the FPC relating to housing market instruments, such as the restriction of LTV and DTI in respect of owner-occupied mortgage lending. The FPC's powers of direction should also involve instruments, notably ratios of DTI, in respect of buy to let residential mortgage lending that would be consulted on by the government separately, based on the recommendation, by the end of 2015.[607] In general, Indonesia has not implemented the LTI and DTI, but has been using CCB, LTV and minimum reserve requirement (RR) plus Loan Deposit Ratio (LDR). On the other hand, the UK already implements the LTV, LTI and DTI, including the ICR, to handle buy to let lending which poses risks to financial stability. These risks stem from the primary channel involving not only credit risk and the amplification risk of the house price cycle but also the possibility of high indebtedness interacting with these two channels.[608]

The losses from credit default on buy to let residential mortgages could have an adverse effect on the banks' balance sheet and also the resilience of the banking system due to a reduction of the value of real estate and an increase of the loss risk in house assets. Besides the potential risk from buy to let residential mortgage there could be amplification of housing market cycles in upswing and falling house prices which can incur indirect cost for the wider economy and boost the risk of financial stability. Therefore, in order to mitigate the risk of buy to let residential mortgages, the FPC recommendation to the PRA and FCA ensures that buy to

[605] Gelain, P., Lansing, K.J., Mendicino, C. (2013) 'House prices, credit growth, and excess volatility: implications for monetary and macroprudential policy.' International Journal of Central Banking 9, 219-276.
[606] Metzing, P. C. (2016) 'Macro-prudential financial regulation of banks after the crisis of 2008.' Newcastle University Business School. p.105.
[607] FPC power of direction policy
[608] HM Treasury, (November 2016) 'Consultation outcome: Financial Policy Committee powers of direction in the buy to let market' from www.gov.uk/government/publications

let residential mortgages are required to be restricted through the LTV ratio and ICR, which will act to lower the credit supply.[609]

In addition, the two instruments, LTV ratio and ICR, can lower the level of the channel of amplification.[610] Research from the CBI identified a positive correlation between the share of buy to let borrowers and amount of house price overvaluation. Overvaluation of residential prices might cause an unsustainable rise in indebtedness for all residential borrowers or mortgagors.[611] Also, the restriction of ICR might safeguard against amplification level in upswing, specifically when house prices rise much faster than rents, as well as the possibility of the mortgagors experiencing an operating loss in the downturn.[612]

These three ratios, LTV, LTI, and DTI, are complementary and ought to be determined by financial authorities with prudence.[613] The lenders have to comply with a strict regime of these three ratios to restrict build-up of a boom. If they merely obey one or two of these ratios, such as the LTV ratio without DTI or LTI or vice versa, it will increase risk taking or speculation regarding taking on more mortgage without considering or assessing all of the household indebtedness that could be covered by the mortgage income. Igan and Kang revealed that the restriction on the ratio of DTI and LTV could restrain speculation on real estate in the first place.[614] Avoiding speculation could lower both the exposure of borrowers to shock and volatility in consumption of household debt.

Therefore, all the macroprudential instruments above concentrate on mitigating systemic risk deriving from credit growth that is procyclical in behaviour. Several researches reveal dissimilar implications across macroprudential tools. Basten and Koch explained the instrument of CCB has little implication for credit growth.[615] Besides, Tovar et al reported that the Reserve Requirement instrument is ineffective in lowering credit growth.[616] On the other

[609] HM Treasury, (November 2016) 'Consultation outcome: Financial Policy Committee powers of direction in the buy to let market' from www.gov.uk/government/publications
[610] HM Treasury, (November 2016) 'Consultation outcome: Financial Policy Committee powers of direction in the buy to let market' from www.gov.uk/government/publications
[611] Coates, D, Lyndon, R, McCarthy, Y' (2015) 'House price volatility: the role of different buyer types' Central Bank of Ireland Economic Letter Series, No. 2
[612] HM Treasury, (November 2016) 'Consultation outcome: Financial Policy Committee powers of direction in the buy to let market' from www.gov.uk/government/publications
[613] Metzing, P. C. (2016) 'Macro-prudential financial regulation of banks after the crisis of 2008.' Newcastle University Business School. p. 104
[614] Igan, D., and Kang, H. (2011) 'Do Loan-to-Value and Debt-to-Income Limits Work? Evidence from Korea' International Monetary Fund, Working paper, No. 11/197
[615] Christoph Basten and Cathérine Koch (2015) 'Higher Bank Capital Requirements and Mortgage Pricing: Evidence from the Countercyclical Capital Buffer (CCB)' BIS Working Papers No 511, p. 6
[616] Tovar, C. E., Garcia-Escribano, M., & Martin, M. V. (2012)' Credit Growth and the Effectiveness of Reserve Requirements and Other Macroprudential Instruments in Latin America.' IMF Working Paper 12/142: 1–29

hand, CCB and RR plus LDR tools are able to mitigate procyclicality[617] in Indonesia, whereas the LTV instrument could lower growth of credit, but not mitigate procyclicality.[618] Also some studies showed that LTV and CCB as instruments of macroprudential provision are effective in minimising the risk of credit expansion in emerging countries.[619] Therefore, the macroprudential instruments above, such as RR, CCB, and LTV could be successful in terms of diminishing the procyclicality or credit expansion or the upswing financial movement during financial distress. However, macroprudential provisions pose several challenges that might weaken their impact.

5.3. Substantive aspects of macroprudential provision in Indonesia and the UK: divergence or convergence?

Bank of Indonesia performs macroprudential regulation and supervision in order to prevent and lower systemic risks and enhance efficiency of financial access and financial system.[620] Regulating macroprudential uses regulatory instruments in order to (a) strengthen capital resilience and prevent excessive leverage; (b) to manage the function of intermediation and control risks of credit, liquidity, exchange rate, interest rate and other risks which have the potential to become systemic risks; (c) to limit the exposure concentration; (d) to strengthen the resilience of financial infrastructure, and (e) to improve the efficiency of the financial system and access to finance.[621] Bank of Indonesia conducts macroprudential supervision throughout (a) financial system surveillance, (b) assessment of bank institutions and other institutions which possess a connection with the bank institutions if necessary.[622] The Central bank ought to be macroprudential regulatory body as maintaining stability of financial system connects

[617] Utari, G. A. D., Arimurti, T., & Kurniati, I. N. (2012) 'Pertumbuhan Kredit Optimal (The Optimal Credit Growth).' Buletin Ekonomi Moneter dan Perbankan. Vol. 15(2): 3–36

[618] Dana, B. S. (2018) 'Evaluation of Macro-prudential Policy on Credit Growth in Indonesia: Credit Registry Data Approach.' Etikonomi: Jurnal Ekonomi. Vol. 17 (2): 199 – 212. doi: http//dx.doi.org/10.15408/etk.v17i2.7324

[619] Fendoğlu, S. (2017) 'Credit Cycles and Capital flows: Effectiveness of The Macroprudential Policy Framework In Emerging Market Economies.' Journal of Banking and Finance. Vol. 79: 110–128. doi: https://doi.org/10.1016/j.jbankfin.2017.03.008 . Also, Drehmann, M., & Tsatsaronis, K. (2014) 'The Credit-to-GDP Gap and Countercyclical Capital Buffers : Questions and Answers.' BIS Quarterly Review, March 2014. Retrieved from: https://www.bis.org/publ/qtrpdf/r_qt1403g.htm

[620] Article 2, the provision of Bank Indonesia, No. 16/11/PBI/2014 about macroprudential regulation and supervision

[621] Article 3, the the provision of Bank Indonesia, No. 16/11/PBI/2014 about macroprudential regulation and supervision

[622] Article 5, the provision of Bank Indonesia, No. 16/11/PBI/2014 about macroprudential regulation and supervision

well with the purpose of lender of last resort and policy of monetary.[623] On the other hand, the FPC which is a subsidiary of the Bank of England has responsibility for macro prudential provision. It would have macro prudential instrument to control or regulate financial intermediary institutions. It is to function and operate as a sub commission of the bank's court of director with major purposes: to provide contribution to the success of the financial stability purpose of the financial intermediary institution and to encourage the Government economic policy, as provided by the Treasury.[624] It is important to note that the words of the purpose of the financial stability has been enhance to underline that the financial intermediary institution has to safeguard and augment the UK financial system stability.[625] There are three primary functions of the FPC: (a) monitoring the financial system's stability with scrutiny to monitor, identify, and address systemic risk; (b) preparing reports on financial stability; and (c) providing binding directions to the PRA and FCA so its macro prudential policies are properly implemented.[626] By possessing the FPC within the Bank of England, Tucker contended that the government is making assurance that stability does not decrease by the verge, into the gap between the provision of companies and policy of monetary.[627]

Both regulatory frameworks reject free systemic risk of boom and bust in the financial cycle. However, they are unlikely to avoid procyclical credit growth. The macroprudential provisions show that both countries are aware of potential risk of procyclicality that could threaten the financial system as a whole. Although Indonesia and the UK face potentially dissimilar banking risks, particularly relating to credit growth which could possibly have a financial cycle impact on the banking system's stability, both countries attempt to mitigate procyclicality. Hence, the effectiveness and efficiency of CCB as part of macroprudential provision is vital to mitigate procyclicality and safeguard financial system. The CRD and CRR are mostly similar to the 34 IFSA provision 2016 and the 17 BI provision 2015 which oblige banks to lay down additional capital buffers in line with the International standard to mitigate procyclicality. However, there are differences in the regulatory structure.

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[623] Blinder, A. (2010) 'How central should the central bank be? ', *Journal of Economic Literature,* 48(1), pp. 123-133.

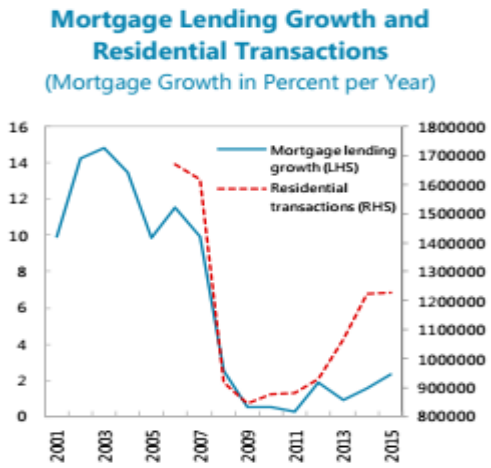
[624] Financial Services Act 2012 s.4;; new Bank of England Act 1998 ss.9C and 9D

[625] Financial Services Act 2012 s.2. The financial stability objective of the Bank of England was first introduced by the Banking Act 2009 s.238 which inserted s.2A into the Bank of England Act 1998.

[626] Financial Services Act 2012 s.4; new FSMA 2000 s.9G.

[627] Tucker, P. (2011) 'Macro and Microprudential supervision', *Speech given by Paul Tucker, Deputy Governor Financial Stability, member of the Monetary Policy Committee and member of the interim Financial Policy Committee*.

Figure 6.5.1



Sources: Bank of England and HM Revenue and Customs.

The regulatory structures of both countries regulate a relatively similar percentage of CCB level, but in practice the different banks' CCB levels in these countries are a significant concern. It is interesting to note that the CCB level owned by banks in Indonesia and the UK are not similar. Banks in the UK maintain higher CCB levels, with an average CCB level of around 2%[628] in 2019 compared to the Indonesia banks' level of around 0%. In 2017, the Bank of England augmented the rate of CCB to 1% or about approximately £11.4bn in aggregate to protect against other macroeconomic risks, notably a disorderly Brexit and other material risks, such as growth of consumer credit, asset valuation, level of global debt and misconduct costs.[629] It could be argued they determine the CCB level in relation to the potential risks they are facing. In the UK, banks endeavour to mitigate the possibility of financial cycle impacts during excessive credit growth periods. Figure 6.5.1 regarding the growth of mortgages indicates the possibility of increases in lending and residential transactions. The CCB level should be used to calm the boom and mitigate the bust which might lead to unexpected losses during the downturn. Although it could mitigate these possibilities, the UK might not be able to completely ensure the safety of the financial system from financial cycle impacts. CCB has been employed in Spain, for example, where the data indicate that it did not stop a banking catastrophe from happening.[630]

[628] Bank of England. Financial Stability. Latest announced rate of UK CCB with binding impact from December 16 2020

[629] Binham, Caroline and Arnold, Martin. (2017) 'BoE tells banks to hold extra £6bn buffer for risks beyond Brexit' Financial Times accessed 7 February 2020.

[630] Saurina, Jesus, 2009, "Loan Loss Provisions in Spain. A Working Macroprudential Tool," Revista de Estabilidad Financiera, 17, pp. 11-26

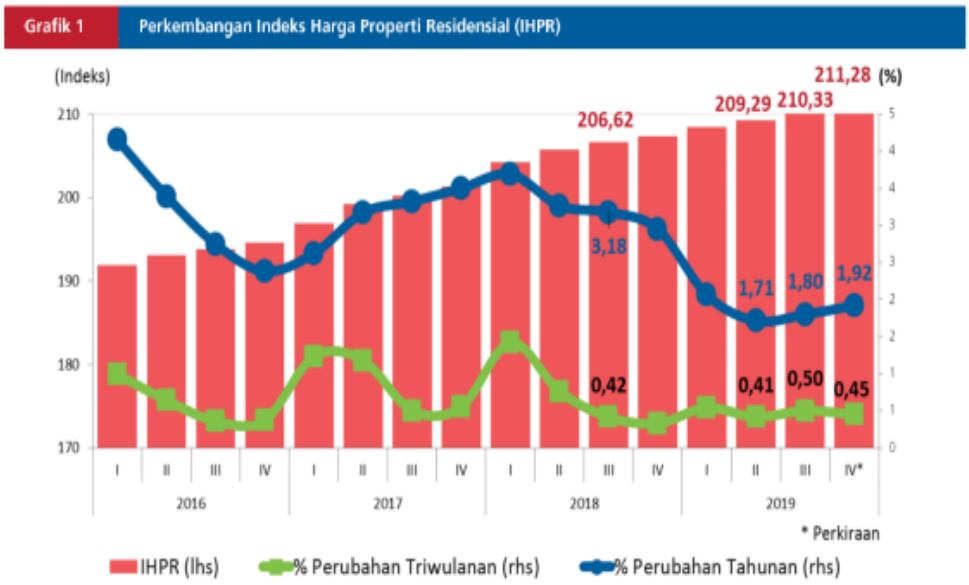
In contrast, in Indonesia, the BI provision regulates the CCB level at around 0% and, in practice, banks also hold 0% of CCB but they maintain higher capital levels as already discussed in Chapter 4 above. It could be argued that government or regulatory bodies assume that the banks' condition and property market are still sound and safe. Indices of property prices still show a positive increase, although there are fluctuations year on year as shown in figure 6.5.2 below.[631] If property prices are stable or there is a positive increase, the potential losses of banks could be mitigated. Therefore, it could be assumed that regulatory bodies in Indonesia have not needed to tighten the CCB level as they might assume that the possibility of financial cycle impacts during excessive credit growth periods is lower. However, although there were fluctuations in growth of property sales between 2018 and 2019, property sales showed a significant increase from -15% to 13%, This might have been caused by BI provisions not tightening the LTV ratio as will be discussed below in this subchapter

Therefore, Indonesia might not be able to calm the boom and mitigate the bust if there are unexpected lossess during the downturn. Dana reports that the CCB implementation is ineffective in affecting growth of credit but is not ineffective in preventing procyclicality of credit growth.[632] Besides, it could be assumed that the possibility of credit default might be lower due to banks' high capital levels. In other words, banks would be careful to evaluate credit comprehensively and endeavour to mitigate moral hazard covered by their high capital levels. If moral hazard could be minimised with high capital, banks could prevent credit default and sale of collateral to address credit default. As a result, stability of property prices could be maintained to be stable through avoidance of property selling to address credit default.

Figure 6.5.2. Development of index of residential property price from 2016 to 2019

[631] Bank Indonesia (2019) 'A survey of residential property price' https://www.bi.go.id/id/publikasi/survei/harga-properti-primer/Documents/Triwulan%20III%20-%202019.pdf

[632]Dana, B. S. (2018) 'Evaluation of Macro-prudential Policy on Credit Growth in Indonesia: Credit Registry Data Approach.' Etikonomi: Jurnal Ekonomi. Vol. 17 (2): 199 – 212..



Source Bank Indonesia

It could be argued that the CCB is quite ineffective because of a limitation influencing the use of time varying tools. The countercyclical buffer instrument would vary in relation to the growth of credit. When asset prices or leverage or credit growth are excessive, bank institutions have to provide additional capital cushions. One emerging question is how long banks will have to hold a countercyclical capital buffer, although the macroprudential authority in Indonesia will review the amount of the capital buffer in 3-4 months. Time will be needed to assess the impact of the growth of credit. For example, there was significant credit growth in October 2019 and the authority obliged banks to provide a high countercyclical buffer, such as 2,5%. In February 2020 the trend of credit growth tends to be low or reduced and the authority will likely lower the level of the capital buffer as well. In September 2020 or August 2021, there will be many credit defaults that could potentially influence stability. In such times when credit default occurs, banks hold only a low level of countercyclical buffer, notably 0%-0,5%. In bad times, it is likely banks will not increase or provide more buffer as they are likely to concentrate on obtaining more funding against the difficulty or the run or the lowering of house prices or the instability. Therefore, the effectiveness of the capital buffer is not certain because of several factors such as time of credit growth and time of its impacts, so the measure can vary and needs to be explained more specifically.

Besides, prices, notably of certain assets or property or house prices which increase significantly could be hard to identify clearly as a bubble ex ante because of a change in non

fundamental aspects or fundamental aspects or a combination of the two.[633] For instance, an increase could occur in commercial property prices in a particular area of around 15% within a period of four months. Once there is growth due to business relocation to this area, notably in fundamental aspects, it is not identified as a bubble. A bubble could occur once, in order to obtain short term profits, investors survey or study the prospects of business relocation and then acquire houses or buy assets, thus stimulating an increase in property prices. Speculation by businesses may contribute 8% and local business effect might cause an increase in property prices of around 18%. However, the way in which non fundamental aspects affect the property price and become dangerous speculation is difficult to justify or identify.[634]

The UK provision regulates sectoral buffers under the CRR and CRD. The UK has a clear potential risk, notably regarding house prices, long term mortgage lending with uncertainty in the interest rate, and securitisation .[635] These potential risks include default credit, externalities, maturity mismatch, liquidity problem, interconnectedness and systemic banks that could impact banking systems in other countries. These concerns might possibly affect the banking stability. Therefore, the UK needs sectoral buffers to restrict the growth of credit exposure in specific sectors, such as buy to let residential lending. In contrast, Indonesia has not regulated the sectoral buffer yet. Indonesia has a different market. It could be assumed that the banking market in Indonesia is safer based on its retail market compared to UK banks that use several different innovative products, such as credit default swap. It is likely that regulatory bodies in Indonesia do not prioritize the capital provision of sectoral buffers because it could possibly increase banking costs, and make the banks less competitive if they transfer the cost into higher interest rates, and could potentially influence banking development in Indonesia. The banking sector could grow more slowly due to the high costs.

There are possible risks including losses, bank balance sheet concerns, and huge costs. Although the biggest percentage of growth of credit is contributed by wholesale and retail trade, and processing industry, Indonesia has a potential risk in the form of different currency and interest rates.[636] Debtors import goods from overseas using dollars to run the business, predominantly for wholesale and retail trade, and processing industry. They use banking services or credit facilities in dollars, but they sell their products in Rupiah and they have to

[633] Bernanke, B, and Gertler, M. (2000) 'Monetary policy and asset price volatility' NBER WP No. 7559
[634] Metzing, P. C. (2016) 'Macro-prudential financial regulation of banks after the crisis of 2008.' Newcastle University Business School. p. 102
[635] Jay Cullen (2017) 'Securitisation, Ring-Fencing and Housing Bubbles: Financial Stability Implication of UK and EU Bank Reforms.'
[636] Indonesia Financial Service Authority (Otoritas Jasa Keuangan "OJK"), (2017) 'Report of Indonesia Banking Profile' Quarter 2

repay their credit in Dollars. When there is economic distress or economic or political issues that influence International trade and Indonesia's economy, the Rupiah could be lower in value than the Dollar or other currencies, notably the GBP, and interest rates could potentially increase. This could affect the ability of debtors to repay their credit. Banks could also possibly suffer losses if debtors could not repay their payments and their collateral could not cover their credit. Banks losses create bank balance sheet concerns and potentially cause liquidity concerns. Banks suffer huge costs to address these difficulties. Therefore, the UK provision is more preventive and robust than Indonesia provision.

Both the UK and the Indonesia regulatory framework, in general, highlight a similar leverage ratio. It is impossible to neglect excessive leverage risk that can potentially build up not only in individual bank institutions but also in the financial system as a whole. In efforts to prevent the risk of excessive leverage, both the UK provision, including the CRR and policy statement 28/18,[637] and the Indonesia provision regulate not only appropriate adjustment to the measure of capital and the measure of total exposure but also its reporting[638]. The appropriate adjustment of capital requirement is designed to ensure that banks have a tool to tackle any build-up in systemic wide leverage. Also, it could be argued that both regulatory authorities highlight the importance of leverage ratio reporting in order not only to boost supervision of the leverage ratio but also maintain a prudent leverage level that will enhance the loss absorbency of a bank institution.

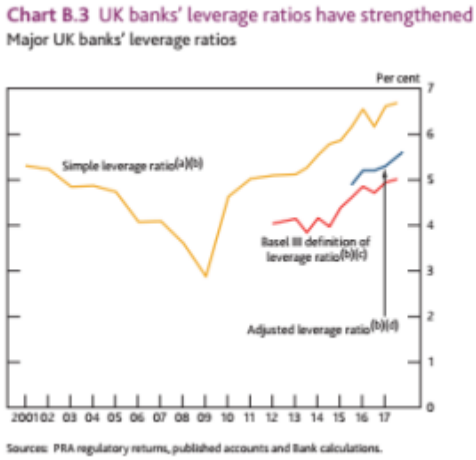
Figure 6.5.3.

Figure 6.5.4.

Comparative in 2017	Capital	Leverage[639]
BUKU 1	21.73%	12.64%
BUKU 2	25.32%	15.79%
BUKU 3	25.22%	15.98%
BUKU 4	21.43%	14.65%

[637] UK leverage ratio: implementing the structure to systemic ring fenced bodies and reflecting the buffer of the systemic risk.
[638] The 31 Indonesia leverage provision 2019
[639] According to LPIP TW II-2017, The majority of capital components involve core capital with around 91.49% and the dominant percentage of core capital is common equity tier 1/CET 1. Leverage is calculated by a more commonly used measure: equity/total assets. In this figure, data on core capital and assets between 2012 and 2017 are analysed using this measure to determine the trend of leverage over these periods of time.

Foreign Banks	53.03%	40%



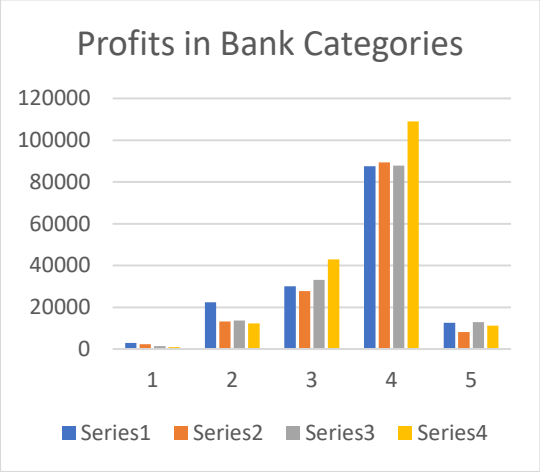
Source. IFSA (IBS 2017)

However, the differences in leverage levels between these countries is a significant concern. It is interesting to note from figure 6.5.3 and 6.5.4 above that Indonesia banks have larger leverage ratios than the UK banks. Indonesia banks, with an approximate average of 14,65%, have ratios almost one quarter higher than those of the UK banks (3,25%). Interestingly, foreign banks in Indonesia have a significantly high level of leverage of around 40%. High leverage is representative of the UK banking system. Leverage is boosted to supply more credit and maximise profit, resulting in a bigger banking system because of an increase in banking assets. But in Indonesia, the degree of leverage might not represent the condition of the banking system. With high leverage, they will supply more credit and the banking assets would increase significantly and the banking system would develop considerably. However, these assets have not grown substantially and the trend of assets of foreign owned banks tended to reduce between December 2015 and October 2017 even though they had the highest leverage, around 40%.[640] There are several assumptions relating to high leverage in Indonesia. It could be assumed that banks in Indonesia increase leverage to invest in very risky assets. Alternatively, banks increase leverage to increase capital, not to generate profits due to capital provision that demands boosting of capital. Otherwise, banks' leverage could be high because they aim to increase the quality of service or lower operational costs, for example, to buy technology, increase bank infrastructure or buy a building for a head office or add a branch office. Another assumption is that bank leverage is high because foreign banks use their money or deposits for their head office overseas, not to increase the credit supply in Indonesia.

[640] The IFSA, 2017. 'Indonesia Banking Statistics' vol 15 No.07 Otoritas Jasa Keuangan 197

Therefore, the regulatory authority should conduct further research to identify and analyse the causes of high leverage accurately and the relationship with other data on Indonesia's financial structure. Another difference is that the UK has implemented model requirements of an additional leverage ratio buffer for GSIB from 1 January 2019 whereas Indonesia does not regulate this additional leverage ratio. The UK banking sector poses systemic risks and risks from interconnectedness. The adoption of additional leverage for GSIIs could effectively assist to lower the risk of excessive leverage for GSIIs. In contrast, Indonesia has not implemented an additional leverage ratio buffer for GSIIs yet. The UK's banking system is much bigger and more interconnected domestically and globally than that of Indonesia. It could be assumed that the IFSA adjusts the leverage provision in line with national interest and bank condition.

Figure 6.5.5



Source: IFSA (IBS 2015-2017)

In terms of the high leverage level in Indonesia, certain assumptions can be made. Firstly, the high degree of leverage in Indonesia should show high profitability generated by banks, but based on figure 6.5.5 the banks' profits have not increased significantly. It could be assumed that the degree of high leverage does not represent its level precisely due to no standardisation , clear calculation and measurement. It could be argued that these concerns could lead to miscalculation of the leverage ratio and banks have no similar measurement to calculate the level accurately. As a result, these factors could lower the prudent level of leverage and the loss absorbency of banks, leaving them worse equipped to handle financial shocks. The second assumption is that banks hold high capital in order to maximise their profit because they might possibly assume that they could minimise the possibility of bank failure even though they are

making riskier project choices. However, Indonesia banks face high NPL concerns that are driven by bad management, moral hazard and skimping behaviour.[641] If these concerns still arise and regulatory bodies and banks still cannot minimise them, the possibility of higher project returns would likely be small. Consequently, it could potentially lead to bank failure and financial distress if many riskier projects were to default or fail. Although both regulatory frameworks highlight the importance of the leverage ratio, in practice, use of the leverage ratio is more dangerous or riskier in Indonesia due to the possibility of both high risk of project default and bank failure.

Both the UK and the Indonesian regulatory framework, in general, highlight a similar stable funding provision including obligation of long term funding. It is necessary to maintain long term funding. To satisfy their regulatory obligation, the UK and Indonesia both have norms to regulate calculation of stable funding ratio and its reporting or publication. Both countries emphasise the importance of reporting of stable funding ratio to augment supervision of minimum stable funding. This is designed to ensure that bank institutions maintain stable funding in line with the items requiring stable funding or asset composition and items providing stable funding. Maturity mismatch, bank run and costs are implications attached to clearing up a failure to maintain stable funding.

However, there are differences between the UK and Indonesia, particularly in terms of clarity or transparency of items requiring stable funding or asset composition and items providing stable funding. The UK imposes items needed for obligation of reporting on stable funding[642] whereas Indonesia has not described these specifically and explicitly yet. The UK provision provides more detail on items requiring/providing stable funding. It is argued that the UK regulatory authorities would like to ensure and encourage standardiaation of reporting, including clarity or transparency of clear measurement and criteria for reporting on stable funding. Without clear standardisation of items needed in reporting on stable funding, they will not be able to assess the reporting provided by banks comprehensively or obtain precise or accurate results. On the other hand, Indonesia norms merely include simple reporting, notably information about calculation of stable funding and analysis of development of stable funding. There are several assumptions relating to Indonesia's provision of long-term stable funding. It could be assumed that the majority of Indonesia's banking credit market is retail whereas the UK has a complex market, notably of securities and derivatives. In addition, it could be

[641] Infra. Chapter 3. Subchapter 3.3.1.
[642] Article 427 and Article 428 CRR.

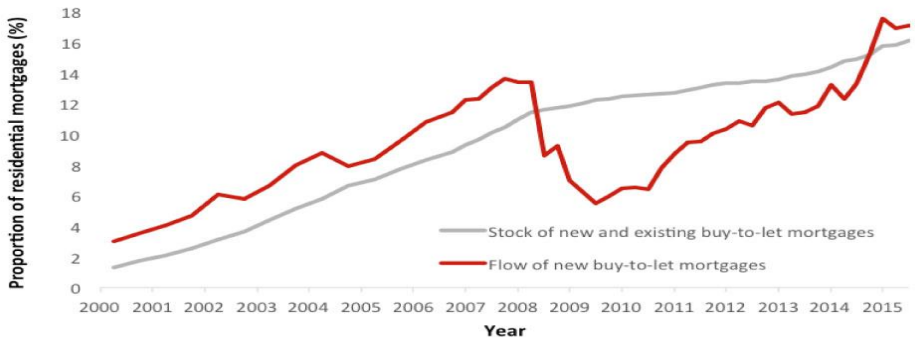
assumed that Indonesia regulatory bodies have endeavoured to prepare the foundation for a legal base of stable funding in line with the International standard. In other words, it is likely they still have no blueprint for standardisation of items requiring stable funding, but they would develop the provision in line with Indonesia's economic conditions and with Basel to mitigate maturity mismatch and maintain long term funding. Besides, it also could be assumed that Indonesia regulatory bodies merely validate and follow the reports provided by bank institutions without clear objectives on what, why and how to analyse the accuracy of data due to no clear measurements and criteria. Therefore, the regulatory body cannot assess the stable funding comprehensively. In other words, it is likely they are merely followers of reporting provided by bank institutions, resulting possibly in wrong decisions due to the above omissions in their procedure. There are several other possible risks, the first of which relates to accuracy of the data or trust in the data. Bank institutions might provide data that is deemed good based on their side because regulatory authorities do not oblige them to conduct comprehensive analysis of the required data. The second risk relates to unstandardized data. Every bank institution might possibly provide different items requiring/providing stable funding. Another risk relates to no consistency of bank reporting on stable funding because of no standardization n of methodology or use of different methods among bank institutions, resulting in potentially uncertain quality of the result or uncertain result of calculation of stable funding.

Both the UK and the Indonesian regulatory framework, in general, highlight the importance of macroprudential tools for credit. It is impossible to neglect the build-up of a boom that could potentially lead to volatility in consumption of household debt. To avoid the build-up in household debt, both the UK and the Indonesia provisions regulate ratio of loan to value. Nevertheless, in these two countries there is different implementation of ratio of loan to value and other macroprudential tools for credit. The UK employs tools of LTV, LTI and DTI including ICR. The UK uses these instruments because of concern not only that the development of the housing market might carry risks to banking stability but also to develop tools or strategy to tackle such risks.[643] There has been a significant increase in the Private Rented Sector (PRS) since 2002, from around 10% of dwellings (2.5 million dwellings) to approximately 19% of all dwellings (5.2 million dwellings) in 2013 based on figure 6.5.7 below.[644] Figure 6.5.6 shows that there has also been growth in buy to let residential lending

[643] HM Treasury, (November 2016) 'Consultation outcome: Financial Policy Committee powers of direction in the buy to let market' from www.gov.uk/government/publications
[644] HM Treasury, (November 2016) 'Consultation outcome: Financial Policy Committee powers of direction in the buy to let market' from www.gov.uk/government/publications

since 2010, although there was a decline sharply between 2007 and 2010. In 2015 the level of new buy to let residential lending was slightly higher than the proportion of new buy to let residential lending in 2007.[645] Restriction using these macroprudential tools, notably LTV ratio and ICR, to measure underwriting standards in buy to let residential lending can lower not only the default probability and the loss given default on individual residential lending but also the possibility that borrowers of buy to let residential mortgages will fall into default or arrears on their loan.

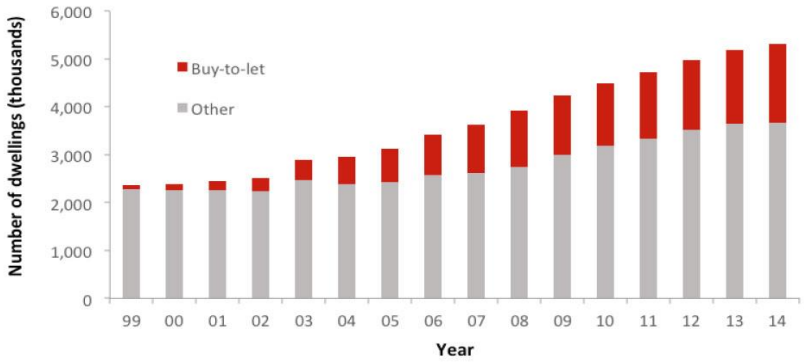
Figure 6.5.6 Growth in buy to let residential lending, 2000-2015



Source CML[646]

Figure 6.5.7 Growth in proportion of buy to let mortgage lending, 1999-2014

[645] HM Treasury, (November 2016) 'Consultation outcome: Financial Policy Committee powers of direction in the buy to let market' from www.gov.uk/government/publications
[646] HM Treasury, (November 2016) 'Consultation outcome: Financial Policy Committee powers of direction in the buy to let market' from www.gov.uk/government/publications



Source: HM Government, CML and HM Treasury calculation[647]

In contrast, based on its different products and market, Indonesia uses mainly LTV and the RR instrument plus LDR, and also the interaction of monetary instruments, particularly interest rate and macroprudential instruments; however, this thesis focuses on discussing macroprudential tools, excluding monetary policy. It could be assumed that the regulatory bodies use these instruments to stabilise the growth of credit. Suh revealed that the interaction of macroprudential instrument and monetary policies could stabilise the growth of credit. For example, when there is a potential boom, they will tighten the LTV instrument and increase the interest rate to slow the credit growth. Mortgagors will think twice about taking on property credit or speculating if the interest rate and LTV are high. Also, Dana revealed that interaction between the LTV tool and monetary instrument through interest rate is not ineffective in influencing growth of credit, while interaction between interest rates and RR plus LDR is not effective in influencing growth of credit because growth of TPF becomes higher than growth of credit with the slowing of economic expansion[648]. She also argued that the LTV instrument can lower growth of credit but not mitigate procyclicality. She also contended that the application of CCB and RR plus LDR policies can mitigate procyclicality.[649]

Indonesia banks supply credit only for homeowner occupied mortgages and not for buy to let residential lending. Mortgagors own the rights to the house for their residents, not as their

[647] HM Treasury (November 2016) 'Consultation outcome: Financial Policy Committee powers of direction in the buy to let market' from www.gov.uk/government/publications
[648] Dana, B. S. (2018) 'Evaluation of Macro-prudential Policy on Credit Growth in Indonesia: Credit Registry Data Approach.' Etikonomi: Jurnal Ekonomi. Vol. 17 (2): p. 205
[649] Dana, B. S. (2018) 'Evaluation of Macro-prudential Policy on Credit Growth in Indonesia: Credit Registry Data Approach.' Etikonomi: Jurnal Ekonomi. Vol. 17 (2): p. 205-208

business or for buy to let residential lending.[650] When the house price, used as collateral, starts to fall, they face the loss of the property price, not the banks that provided the credit. Banks have the right to ask mortgagors to repay their credit when there is default payment. Therefore, banks could minimise the credit risk that could affect lender balance sheets because borrowers are adequately protected through the property they buy as collateral. Analysis of the Central Bank of Ireland showed that the default probability for owner occupier mortgages was lower than for buy to let mortgages from 2009 to 2013.[651] Although banks still face the possibility of loss, the risk could still be mitigated. When there are many default repayments, regulatory bodies could tighten the LTV and increase interest rate to lower the credit growth. Then, banks could concentrate on addressing the default repayment, but they have to provide a high reserve requirement to maintain the liquidity. For example, the bank could discuss with mortgagors to look for the best solution, which could be to repay only the low interest rate, not including their main credit.[652] However, there are still possible risks of liquidity, huge cost and instability. It is not easy to sell property when economic conditions are deteriorating or weakening. Banks have to maintain their RR to maintain liqudity. If they fail to provide enough RR, maturity mismatch might possibly arise, resulting in potential financial distress.

Besides, it could be assumed that although there are no provisions that regulate LTI and DTI specifically, banks have internal policies in order to mitigate default risk and increase the prudency level. But banks potentially have different policies regarding these levels due to no standarisation. No standardisation could possibly lead to poor underwriting standard of credit and default payment. Banks might have different criteria of eligible or good borrowers. For instance, a debtor could have debt of around £ 2000 and monthly income of approximately £4000, hence the DTI ratio would be 50%. But banks might still provide credit because their internal policies allow consideration of a DTI ratio of 50%. Consequently, poor underwriting standard of credit would increase the risk of default repayment.

Another difference is that in the UK there are no aggregated sets of information on the ICR's evolution over time. Nevertheless, it is common practice for banks to require the monthly rental income on the house to be at least 1.25 or 125% of monthly payments of the residential lending

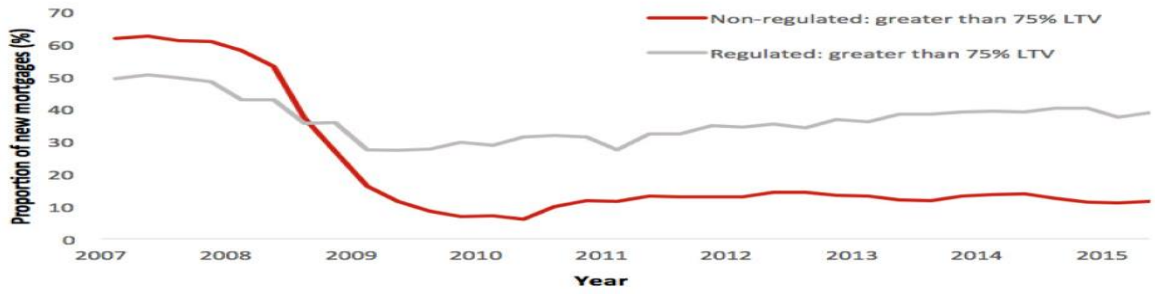
[650] HM Treasury, (November 2016) 'Consultation outcome: Financial Policy Committee powers of direction in the buy to let market' from www.gov.uk/government/publications

[651] McCann, F, (2014) 'Modelling default transitions in the UK mortgage market' Central Bank of Ireland Research Technical Paper 18/RT/14.

[652] For example, mortgagors must repay credit each month, around £1500. This includes £1000 for interest rate and £500 for main credit of property. When they lack ability to make repayments, banks might allow mortgagors to pay a low interest rate until their income can cover their credit in full, and might also extend the time period of their credit, notably 10 years extended to 12 years.

interest rate when employing an interest rate of 5%.[653] Besides, the LTV ratio on new property lending was 88,5% in Quarter 3, 2019. The maximum LTV of HSBC bank in the UK was 95%.[654] Figure 6.5.8 below shows the evolution of LTV ratios on non-regulated and regulated residential lending between 2007 and 2015. Around 36% of new regulated residential lending and around 11% of new non regulated residential lending in 2015 Q2 had an LTV ratio greater than 75%.[655] It is argued that the UK banks and non-regulated residential lending endeavour to mitigate the potential default probability through limiting residential lending that has an LTV ratio greater than 75%. They prefer to encourage borrowers to provide deposits of more than 25% to minimise the risks. Based on data research for the supervisory function of the Bank of England, around 4 percent of buy to let residential mortgages of the six largest bank institutions with an existing LTV ratio above 79% were in default or debt of more than three months amount unpaid in contrast to the 0.6 percent of residential mortgage lending with LTV ratios less than 79%.[656] This research also reveals that levels of arrears are higher for buy to let residential mortgage lending with lower ratio of ICR. Additionally, CBI research revealed a relationship between default probability and LTV ratio. An increase in the ratio of LTV of around one percent causes a rise in the default probability of around one percent.[657]

Figure 6.5.8



[653] HM Treasury, (November 2016) 'Consultation outcome: Financial Policy Committee powers of direction in the buy to let market' from www.gov.uk/government/publications
[654] HSBC, (23 January 2020) Mortgage rate from www.hsbc.co.uk/mortgages/our-rates/
[655] HM Treasury, (November 2016) 'Consultation outcome: Financial Policy Committee powers of direction in the buy to let market' from www.gov.uk/government/publications
[656] HM Treasury, (November 2016) 'Consultation outcome: Financial Policy Committee powers of direction in the buy to let market' from www.gov.uk/government/publications
[657] McCann, F, (2014) 'Modelling default transitions in the UK mortgage market' Central Bank of Ireland Research Technical Paper 18/RT/14.

Source: Mortgage Lender and Administrators Return statistics[658]

In contrast, in 2018, the BI provision regulated the LTV level at around 100%. This means that regulatory bodies in Indonesia are not tightening the credit. It could be assumed that they wish to encourage the consumption of household mortgages. Banks could provide property credit up to 100% without borrower capital or down payment. The BI provision of LTV is intended to grow the national economy, including growth of property credit.[659] Perry Warjiyo, Governor of BI, argued that relaxation of LTV policy is intended to provide customers or people with opportunity to own a house through mortgage.[660] He also argued that the LTV provision did not threaten the national economy, the risk of Bubble being relatively small due to growth of credit of around 8% and economic growth of around 5,1%-5,2%.[661] In addition, Filianingsih Hendarta, Assistant Governor of the head divison of the macroprudential department, argued that the relaxation of LTV provision did not lead to overpricing in property prices due to big supply and consideration of market condition.[662] In 2019, BI change the LTV provision 2018[663] with the LTV provision 2019. BI provides relaxation of LTV provision of around 85% up to 95% depending on the type of property but banks have an authority that is provided by BI provision 2019 to determine the LTV level at around 100%.[664] They must fulfil the NPL requirement, which is no more than 5%.

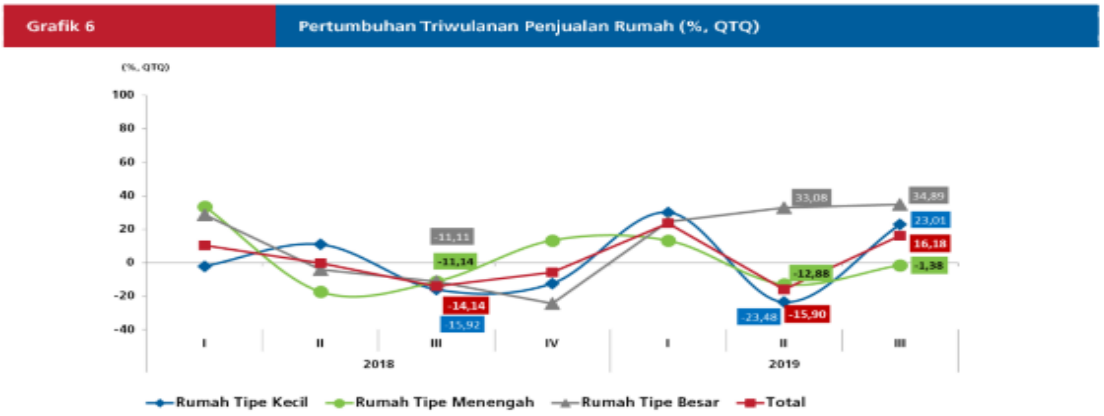
Indonesia also has different products and market from the UK. Figure 6.5.2 above shows that the development of residential property prices was always positive or above zero point between 2016 and 2019 based on a survey on the trend (changes) of yearly and quarterly percentage of index of property prices. Although housing price indices decreased from Quarter 1 2016 to Quarter II 2019 by around 1,71%, the yearly and quarterly trends of property price increased between Quarter II 2019 and Quarter III 2019. The survey suggested that an increase in property price is caused by an increase in material price and addition of property facilities.[665]

[658] HM Treasury, (November 2016) 'Consultation outcome: Financial Policy Committee powers of direction in the buy to let market' from www.gov.uk/government/publications
[659] BI provision No. 20/08/PBI/2018
[660] Fauzia, Mutia, (June 2018) 'BI longgarkan LTV, Pembeli Rumah Pertama Bisa Bebas Uang Muka' Ekonomi Kompas.com
[661] Asmara, Chandra G, (June 2018) 'BI Klaim Relaksasi Aturan LTV tak akan Ciptakan Bubble' CNBC Indonesia.com https://www.cnbcindonesia.com/market/20180629164717-17-21123/bi-klaim-relaksasi-aturan-ltv-tak-akan-ciptakan-bubble

[662] Arvirianty, Anastasia. (June 2018) 'Aturan Uang Muka Longgar, BI pede harga rumah tak melambung' CNBC Indonesia. https://www.cnbcindonesia.com/market/20180702160145-17-21453/aturan-uang-muka-longgar-bi-pede-harga-rumah-tak-melambung
[663] BI provision No. 20/08/PBI/2018
[664] BI provision No. 21/13/PBI/2019
[665] Bank Indonesia (2019) 'A survey of residential property price'

Figure 6.5.9 below reveals that although the trend in house sales on total property types reduced from Quarter 1 2019 by a little below 20% to approximately -15,90% in Quarter II 2019, the trend increased up to 16,18% in Quarter III 2019. The survey showed that there are several factors that lead to a reduction in property sales, including high interest rate, huge down payment (borrower's capital), tax concerns, and bureaucratic or permit or licence to develop land. Figure 6.5.10 shows that the proportions of sources of buying property involving credit property (owner occupied mortgage), cash in instalments, and cash in Quarter III 2019 were around 76,02%, 17,96%, and 6,02%, respectively. It could be assumed that regulatory authorities concentrate on making provisions in line with these developments. They would aim to address the concern of the huge down payment in order to increase the property credit available for homeowner mortgages. They might also have considered the fact that the housing price index always shows positive when analysing and mitigating the risks and security or safety of bank institutions if borrowers cannot repay their credit and banks have to sell the property.

Figure 6.5.9. Growth of property sale quarterly

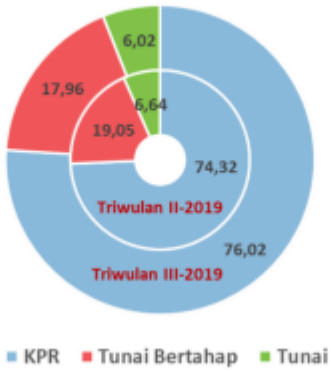


Source Bank Indonesia

Figure 6.5.10 source of constomer financing in order to buy residential property

https://www.bi.go.id/id/publikasi/survei/harga-properti-primer/Documents/Triwulan%20III%20-%202019.pdf

Grafik 12 Sumber Pembiayaan Konsumen Membeli Properti Residensial (% Konsumen Pembeli Properti Residensial)



Source: Bank Indonesia

There are potential risks of credit default, lender balance sheet concern, maturity mismatch and financial distress. An LTV level of around 0% would increase moral hazard among borrowers. They might speculate on making mortgage investments. If they cannot repay their debt, they will not feel loss. They can become homeowners without having any capital. This can increase the possibility of credit default. It is not easy to address credit default or sell the property quickly. When many credit defaults arise, this could lead to concern over the bank balance sheet and bank liquidity, and possibility of financial distress. Therefore, an LTV level of 0% could lower the bank's prudent level and increase the default probability and potentially banking shock. Gerlach and Peng, who conducted research ofn the housing market in Hongkong, revealed that the prudent level of the LTV ratio is 70%, so that if there is a sharp decline in the s real estate sector, it has less impact on the banking stability.[666]

Another risk is weak prevention provision, huge cost and instability because of the possibility of externalities that could lead to systemic risks. The growth of consumption of property credit is possibly increasing due to the LTV level being around 100% or zero capital. This encourages and increases speculation by borrowers due to their moral hazard of being able to buy a house without capital. Nevertheless, the LTV level of 100% is not followed by the CCB level, which is still around 0% as discussed above in this chapter. This weakens the safeguard or prevention aspect of mitigating risks when there are many credit defaults, which could possibly lead to externalities and systemic risk. Consequently, banks could p suffer losses and huge costs in handling such credit defaults and externalities. When the risk and costs build

[666]Gerlach, S., Peng, W., (2005) 'Bank lending and property prices in Hong Kong.' 29 J. Bank. Financ. pp 461–81

up, the possibility of instability and systemic risk also increases. Although Indonesia and the UK provisions both highlight the importance of macroprudential tools for credit, the UK provisions for credit are more comprehensive and robust than those of Indonesia.

5.4.Conclusion

This chapter considered the substantive aspects of macroprudential provision through the author's examination of Indonesia's macroprudential tools. Then, comparison was made with the UK macroprudential instruments. Next, the author concentrated on the challenges of implementation of macroprudential provision in Indonesia and the UK. There are apparent signals that the Indonesian macroprudential instruments are similar to those in the UK regulatory structure. However, there are dissimilarities within the two macroprudential normative structures. Both regulatory structures generally regulate a relatively similar proportion of CCB but they implement different levels of CCB in practice due to the potential risks that each is facing. Another difference is that the UK already regulates a sectoral specific capital buffer whereas Indonesia has not yet done so. Both the UK and the Indonesia regulatory framework mostly highlight similar leverage ratios but a significant concern is the difference in leverage levels between Indonesia and the UK. The average leverage level of Indonesia banks, at around 14,65%, is bigger than that of UK bank institutions, at approximately 3,25%. Another difference is that the UK already implements model requirements of additional leverage ratio buffer for GSIIs whereas Indonesia provisions have not yet regulated this. Both macroprudential regulatory structures mostly highlight similar obligations of long-term funding but the UK regulates more comprehensively than Indonesia, notably with clarity or transparency of items requiring stable funding or asset composition and items providing stable funding. Both macroprudential regulatory structures emphasise the importance of lending, but the UK implements instruments of LTV, LTI, DTI including ICR, whereas Indonesia employs LTV, instruments of RR plus LDR, and also the interaction of monetary and macroprudential instruments. In summary, the UK and Indonesian frameworks highlight the importance of macroprudential provisions. Their macroprudential regulatory structures are relatively similar but they have different levels of implementation of macroprudential instruments because they adjust the levels of macroprudential tools in line with their national interest, risks, banking size, and financial developments.

Chapter 6 The possibility of adopting the UK provisions into Indonesia's provisions

6.1. Introduction

From chapter two and five, the thesis discussed not only the incremental development or evolution which is related to the debate on path dependence and legal transplant but also comparative legal analysis. Path dependence appears for change or growth or progress throughout incremental development or evolution.[667] The comparison of legal analysis was used to understand the UK and Indonesia banking regulations including particularly similarities and differences of their Banking law and provisions and to see what these weaknesses or what flaws of Indonesia banking regulation which could potentially increase the possibility of bank institutions failing or to see what segments in specific concern. Legal transplantation considers path dependence as a method of illustrating the significance of legal system in the past to legal transplant.[668] Mariana Prado and Michael Trebilcock contend that path dependence could explain past legal reform failure and give several direction relating to future legal amendments.[669] It reveals what type of legal amendments is possible to be successful and what type of legal amendments is less possible to be effective. Therefore, Chapter 6, in light of previous discussions, will undertake the discussion whether the Indonesian regulatory regime may benefit from adopting the UK regulations. This involves not only an analysis of possible adoption of the components of the UK measures or provisions or law which will be used to further determine which aspects could be adopted and which could not into Indonesia banking regulations but also its impacts for a possible future scheme of banking provision in Indonesia.

6.2. The possibility of adopting the UK provisions into Indonesia provisions

This subchapter will discuss whether Indonesia should adopt the UK provisions. This discussion will start with a summary of the major differences and similarities between the two frameworks which have already been discussed in the previous chapter. In addition, this subchapter considers the potential risks and impacts that the Indonesian banking system could possibly face. The following table summarises the main areas of divergence and convergence of the UK and Indonesia regulation.

[667] Jaakko Husa, 2015. A New Introduction to Comparative Law. Hart
[668] Jaakko Husa, 2015. A New Introduction to Comparative Law. Hart
[669] Prado, M. and Trebilcock, M. 2009. 'Path Dependence, Development, and the Dynamics of Institutional Reform' 59 UTLJ 341

Table 6.2.1.1.

		Indonesia	The UK	Finding or Conclusion
Chapter 3				
Regulatory Structure	Legal base of prudential approach	The 1998 Act --- No ring fence	The Banking Act 2009 and the Banking Reform Act 2013 ---- regulate Ring Fence	1. Business transactions of Indonesia banks are likely limited or more traditional, for example, concentrating on accepting funding and supplying credit. 2. The absence of common definition or understanding of 'other form' under bank definition and lack offurther provisions or instructions or guidelines on the implementation or processes of unregulated activities could augment implicit banking risks in Indonesia. Non-bank institutions or the shadow banking system have a big possibility to compete and enter into traditional market directly. 3. Indonesia law has no ring fence, resulting in less robust protection for retail banks.
Chapter 4				

Microprudential regulation	Capital	The 11 and 34 provision 2016 --- minimum capital from 8% to 14% for different bank categories. In practice, average percentage of capital around 22%. Furthermore, capital applied to all banks and the scope does not include investment firms	Capital ratio is around 8%. Moreover, capital applied to all banks and investment companies.	1. The scope of the framework of Indonesia capital requirement is limited to banks, excluding investment firms. 2. Different capital levels in practice between the UK and Indonesia banks. Indonesia banks hold higher capital than the UK but the size of banking system in Indonesia and the risks are smaller than in the UK.
a. Capital	Credit risk – standardised approach	Yes	Yes and more comprehensive	1. Standardised model in Indonesia is simple. 2. Indonesia capital provisions have no provisions for the use of credit risk mitigation technique, treatment of securities exposures, and treatment of credit risk adjustment under the Standardised model and IRB model, unlike the UK approaches.

				3. Indonesia provisions are likely to lack comprehensive techniques for improving the application of the IRB or standardised models. There might be inaccuracy, ineffective and less optimal capital calculation using these approaches. 4. The application of standardised techniques and IRB model in Indonesia is adjusted in line with national interest. 5. Different number of provisions and titles of the capital rules which are made by IFSA or BI might lead to inconsistency, incoherence and difficulty in identifying, recognising, and understanding intercorrelated meaning and rules in different provisions, notably the 11 and 34 provisions 2016 and all the IFSA

				letters for guidance or instruction.
	IRB approach	Yes	Yes and more comprehensive	IRB model under Indonesia regulatory structure has not been developed yet. It is simple and short. There are still no further rules or guidelines or IFSA letter to regulate the implementation of IRB in Indonesia.
	The supervisory review process	Yes.	Yes and more comprehensive	1. Indonesia norms define briefly and simply the tasks and powers of supervisory authorities. 2. No technical standard assessment procedure or methodologies used for review and assessment.
	Disclosure requirement	Not yet	Yes and more comprehensive	Indonesia capital provision does not regulate disclosure requirements clearly or explicitly, but in practice, Indonesia Banking Statistic and profile report on the Indonesia Banking Industry which are made by the IFSA, not a bank institution, demonstrate the feature of disclosure requirement in line with the Pillar 3 disclosure requirements, Basel III.

b. Liquidity	LCR	Calculation of Indonesia LCR is performed by dividing HQLA by total amount of its net cash outflow, producing a positive result.	Liquidity outflows less the inflows oiquidity	**8.** 1. The meaning of LCR is less robust because it could potentially lead to or increase possibility of illiquid banks, resulting in potential vulnerabilities to liquidity runs.
Chapter 5				
Macroprudential regulation				
a. tool for capital	Countercyclical Buffer	The IFSA provision regulates the CCB level between 0% and 2,5%. However, the BI provision regulates CCB level at around 0% and, in practice, banks also hold 0% of CCB.	In practice, average level of CCB is around 2%. Also, the UK has specific CCB relating to the geographical distribution of banks' credit exposures, setting and calculation of CCB, and recognition of rates of CCB	1. CCB level and sectoral level in Indonesia reflects the condition of banks in association with growth of mortgage or property credit, property prices and smaller risk of procyclicality.

			in excess of 2,5%.	
	Sectoral Buffer	Not yet	Yes	Indonesia has not regulated sectoral buffer yet.
	Leverage Ratio	Leverage level of Indonesia banks is around 14,65%. However, foreign banks have leverage level of approximately 40%.	Average level of leverage is approximately 3,25%	1. The degree of leverage in Indonesia might not represent the condition of its banking system. Indonesia's banking sector is small but holds high leverage whereas in the UK banks' leverage is associated with their size. 2. Leverage in the Indonesia banking system is likely dangerously high as Indonesia banks face high risk of credit default and potentially high possibility of bank failures.
b. tool for addressing maturity mismatch	NSFR	Unlike the UK, Indonesia has not yet described items needed specifically and explicitly. Indonesia norms merely include simple reporting,	The UK imposes items needed for obligation of reporting on stable funding[670]	1. Indonesia norms merely include simple reporting, notably information about calculation of stable funding and analysis of development of stable funding 2. Indonesia NSFR provisions, unlike the UK provisions, lack components of clarity or transparency of items requiring stable

[670] Article 427 and Article 428 CRR.

		notably information about calculation of stable funding and analysis of development of stable funding		funding or asset composition and items providing stable funding.
c. Tool for lending	Tool for limiting build up of boom	Indonesia uses mainly LTV and instrument of RR plus LDR, and also the interaction of monetary, particularly interest rate and macroprudential instruments, specifically LTV instrument because of different products and market. In 2018, the LTV level was around 100%, but in 2019, it	The UK employs tools of LTV, LTI and DTI including ICR. The LTV ratio was approximately 88,5% in Q3, 2019. Furthermore, there are no aggregated sets of information on the ICR's evolution over time. Nevertheless, it is common practice for banks to require the monthly rental	1. Indonesia uses mainly LTV and instrument of RR plus LDR, and also the interaction of monetary 2. Unlike the UK, banks supply credit only for homeowner occupied mortgages, not for buy to let residential lending. 3. Assuming that although Indonesia has no provisions which regulate LTI and DTI specifically, banks have internal policies in order to mitigate default risk and increase prudent level, resulting in no standardisation, poor underwriting standard of credit and default repayment. 4. LTV level in Indonesia of around 100% might have

		was approximately 85% to 95%.	income on the house of at least 1.25 or 125% of monthly payments of residential lending interest rate when employing an interest rate of 5%.[671]	impact, notably moral hazard of borrower, or borrower speculation, although there are further requirements that would need to be fulfilled.

6.2.1.1. Ring Fence

Indonesia and the UK provide different response to the level and direction of development of their banking system and to mitigate their risks. Indonesia banks had not by 2017 implemented the ring fence whereas the UK bank institutions had already done so. Although they have a different approach, it is better for Indonesia to not adopt ring fence currently due to several reason. Firstly, in relation to chapter 2, the proportion and average growth of total OFIs to total financial assets are approximately 9% and 0% respectively. Secondly, it could augment not only direct cost to Indonesia bank institutions and regulatory bodies but also indirect cost which potentially reduce long run GDP level but the IFSA should conduct a research to analyse and mitigate the possible impact. It might also influence the competition which provides a competitive benefits to BUKU 4 and BUKU 3 banks over smaller bank institutions, such as BUKU 1 and BUKU 2 banks because of possible aspects of the perceived implicit guarantee. Furthermore, it might potentially provide the impact which could influence a soundness, safety and stability of banking system in Indonesia, distribution in the market, distortions of business borrowing, effect of equality, effect of resource and expected finance on the IFSA, and effect on the labour market, high operational cost and potential reduction of

[671] HM Treasury, (November 2016) 'Consultation outcome: Financial Policy Committee powers of direction in the buy to let market' from www.gov.uk/government/publications

profits which need to be conducted a comprehensive research by the IFSA. Moreover, there is no law and provision and no further improvement which provide a base or principle to facilitate implementation of ring fence, except performing amendment of banking law which will be discussed a further in next chapter. Therefore, ring fence is better to not be implemented in Indonesia.

6.2.1.2. Capital

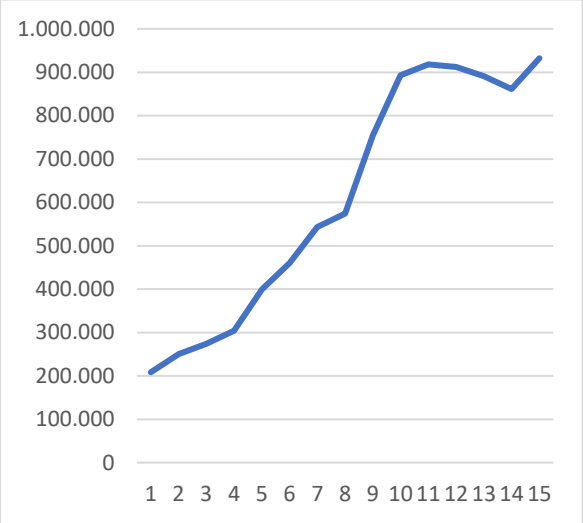
The UK and Indonesia have different levels of capital to respond their risks. Although their capital provisions regulate at a similar level, Indonesia banks, in practice, hold higher capital levels, at around 22%, compared to around 17% for UK banks, such as HSBC. However, it is better for Indonesia banks to not reduce their level close to the UK capital level due to high RWA and high leverage. The different capital level will be discussed in the following below.

Indonesia banks might gain benefit from adopting a capital level close to the UK capital level. In other words, they would derive several benefits from reducing their capital level. Studies have submitted a variety of understandings or information relying on the methodology adopted, funding types and their samples. In the US, Kashyap et al provided estimates for a 10 percentage point increase in the capital requirement, with borrowing costs faced by banks' customer rising by around 25 to 45 basis points. [672] Cummings and Wright demonstrated that a 5 percentage point increase in the capital requirement would cause a rise of 20 basis points annually in the borrowing costs faced by bank customers. [673] If there are regulatory changes in Indonesia, they might have an effect on economic output. Assuming a reduction of capital around 5 percentage points, this could result in reducing borrowing costs faced by bank customers by 20 basis points annually. Based on IBS for December 2017, Indonesia bank institutions hold loans or distribution of funding which are valued at Rp. 7,177,051 (Billion rupiah). Once a 20 bps reduction in funding costs is entirely passed on to bank customers, this indicates that they would save or not pay about Rp. 14,354,102 (million rupiah) per annum. Furthermore, Gambacorta and Shin reveal that a 1 percentage increase in the capital level is closely related to a reduction in the average funding cost of bank debt of approximately 4 basis points.[674] In addition, BIS BCBS reveal that a 100 bps rise in the capital requirement will lower

[672] Kashyap, A. K., Stein, J. C. and Hanson, S. (2010) 'An analysis of the impact of "substantially heightened" capital requirements on large financial institutions' Working Paper, University of Chicago
[673] Cummings, J., R., and Wright, S. (2016) 'Effect of Higher Capital Requirements on the Funding Costs of Australian Banks' The Australian Economic Review, vol. 49, no. 1, pp. 44–53
[674] Gambacorta, Leonardo and Shin, Hyun song. 2016. Why Bank Capital matters for monetary policy. BIS Working Papers No. 558.

the GDP level by approximately 0,6 percent. [675] Assuming that there is a 5 percent reduction in capital level, this would result in a rise in GDP level of approximately 3 percent a year and 15 percent in 5 years. Based on figure 6.2.1.8 below, in 2016, Indonesia's GDP was around $ 932,259.- (Billion Dollars) and was expected to rise to approximately $139,383.85 (Billion Dollars) in 2021.

Figure 6.2.1.8



Source: World Bank

Table 6.2.1.9 average probability of a banking instability in terms of capital to RWA.[676]

Capital to Risk-Weighted Assets Ratio, %	2	5	6	7	8	9	10	11	12	13	14	15	20
BCBS(2010)			7.2	4.6	3.0	1.9	1.4	1.0	0.7	0.5	0.4	0.3	
Miles et al. (2012)	13.8	7.0					2.5					1.2	0.4

Source: World Bank

However, a reduction of capital level would provide several impacts. Firstly, this might lower banks' ability to survive financial crises and increase the fragility of bank institutions. Beltratti and Stulz reveal that higher pre crisis capital level augmented the performance of bank

[675] BIS (2010) 'Assessing the Macroeconomic Impact of the Transition to Stronger Capital and Liquidity Requirements' Macroeconomic Assessment Group Final Report.
[676] Martynova, N. (2015) 'Effect of bank capital requirements on economic growth: a survey' De Nederlandsche Bank. DNB Working Paper No. 467, p. 15

institutions during the instability in 2008. [677] Diamond and Rajan argued that higher capital level is vital in lowering fragility of bank institutions. [678] In addition, table 6.2.1.9 above reveals that banks with lower capital would have higher probability of banking instability. Assuming a reduction of capital level to 15 percent, Indonesia banks would have 0,3 probability of a banking instability. Furthermore, a reduction of capital in a short time period without implementing appropriate measures, as will be discussed in the next subchapter 7.3 below, could also lead to other problems or risks. For example, Indonesia banks have a big possibility of unexpected losses. A reduction in capital level would lower the capability to safeguard banks from unexpected losses in their investments. If there is an unexpected loss due to the possibility of inaccuracy and uncertainty of capital calculation or true banking risks, Indonesia banks do not have enough sources of funding to cover these unexpected losses and could potentially become troubled banks. Therefore, Indonesia's regulatory authority should consider many aspects, such as RWA level, proper amount of capital level, or leverage level, and NPL level if they plan to lower the capital level.

Indonesia banks could not adopt the UK capital level due to high RWA and high leverage which might potentially contribute to be a bank failure. However, Indonesia should learn from the UK experience in the late 1980s.[679] Bank institutions stimulated rapid change and innovation to expand rapid lending but lower lending standards. They changed their business model to take more risks in order to boost their profits. Consequently, banks were building up excessive risks in their balance sheets. Therefore, Indonesia should not decrease capital if they have excessive risks and also other indicators such as high RWA and high leverage have not been addressed. It is important to note that Indonesia banks should not lower the capital level if they still have a high RWA, high leverage and excessive risks. There are potential risks to the health of banking institutions, stability and the huge cost of handling many troubled banks. Furthermore, the adoption of capital level directly in a short period of time without proper measures is a significant matter for supervisory authorities seeking to maintain banking soundness, safety and stability.

Furthermore, in relation to discussion in Chapter 3, particularly the case of Century Bank, it could be assumed that Indonesia has a weakness of the part of capital provisions, specifically

[677] Beltratti, A. and R.M. Stulz (2012) 'The credit crisis around the globe: Why did some banks perform better?' Journal of Financial Economics 105, 1-17.
[678] Diamond, Douglas W., and Raghuram G. Rajan (2000)'A Theory of Bank Capital' Journal of Finance 55, 2431–2465.
[679] Balluck, K. and Galiay, A. (2016) 'The small bank failures of the early 1990s: another story of boom and bust' Bank of England. Quarterly Bulletin Q1 . P. 47-48

supervisory review regime and explicitly disclosure requirement. The case of Century Bank reveals the importance of supervisory review regime, such as disclosure requirement on the competent authorities including due diligence relating to criteria for credit granting, retention of loss exposure and additional risk weight, and disclosure requirement. Bank Indonesia provided untruthful or inappropriate information or data on the it's up to date condition.[680] Furthermore, difficulty of analysis of minimum capital calculation based on the research of Kurniasari reveals concerns relating to accuracy data, trust of data, unstandardized data, and no consistency of bank financial report, and potentially uncertain quality of result or uncertain result of capital calculation.[681] Moreover, poor asset quality and a decline in bank capital due to asset default which were categorised as an illiquid asset could not be detected or identified effectively and comprehensively by Bank Indonesia. It also did not monitor effectively product and hidden risky activity of Century Bank. Therefore, the case of Century Bank showed the importance of disclosure requirement on the competent authorities to minimize and prevent the similar case to recur in the future.

Furthermore, the majority of Indonesia banks hold capital of around 22%, which is a sufficient amount, but the case of a failing bank, such as Century Bank shows a much lower amount of bank capital. There are several possible assumptions regarding these cases. First, the IFSA knew of these cases from the national press. Second, it recognised their concerns and wanted to hide these cases. Otherwise, it identified and monitored these cases, but it did not address their concerns quickly. Finally, as has been argued in relation to the IFSA, it did not perform supervisory review and evaluation appropriately. Assuming that supervisory review and evaluation works well, Indonesia banks generally hold 22% capital, so if there is a small reduction of this capital level, such as 0,5% or 1%, the supervisory authority should recognise and identify the reason for this capital reduction. The reduction of capital level from 22% to around 11% should take a relatively long time period of time and the supervisory authority has time to monitor banks closely and attempt to address their concerns, unless there are significant unpredictable causes, such as macroeconomic condition or serious fraud. However, the cases of these three banks hit the headlines of national newspapers. This indicates that supervisory review was not working well in Indonesia. It could be assumed that the IFSA lack clear

[680] N. Lumanauw, (2018) 'Sri Mulyani: Bank Century Bukan Bermasalah Likuiditas Tetapi Bangkrut' Beritasatu.com
http://www.beritasatu.com/hukum/181583-sri-mulyani-bank-century-bukan-bermasalah-likuiditas-tetapi-bangkrut.html

[681] Kurniasari, W., Juni 2012, "Analisis Neraca Kasus Pemberian Dana Talangan (Bailout) Bank Century", Jurnal InFestasi, Vol 8 No. 1, p. 97-106

measurement procedures, transparency and accountability. Indonesia might gain benefit from adopting parts of the CRD, such as general criteria and methodologies in their review and evaluation. Otherwise, Indonesia capital provisions might regulate the disclosure of comparison of the methods adopted between authorities and banks. Regulation of these disclosure requirements by the competent authorities explicitly under Indonesia capital provisions could provide more powers to perform monitoring closely, could avoid assumptions to merely follow or validate the reports provided by banks, could avoid potential supervisory capture of assessment. Agoraki et al contend that power of supervision has a direct effect on not only risk of credit but also the loans quality and the ratio of capital.[682] Fernandez and Gonzalez contend that more authority on official supervisory bodies might lower behaviour of risk taking from the manager view.[683] On the other hand, Indonesia banks might feel they have little room to grow or maybe introducing comprehensive rule-based provisions will increase the costs. However, the positives of imposing disclosure requirements on the competent authorities might outweigh the negatives. The IFSA could monitor closely and ensure the health, soundness and safety of bank institutions. Furthermore, it could minimise recurrences of the same concerns, particularly lack of capital. It could recognise, identify or detect bank concerns, notably lack of capital, accurately and quickly, so it could have enough time to address the bank's concerns and prevent the bank from becoming headline news in the national newspapers.

Another aspect of capital relates to disclosure requirements. The CRD regulates this requirement, whereas Indonesia capital provisions do not regulate this requirement explicitly. The cases of the Century Bank, Muamalat Bank and Bukopin Bank indicate that capital provisions, specifically disclosure requirements, are ineffective in Indonesia. If they had been effective, the concerns of these banks or real condition of each bank could have been identified and monitored quickly by either the IFSA or investors. Indonesia might benefit from adopting specific disclosure requirements under Article 144 CRD, notably general criteria and method, total capital amount held by each bank, including either own funds or the consolidated basis of the parent institution. This could enhance harmonisation of information about bank condition specifically. Furthermore, the market or investors could access data on particular banks, so they could analyse the real condition, real data, the soundness, health and safety of a bank's condition. As a result, each bank would attempt to perform better due to the tight supervision

[682] Agoraki, M.-E.K., Delis, M.D. and Pasiouras, F. (2011), "Regulations, competition and bank risk-taking in transition countries", Journal of Financial Stability, Vol. 7 No. 1, pp. 38-48, doi: 10.1016/j.jfs.2009.08.002
[683] Fernández, A.I. and Gonzalez, F. (2005), "How accounting and auditing systems can counteract riskshifting of safety-nets in banking: some international evidence", Journal of Financial Stability, Vol. 1 No. 4, pp. 466-500.

by the IFSA or the market. Moreover, similar cases to those of these three banks could be avoided. Assuming that the market or IFSA will recognise any small reduction of their capital, such as 1,5%, banks will attempt to address this small reduction quickly and enhance their performance in order to maintain and strengthen trust of customers, investors, and the supervisory body.

Several analysis provided two reasons in which disclosure of information might weaken stability of banking system. Firstly, rising information disclosure might lead to depositors to exaggerate or overreact to adverse data regarding other bank institutions. [684] Furthermore, disclosure of information involve indirect and direct costs, and also might carry implication to lower margins of profit. [685] However, several researchers contend that rised transparency contribute to the stability of banking system considerably by a) imposing bank institutions to implement or adopt more prudent behaviour of risk taking, b) boosting oversight of supervision, c) enhancing monitoring, d) lowering asymmetries of information[686] Beck, Demirguc-Kunt and Levine contend that accurate disclosure of information cause reduction in bank official corruption. [687] Nier and Baumann contend that bank institutions which implement disclosure of information possess higher buffer of capital and lower threat. [688] Therefore, the IFSA might consider to improve facets of capital provisions, notably supervisory review regime including disclosure requirement on the competent authorities and explicitly disclosure requirement, but it need to conduct a further research of these potential impacts

6.2.1.3. CCB and sectoral buffer

Another difference between Indonesia and the UK relates to the sectoral buffer. The UK has already implemented it whereas Indonesia has not yet done so. Both countries face difference potential risks as already discussed in previous chapters, but Indonesia should learn from the UK experience of handling the growth of credit in specific sectors. Either every bank business or all business sectors using banks' credit in Indonesia have potential concerns. The collateral that is generally provided by debtors to gain banks' credit is property. It is assumed that the

[684] Chen, Y. and Hasan, I. (2006) The transparency of the banking system and the efficiency of information-based bank runs, Journal of Financial Intermediation 15, 307–331.
[685] Hyytinen, A. and Takalo, T. (2002) Enhancing bank transparency: A re-assessment, European Finance Review 6, 429–445.
[686] Demirgu¨xc-Kunt, A., Detragiache, E., and Tressel, T. (2008) Banking on the principles: Compliance with Basel Core Principles and bank soundness, Journal of Financial Intermediation 17, 511–542.
[687] Beck, T., Demirgu¨xc-Kunt, A., and Levine, R. (2006) Bank supervision and corruption in lending, Journal of Monetary Economics 53, 2131–2163.
[688] Nier, E., and U. Baumann. 2006. "Market Discipline, Disclosure and Moral Hazard in Banking." Journal of Financial Intermediation 15 (3): 332–361. doi:10.1016/j.jfi.2006.03.001.

property has positive value. In other words, when it has to be offloaded or sold, it can still be used to cover or minimise the potential bank losses. There are several possibilities for credit failures in a specific sector in Indonesia, such as wholesale or processing industry or property.[689] Banks might also sell or offload the collateral to mitigate potential liquidity concerns or banking loss if resolution of credit cannot be reached. There are difficulties relating to selling collateral due to decrease in asset price and liquidity concerns. Therefore, the provision of sectoral buffer should be created or added into capital provision by the regulatory authority to provide a legal basis when needed to either restrict the growth of credit exposure or mitigate potential risks in a specific sector. However, the level of the sectoral buffer should be determined by further research and the supervisory authority also ought to establish clear measures in each level of the sectoral buffer.

Indonesia might face possible credit booms, variable property prices, and financial distress in the financial cycle because of government policy or authority provision, credit growth, and property prices. The percentage of property sales shows an increase based on figure 6.5.9 in chapter 6 above. Dell'Ariccia emphasised that crises can relate not only to matters of credit growth but also fixed exchange rate regimes, based on a study of 175 credit booms in 170 countries.[690] Borio reveals that peaks in the financial cycle that could be characterised by credit booms, credit growth and price of property, in the tradition of von Mises, Hayek and Minsky, can be related to banking crises.[691] There are potential negative externalities and huge costs involved in handling systemic risk. Therefore, Indonesia banks should either increase the level of CCB or adopt a lower CCB level than the UK in line with the risks the Indonesia banks are facing, such as potentially excessive credit growth in the property sector or other sectors that use property as collateral.

Indonesia should raise the CCB level due to several reasons. Firstly, there has been a significant increase of property sales because of government policy or BI provision. Secondly, although Indonesia investment banks have enjoyed less development than the UK investment financial institutions and the majority of Indonesia banking market is retail banks, debtors generally provide a property as their collateral. When they fail to repay their credit, banks might offload or sell their collateral to obtain cash and maintain the bank's liquidity. Thirdly, banks'

[689] Indonesia Financial Service Authority (Otoritas Jasa Keuangan "OJK"), (2017) 'Report of Indonesia Banking Profile' Quarter 2

[690] Dell'Ariccia Igan, D., and Hui Tong (2012) 'Policies for Macrofinancial Stability: How to Deal with Credit Booms' IMF Staff Discussion Note 12/06

[691] Borio, Claudio (2012) 'The Financial Cycle and Macroeconomics: What have we learned?' BIS Working Paper 395.

NPL levels in Indonesia are still relatively high, although still under the maximum limit, but might not reflect the true level. The CCB level in Indonesia should be adjusted in line with the banking structure and market through stress testing with clear guidelines, calculation or methods. Even though the stress test approach and the aim of CCB level are time variant, the CCB level is activated if and only if banks have excessively significant credit growth.[692]

Indonesia banks might gain benefit from internalising externalities if they augment the CCB or sectoral levels. However, Francis and Osborne demonstrate that there was a reduction of lending in 2002 of approximately 1.2% due to an increase in capital requirement of around 1 percent.[693] Furthermore, the UK study performed by Noss and Toffano revealed an estimated 4,5% reduction in lending because of an increase of 1% in capital requirement.[694] Assuming, based on this study, Indonesia banks might face a 9% reduction in lending, approximately Rp.645,934.59 (Billion rupiah),[695] if they increased their CCB level to 2%, close to the UK level, this would impact on Indonesia's economy, and it could be assumed that this impact would outweigh the benefits.

However, based on analysis of other components, such as capital, leverage level and data of price property, Indonesia banks should not strengthen the CCB level, but they still should perform stress testing to consider and analyse the CCB level comprehensively. Indonesia banks still have sufficient capital and, therefore, the increase of CCB level might not be effective. However, if a deleveraging scheme has already been performed by Indonesia banks and they still have a higher capital level, this might lead to increase in loan growth and total lending. Stress testing might then be needed and limitation of the growth of credit or lower lending due to the possible occurrence of 'boom'

It is one of the effective prudential instruments which is available for protecting banking's resilience. It not only could give a reason for adjustment in the shock distribution which may hit the financial system but also could comprise the mechanisms of propagation which augment the shock's impact on the economy. Furthermore, prudential bodies could maintain a chosen resilience level by adjusting the scenarios.[696] In addition, regarding the CCB level concerns,

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[692] Schoenmaker, D. (2013) 'An integrated Financial Framework for the Banking Union: Don't Forget Macro Prudential Supervision.' European Commission. Economic Papers 495. ISSN 1725-3187 https://ec.europa.eu/economy_finance/publications/economic_paper/2013/pdf/ecp495_en.pdf

[693] Francis, W. and M. Osborne (2009), Bank regulation, capital and credit supply: measuring the impact of prudential standards, FSA Occasional Paper 36.

[694] J Noss and P Toffano, 'Estimating the impact of Changes in Aggregate Bank Capital requirement during upswing' Bank of England Working Paper No 494 March 2014.

[695] Based on data of IBS for December 2017, loan or distribution of funding are valued at Rp. 7,177,051 (Billion rupiah)

[696] Cecchetti, S. and Schoenholtz, K. (2016) 'Transparent stress tests?' moneyandbanking.com.

the Indonesia supervisory authority could use stress testing to obtain broader and deeper analysis of the future health of banking institutions under dissimilar situations or scenarios[697] to assess or determine the CCB level. They could consider the possibility emphasised by Greenlaw et al of identifying the capital injection required to recapitalise the system to avoid a credit crunch.[698] Therefore, the stress test could assist not only in crisis management but also resolution.

However, it does not recognise the build-up of vulnerabilities. It becomes part of the concern. It calms either market participants or policy makers into a false sense of security. There are two primary parts of the stress test, the scenario and the model.[699] First, it is associated with scenarios. Design of scenarios can be hard or complicated, particularly in good times. There are two challenges associated with the formulation of the stress test scenario. They include not only incorporating events which are not included in the historical relationship but also additional variables into the supervisory scenario. Second, the methods employed to simulate the volatility could hardly provide a realistic picture of the dynamics of financial volatility. It is difficult to capture the non linearities included.[700] Furthermore, if performed ahead of the distress it does not recognise severe weaknesses or vulnerabilities. It can be run accurately once aggressive risk-taking is at its highest and prudence is at its lowest.[701] Moreover, there are several concerns relating to the stress test process.[702] The assumptions of macroeconomic indicators regarding the scenarios which these financial institutions might face or handle are criticised for being too confident or optimistic, which further complicates the test validity problem.[703] Secondly, the several scenarios of liquidity ratio and capital adequacy which are employed in the stress test process are criticised as being too tolerant, and possibly creating a false positive.[704] Furthermore, it is difficult to apply the stress test due to false starts, delays and complaints regarding cost plaguing the process.[705]

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[697] Gohari, Behzad and Woody, Karen E. (2014) 'The new global financial regulatory order: can macroprudential regulation prevent another global financial disaster?',p. 50-51

[698] Greenlaw, D, A Kashyap, K Schoenholtz and H Shin (2011) 'Stressed out: macroprudential principles for stress testing', paper presented at the US Monetary Policy Forum, New York.

[699] Borio, C, Drehmann, M., and Tsatsaronis, K. (2012) 'Stress testing macro stress testing: does it live up to expectation?' Monetary and Economic Department, BIS Working Paper No. 369.

[700] Juselius, M and M Kim (2011) 'Sustainable financial obligations and crisis cycles', Helsinki Economic Centre of Research Discussion Papers,313

[701] Ong, L, and M Cihak (2010) 'Of runes and sagas: Perspectives on liquidity stress testing using an Iceland example', IMF Working Paper,WP/10/156

[702] Borio, C., Drehmann, M. and Tsatsaronis, K. (2011) 'Stresstesting macro stress testing: does it live up to expectations?' BIS

[703] Sarah Pei Woo (2011) 'Regulatory Bankruptcy: How Bank Regulation Causes Fire Sales' 99 Geo. L.J. 1615

[704] Sarah Pei Woo (2011) 'Regulatory Bankruptcy: How Bank Regulation Causes Fire Sales' 99 Geo. L.J. 1615

[705] Trefis Team (2014) 'Fed Stress Test For Banks: Rationale, Results & Implications' Forbes

Indonesia banks should not increase the CCB level currently as they still hold sufficient capital and also have not addressed their basic concerns, such as leverage level, high RWA and NPL level or other problems. In other words, Indonesia banks could adopt the UK CCB level in a certain period of time in the near future once they have addressed these concerns and they have a well-designed blueprint and legal base of development of the banking structure and market through investment banks, notably securitisation. For example, Indonesia's supervisory authority has clear schemes to augment banking development through investment banks in 5 years. Banks are encouraged to create innovative products, but they have to provide the infrastructure for development of the banking market, such as securities provision. It could be used by Indonesia banks to mitigate the risks of credit by transforming either illiquid asset or risks, notably mortgage into marketable instruments through capital markets to obtain cash. Indonesia regulatory authorities have to provide clear guidelines or instructions, standardisation and provisions of securities and also ring-fencing which will be discussed below. An increase in CCB level would be ineffective if banks have not tackled the above basic concerns and not encouraged the development of the banking market and products, notably securitisation through the capital market, as this could potentially inhibit the development of Indonesia banks. Indonesia banks should not adopt the UK CCB level directly without stress testing and a clear blueprint, considering the banking structure and market, economic condition and further study.

Therefore, Indonesia banks cannot currently adopt the UK CCB level as it is too high level for Indonesia banks, which experience different economic conditions and credit growth; also, it could augment banking costs in Indonesia which are already higher due to high interest rates. As a result, the Indonesia banks might be less competitive and could face difficulty in supplying credit. It will be hard to find good debtors who can satisfy bank requirements for getting credit as Indonesia banks will determine strict requirements for debtors.

6.2.1.4. Leverage ratio

Another difference is in relation to implementation of the leverage ratio. The UK has a lower level, approximately 3,25%, than the Indonesia level, around 14,65%. The high leverage level of Indonesia banks, particularly among foreign banks, reflects a rise in the amount of possibly high-risk credit and capital amount, although there are several risk diversifications and several assumptions that have already been discussed in Chapter 5. The ratio of the percentage capital ratio and leverage level differs in Indonesia from the UK. The Indonesia ratio is 1,5 from capital

http://www.forbes.com/sites/greatspeculations/2014/03/24/fed-stresstest-for-banks-rationale-results-implications/

22% and leverage 14,65%. The ratio of Indonesia's foreign banks is 1,33 from capital 53,03% and leverage 40% based on figure 6.5.4 in Chapter 6. This shows that foreign banks in Indonesia are riskier than other Indonesia banks. In contrast, the UK ratio is 2,46 from capital 8% and leverage 3,25%. In July 2019, the CET1 capital ratio of the UK banks was around 15.4%,[706] a rise in the UK ratio of 4,74%. From this it could be assumed that the UK banking system has more soundness and safety, while Indonesia's banking structure is fragile even though Indonesia banks have high capital ratios.

Indonesia has a potential risk of financial instability and allocative efficiency impact due to high leverage which augments the risk probabilities deriving from debt contracts[707]. Avgouleas and Cullen argued not only that high leverage contributes to asset bubbles and collapse but also procyclicality worsens the contagion risk in the banking system and worsens the risk transmission from the banking system to economy.[708] Furthermore, it leads to less efficient decisions of investment[709], resulting in not only resources misallocation but also underinvestment because of debt overhang[710] that lowers the efficiency of bank lending. Therefore, Indonesia should adopt the UK leverage ratio. A decrease in Indonesia leverage ratio could augment safety and soundness of the Indonesia banking system and minimise the risk of Indonesia banks.

Indonesia banks might benefit from lowering the risks of default and systemic meltdown through adjusting or lowering their leverage level, close to the leverage level of the UK banks. However, Indonesia might face several concerns regarding lowering their leverage levels. Firstly, it lowers economic and allocative efficiency. When bank institutions supply more credit and finance more worthwhile projects, the capital investment level in the economy will rise.[711] Secondly, it could provide adverse effect on credit flows and consequently growth of Indonesia's economy. It is vital to the development of Indonesia's banking system and the growth of Indonesia's economy as the majority of funding sources to serve long term

[706] Bank of England (2019) 'Banking Sector regulatory capital' https://www.bankofengland.co.uk/statistics/banking-sector-regulatory-capital/2019/2019-q1

[707] Turner, A. (2010) 'Something old and something new: Novel and familiar drivers of the latest crisis.' Speech, European Association of Banking and Financial History, May 21

[708] Avgouleas, Emilios and Cullen, Jay,(2014) 'Excessive Leverage and Bankers' Pay: Governance and Financial Stability Costs of a Symbiotic Relationship' Columbia Journal of European Law, Vol. 21, No. 1, 2015, Available at SSRN: https://ssrn.com/abstract=2412869 or http://dx.doi.org/10.2139/ssrn.2412869

[709] Kashyap, A K, Tsomocos D P, and A P Vardoulakis (2015) 'How does macroprudential regulation change bank credit supply?' revision of National Bureau of Economic Research working paper 20165.

[710] Myers, S. (1977) 'The Determinants of Corporate Borrowing' Journal of Financial Economics 5: 147–75

[711] Arcand, J.-L., E. Berkes, and U. Panizza. (2012) 'Too Much Finance?' IMF Working Paper No. 12/161

investment purposes comes from banks which act as credit intermediators. The banking reforms under Basel III would cause an annual GDP decrease of 0,3 percent.[712] Consequently, based on figure 6.2.1.8, Indonesia might face a potential GDP reduction of approximately $2,796.777 (Billion dollars) annually. Therefore, the Indonesia authority should prepare or plan proper strategy to minimise the impact of deleveraging, which will be discussed further in next chapter, if they are going to encourage banks to lower their leverage level and maintain the health and stability of the whole banking system.

Therefore, Indonesia banks in practice should lower the leverage level or adopt the UK level. They hold too high a leverage level, particularly in the case of foreign banks, and they have little capability of accessing funding sources to cover the possibility of losses. There is a high risk of bank failure if they do not attempt to decrease the level. Haldane showed that pre crisis capital ratios performed worse in predicting which banks would be involved in the GFC 2008, but leverage ratio provides a good indicator of bank failure.[713] An attempt to make changes might affect many factors, notably, management, the way they operate their businesses, capital, and disclosure. Indonesia banks could not adopt the UK leverage level directly in a short period of time as the level is too low for Indonesia banks and Indonesia still has all the basic concerns that have not been handled properly. Although Indonesia banks hold higher capital than the UK banks, the ratio between Indonesia capital and leverage level is lower than the UK ratio. Mitigating the risks of bank failure and maintaining banking stability should be the priority of the supervisory authority. It is important to note that either the adoption of the UK leverage level or a reduction of Indonesia leverage level could be achieved in a medium or long time, such as 5 years or 15 years if the supervisory authority provides a clear blueprint of the development of the banking structure, specifically strategy for deleveraging or restructuring programmes of leverage reduction, if the impacts of all basic concerns have been mitigated, and if well-designed measures are in place, which will be discussed further in next chapter.

6.2.1.5. Tools for Lending

Another difference is in relation to tools for lending. The UK tools involve LTV, LTI and DTI, including ICR, while Indonesia instruments include LTV and tools of RR plus LDR, and also the interaction of monetary, particularly interest rate and macroprudential instruments, specifically LTV tools. As already discussed in Chapter 6, the two countries have different

[712] Institute of International Finance (IIF). (2011) 'The Cumulative Impact on the Global Economy of Changes in the Financial Regulatory Framework.'

[713] Haldane, A. G. (2011) 'Capital Discipline. Remarks Based on a Speech Given at the American Economic Association' Denver, Colorado. January 9. (www.bis.org/review/r110325a.pdf).

implementation of these instruments as they face different concerns. Nevertheless, Indonesia should consider the possible adoption of components of the UK approaches.

Indonesia could adopt general components of the provision of DTI/LTI, adjusted in line with the condition of Indonesia's banking structure and Indonesia banking principles. Research needs to be conducted on technical provision, notably calculation, to adjust it in line with the characteristics or condition of the country and provide clear measurements. This could augment the transparency and standardisation of levels of these provisions. All banks would have the same levels of these provisions, notably maximum level of DTI, but they could determine or change the maximum level that is regulated by these provisions in order to restrict credit growth and mitigate the risk of default repayment. For example, the guidelines of implementation of DTI/LTI regulate maximum DTI for civil servants who do not have other funding sources from business, at around 40%. Banks could change the level of DTI to approximately 30% when facing a concern of high NPL in their institutions. This could prevent the growth of credit and provide credit for good debtors who meet affordability criteria while they are attempting to handle their concerns.

Indonesia could not adopt the UK ICR as the two countries have different housing markets. In the UK, there was a significant increase in the private rented sector (PRS) from 10% of all dwellings in 2002 to 19% of dwellings in 2013.[714] The UK implements buy to let lending, while Indonesia does not. This poses risks to stability of the financial system, the risk of development of the house price cycle and also the possibility of high indebtedness in these interactions.[715] Although Indonesia and the UK have different mortgage products, this does not mean that Indonesia could not adopt the UK ICR concept. Indonesia should consider the application of ICR for other types of credit for business sectors that pose risks to stability of the banking system and are sensitive to distress in the economy, specifically from distress to interest rate Taking the ratio of the expected income from the sale of products to the expected credit interest payments (assuming an appropriate interest rate) over a given time period as an example, determining the percentage level needs further research. The restriction of ICR can lower the possibility of a debtor employing other sources of income to satisfy repayment of their credits if there is an increase in interest rate. Before making decisions, Indonesia needs to consider and conduct research on the potential implementation of ICR, including definition of which

[714] HM Treasury, (November 2016) 'Consultation outcome: Financial Policy Committee powers of direction in the buy to let market' from www.gov.uk/government/publications
[715] HM Treasury, (November 2016) 'Consultation outcome: Financial Policy Committee powers of direction in the buy to let market' from www.gov.uk/government/publications

instruments to implement, implementation and scope of the instruments, procedural requirements, consultation and analysis of cost and benefit, and interaction with other provisions, notably tax.

The mining and gas, processing industry, and construction business sectors in Indonesia have relatively high NPL.[716] Furthermore, processing industry, and wholesale and retail trade have big concentration and amplification of credit.[717] These business sectors might be mainly vulnerable to considerable increase in interest rate. This is because transactions on raw material for processing industry and import of goods for wholesale and retail trade from overseas typically use dollars. In other words, the sources of funding for all these sectors originate from foreign debt. Consequently, the interest rate is likely to increase gradually over time or significantly when there is a recession. However, study of the possible implementation of the ICR is not a priority project. In other words, Indonesia might consider further research and this application after handling basic problems already discussed above.

6.2.1.6. LCR and NSFR

Indonesia banks have relatively high liquidity buffers. Goodhart contended that a bank can use a buffer in conditions of pressure instead of fire-selling its illiquid assets.[718] High liquidity buffers are important for Indonesia banks not only to encourage the scheme of deleveraging but also prevent banking failure and contagion. Their effectiveness is similar to that of capital in avoiding banking failure and contagion in the occurrence of fire sales.[719] The provisions of liquidity and capital could assist in both the management of the associated decline in lending quality and the build-up of aggregate excess liquidity.[720] These tools could also be used to lower the possibility of inefficient bank runs.[721] However, there are differences between the two countries relating to liquidity which include either LCR or NSFR. The UK approach is that HQLA could cover net liquidity outflows, while Indonesia uses the calculation of Indonesia LCR with dividing HQLA by the total amount of its net cash outflow. The UK approaches ensure banks have enough money to maintain liquidity whereas Indonesia's method creates the

[716] The IFSA, 2017. 'Indonesia Banking Statistics' vol 15 No.07 Otoritas Jasa Keuangan
[717] The IFSA, 2017. 'Indonesia Banking Statistics' vol 15 No.07 Otoritas Jasa Keuangan
[718] Goodhart, C. (2010) 'The future of Finance: The LSE Report' Chapter 5 in A. Turner and others, London School of Economics and Political Science.
[719] Cifuentes, R., Ferrucci, G., and Shin, H. (2005) 'Liquidity risk and contagion' Journal of the European Economic Association 3 556-566
[720] Boissay, F., and F. Collard (2016) 'Macroeconomics of Bank Capital and Liquidity Requirements' BIS Working Paper No. 596
[721] Kashyap, A K, Tsomocos D P, and A P Vardoulakis (2015) 'How does macroprudential regulation change bank credit supply?' revision of National Bureau of Economic Research working paper 20165.

possibility of bank illiquidity. Indonesia banks have potential vulnerabilities to liquidity runs. Indonesia could adopt the UK approach to avoid illiquid banks directly, although the banking structure in the two countries is not similar. The UK approach that could be adopted relates to a basic technique to ensure bank institutions remain liquid in which HQLA could cover net liquidity outflow. Therefore, Indonesia should adopt the UK provisions to ensure that Indonesia banks have enough HQLA to cover net liquidity outflow.

Moreover, Indonesia could also adopt the items requiring stable funding. The Indonesia supervisory authority should prepare guidance, instruction or a system through their provision or instruments for standardisation of specific items requiring stable funding and should analyse them accurately. This can assist them to make standardised assessment of banks' assets comprehensively in order to recognise or identify the quality of banks' assets and to avoid overreliance on funding from short term wholesale markets. Reporting either liquid assets or items requiring stable funding could assist Indonesia supervisory authority to monitor and evaluate Indonesia's bank asset composition. They could introduce new provision or guidelines when the system provided signals of undiversified funding. Knowing the composition of Indonesia's banking assets can enable formulation of clear objectives of reporting and enhance harmonisation and accuracy of the required data. Furthermore, it could also assist Indonesia supervisory authority to make a road map or blueprint for development of Indonesia's banking structure. The blueprint could provide for clear measurements in line with the development of Indonesia's banking structure.

There is a potential risk if the Indonesia supervisory authority does not make changes or amendments. They cannot monitor and assess diversification of lending and funding accurately due to no clear standardisation of items requiring stable funding. Diversified funding and lending could avoid vulnerabilities to either liquidity runs or shocks. Indonesia could learn from the UK bank experience, particularly the failure of Northern Rock. It has overdependence on funding from short term wholesale markets, resulting in failure to repay lenders. It means Indonesia should attempt to lessen overreliance on single funding sources through diversified funding in order to safeguard against vulnerabilities to shocks. Furthermore, undiversified lending could also be a concern in the lending decisions of small banks. Logan reveals that during 1990, failed bank institutions were more deficient in lending diversification than bank institutions which survived.[722]

[722] Logan, A (2000), 'The early 1990s small banks' crisis: leading indicators', *Bank of England Financial Stability Review*, Issue 9, December,pages 130–45,
available at www.bankofengland.co.uk/archive/Documents/historicpubs/fsr/2000/fsrfull0012.pdf.

6.2. The possible impact of adoption of the components or levels of the UK provision

Although adopting the UK prudential provisions is advisable, it is submitted that the possible adoption highlights several implications which Indonesia bank institutions could potentially experience as a result of application or non-application of the UK prudential provisions. While the impacts for Indonesia bank institutions might be predictable or unpredictable, it is argued that this research's uniqueness lies in its discussion of this subject as at present, no study or analysis has dealt with the impact of possible adoption of components and levels of the UK provisions into Indonesia's provisions. These impacts will be analysed in the following sub chapter 7.4.

6.2.1. *Possible impacts for Commercial bank institutions should Indonesia implement the components and levels of the UK provisions.*

The adoption of the components or levels of the UK prudential provisions would to a considerable extent rely on the legislative or legal procedure presently under Indonesia's jurisdiction. Indonesia might need to amend its banking provisions prior to adopting or transposing the components or levels of the UK provision. Indonesia has implemented Basel 3, which has also been already implemented by the UK into its banking provisions, particularly the facets of capital and liquidity already discussed above, and there is no doubt that the existing legal structure in Indonesia would enable the smooth adoption of some of the UK regulatory structures. If transposition becomes a reality, it is expected that the UK would assist Indonesia with the acquisition of technical and human knowledge or expertise. Some expected implications will be discussed in the following subsections.

6.2.2. Risk or threat to the existence of Indonesia bank institutions

High leverage level in Indonesia shows that Indonesia bank institutions would need to boost their capital, specifically equity capital so as to either achieve an ideal or proportional ratio between capital and leverage or create a better banking structure. Several bank institutions, specifically BUKU 3 or 4 or larger ones, might be in a position to boost capital, but Indonesia bank institutions which are not able to find new capital or augment their capital quickly might be forced to enter into either acquisition or merger, causing the threat or loss of their individual uniqueness.

6.2.3. Restructuring of the legal entity and business model reorganisation

For Indonesia bank institutions where fulfilling the higher capital requirement is a concern and which choose not to enter into acquisitions or mergers there might be other possibilities available to them.

6.2.3.1. Issuance of new equity[723]

Indonesia bank institutions might issue shares to either new investors or existing shareholders which might be the most ideal way of boosting equity capital. However, this option might cause unhappiness among existing shareholders since it risks the negative impact of lowering their existing share value. Such unhappiness should be avoided if they consider the possible advantage of extra protection afforded by their higher ranking assets as investors or creditors should insolvency arise.

If Indonesia bank institutions decide against this possibility and choose other means for boosting their capital level, they might be exposed to the risk of their high level of leverage potentially worsening.

6.2.3.2. Rise in retained earnings

Indonesia bank institutions might attain or increase higher level of capital through the application of certain severe measures, specifically, lowering or delaying dividend payments to shareholders and augmenting lending rate margins to enhance profit levels, as well as introducing charges or fees to be paid by either borrowers or bank customers for particular banking service transactions. Furthermore, the reorganising and reform of the strategy of operational banks to boost efficiency might provide the general outcome of enhancing their profits.

However, possible impacts of implementation of the severe measures above could include the departure of existing bank customers and tarnishing of the reputation or image of bank institutions due to the loss of current or potential investors or customers.[724] In contrast, a rise in retained earnings through enhancing undertaking risky activities might be achieved through higher profit margins but might increase the vulnerability of bank institutions.

6.2.3.3. Reduction in size of loan portfolios

The size of loan portfolios might be lowered by banks through removing their risky assets. Bank institutions might sell assets which are not tied down or effective or have higher risk weighting as loans. This indicates that the bank institutions would not provide or reserve more capital for their assets that have higher risk.

6.2.4. Business models of Indonesia bank institutions.

[723] This might not be a possibility for bank institutions that are no longer lucrative institutions, particularly where non lucrative bank institutions might struggle to entice potential shareholders or investors.

[724] Deferral or decrease of dividend payment, among other measures, are likely to describe the representation or appearance of a struggling bank institution regarding which either potential or existing customers may seek to circumvent any loss or costs.

The implementation of the UK provisions would affect the Indonesia business patterns. Although fundamental changes to the traditional role of bank institutions would be unlikely, bank institutions might need to overhaul their services completely. The extent of the impact on the business patterns of Indonesia bank institution would rely on whether Indonesia banks entered into universal banking or not as those which chose to do so would still have to maintain their cost effectiveness and profitability. They also might have to attempt to overhaul the structure of their business model to reach this outcome. A reform in business pattern can potentially involve not only the development and introduction of new banking products and services, risk management and re-pricing of current services and products, but also cost cutting measures to implement strategy for the increasing capital requirement to address the high leverage level. Thus, Indonesia banks would need to focus their efforts on those areas which would be most likely to make or maximise profits or income for the bank.

However, Indonesia banks should adopt the best and most appropriate business pattern with considering the requirements of the UK provisions and Basel III if they choose to adopt the possible UK approaches. It is suggested that the optimal pattern would not include universal banking practice as Indonesia still has no robust legal base for this, except for the items under priority 1 in subchapter 7.3 above that have already been fully developed or implemented by the Indonesia regulatory authority. The second reason is that although universal banking has developed significantly in Indonesia, the UK banks have more experience and a bigger system than Indonesia. In other words, UK universal banking has cutting edge technology, a far better system, and regulatory system so the practice of universal banking in the UK cannot be compared or adopted directly without further research and consideration.

In cases where Indonesia does not prohibit the practice of investment or universal banking, the UK approach, particularly ring fencing of all investment banking activities, would be a welcomed proposal for Indonesia's regulatory authorities to consider. This would ensure that all risk coming from highly risky activity or investment banks would be controlled effectively, thereby lowering the possibility of contagion of banking threats.

6.2.5. Impacts of reforming business patterns

6.2.5.1. Profitability

Shifting banks' business patterns would certainly influence their profitability in various ways because bank institutions mostly generate their income from their traditional role that creates different margins or interest rates between funding and credit supply.

Indonesia bank institutions mostly have high interest rates and characteristically short- term funding. Therefore, the implication for bank profitability mostly relies on the sensitivity of their

interest levels, in particular the lending rate, and the impact of economic development on lending rate, or the capital levels that Indonesia banks maintain.

6.2.5.2. Lending

As already discussed above, Jackson argued that lowering lending is used primarily by banks to respond to toughened capital requirements.[725] However, for banks in different jurisdictions, specifically Indonesia and the UK, there might be different implications of changes of capital requirements on bank lending, but this relies on whether the nature of the effect being considered is micro or macro prudential and also whether bank institutions are consolidated or merged or not. Quansah argued that there are several factors which require to be considered including[726]:

1. Whether credit is supplied to either an individual debtor or corporate sector.
2. The type of business conditions which exist when the supervisory authority introduces the changes of capital requirement.
3. The banking size in terms of total assets.
4. Whether credits are supplied that are unsecured or secured.
5. The level of the applicable capital buffer percentage.

Although loans provided by Indonesia bank institutions characteristically have very high interest margins, it is argued that with concerns of NPL and leverage level, any future rise in capital requirement through adopting the UK provisions or requirements will cause potentially higher interest margins to be paid by debtors or borrowers. Banking rules concerning the use of collateral to safeguard bank funding for credit supply are also likely to be revised or changed to maximise potential bank profitability, or the possibilities available when there is credit default.

6.2.5.3. Cost

Bank institutions would generally maintain their cost-effective business patterns intentionally to retain or boost their previous profit levels. However, Eckhart Tolle argued that

[725] Jackson, P., Furfine, C., Groeneveld, H., Hancock, D., Jones, D., Perraudin, W., et al. (1999) 'Capital requirements and bank behavior: The impact of the Basel accord.' BCBS Working Paper No. 1, April
[726] Quansah, Josiah G. D.G (2014) 'Capital Adequacy under Basel 3: its implication for large Commercial Banks in Ghana and Kenya' The University of Leeds. P. 223-224

in order to implement cost cutting measures, bank institutions might need to ensure that their operational procedures are not inefficient regarding not only their data management system but also their IT[727].

Therefore, it is suggested that bank institutions in Indonesia, when considering the cost impact of adopting the UK measures or requirements or provisions, might need to implement particular policies or cost cutting measures in order to minimise the cost of these possible adoptions. The costs which might arise following the application of either legislation or the compliance with provisions can be taken as an example. Any cost cutting measures that might be implemented by Indonesia banks should consider either common customer demography or the needs of potential customers in Indonesia.

6.2.6. Impacts of possible adoption of the UK provision on financial stability.

Possible adoption of the components of the UK provisions or the level of the UK measures or requirements or provisions has to ensure and augment the existence of more secure, stable, soundness, safety and resilient banking industries in Indonesia. It is suggested that in order to ensure the achievement of this objective, Indonesia's supervisory authority needs to conduct research on the impact of the possible adoption of the UK measures or requirements or provisions on the overall financial stability of banks and banking systems.

An analysis of whether adopting the components or these levels of the UK provisions or measures to augment financial stability would rely to a large extent on whether the UK provisions or measures lower systemic risks in financial systems. Although it is outside the remit of this thesis to study and analyse the extent to which these possible adoptions could contribute to the improvement of stability of Indonesia's financial system, the author identifies that the ratio between capital and leverage level is insufficient to ensure stability of the financial system. Therefore, it has been identified that capital and leverage levels and measures under the UK provision could play a significant role in mitigating or minimising systemic threats within the financial system in Indonesia.

It is argued that the impact of such a crisis or negative implications of the systemic risks in Indonesia could be worsened due to the lack of macroprudential provision, which could boost the possibility of NPL and externalities, causing excessive considerable bank exposure through risk of concentration and lack of sufficient capital buffer. Therefore, it is argued that the UK

[727] Eckhart Tolle (2014) 'The most rigid structures, the most impervious to change, will collapse first – Structure Evolving Banking Regulation' Chapter 2, KPMG p18-27.

macroprudential provisions would intensify the stability of the financial system in Indonesia, thereby lowering the possibility of banking instability.[728]

The fact that bank institutions in Indonesia hold higher capital level than those in the UK does not diminish the need to possess a sufficient capital structure to cover banking risks. This is because Indonesia banks have higher leverage levels, particularly foreign banks, and the role of foreign banks in Indonesia has increased significantly. It is argued that although the percentage of assets of foreign banks was around 18% of total assets in 2017,[729] foreign banks in Indonesia represent or could become a source of contagion of systemic risk through assets of their cross border financial activities.

It is suggested that the impact of adopting the components of the UK measures or provisions or the levels of these implementations on financial stability in Indonesia could be augmented further by an extension or addition of the principle of BCBS on interconnectedness and systemic risk to a domestic level. Therefore, it is also suggested that there is a need to extend requirements of domestic systemically important banks (D-SIB)[730] to foreign banks in Indonesia to provide more capital to enhance loss absorbency due to risks of high leverage.

Although foreign banks in Indonesia might not be considered as global systemic banks, they might affect the domestic banking system due to their cross-border activities. It is argued that the existence of their ability emphasises the importance of collaboration between the FSB and BCBS to extend requirements for D-SIB to be implemented in Indonesia. Therefore, it is argued that the supervisory authority in Indonesia should recognise bank institutions as D-SIB by using 12 principles under its structure,[731] to use as a foundation for categorising banks as D-SIB, which might have the implication of D-SIB failure in Indonesia. The level of D-SIB failure in Indonesia will rely not only on bank size and the infrastructure of the banking institution but also on the complexity level and interconnectedness associated with the cross-border activities. It is suggested that the implementation of D-SIB structure for foreign banks in Indonesia ought to fulfil the requirement of Higher Loss Absorbency under its structure. It is also suggested that the IFSA, which has powers to extend D-SIB requirements, should supervise this implementation. Besides, it is argued that there is a need for consistency in the implementation

[728] It is argued that no jurisdiction, including Indonesia or the UK, could ever eliminate the possibility of banking instability completely but could minimise it ultimately.
[729] The IFSA, 2017. 'Indonesia Banking Statistics' vol 15 No.07 Otoritas Jasa Keuangan 197
[730] BCBS (November 2011) 'The assessment methodology rules for globally systemic important banks (G-SIBs). http://www.bis.org/publ/bcbs207.htm
[731] BCBS (October 2012) 'A Framework for dealing with DSIB' BIS.

of its structure as this could intensify bank resilience in Indonesia, which at the same time would not lower the competitiveness of foreign bank institutions in Indonesia.

6.3. Conclusion

This chapter considered the possible adoption of the components of the UK measures or provisions or law and its impacts for a possible future scheme of banking provision in Indonesia. These main facets, which are discussed from Chapter 2 to Chapter 6, were integrated and shown through a simple table which summarized the findings. The findings was used to analyse what components of the UK measures or provisions or law which could be adopted and which could not into Indonesia bank regulations. The analysis of these components include ring fence, capital, LCR and NSFR, CCB and sectoral buffer, leverage level and tools for lending. There are apparent signals which Indonesia could adopt from general UK provisions, but it also could not implement directly parts of the UK regulatory structure associated with technical rules and measurements due to considerations including bank conditions, the national economy, and Indonesia's banking structure. It is therefore suggested that adopting the UK prudential provision is advisable.

It is to consider not only a possible future development of the regulatory and institutional development and way forward in Indonesia but also the limits of legal transplantation.

Chapter 7 Possible future development and way forward

7.1. Introduction

From chapter two to six, the thesis discussed the appearance path dependence for change or growth through incremental development or evolution, comparative legal analysis, and legal transplant or possible adoption of the components of the UK measures or provisions or law into Indonesia banking regulation. However, the transplantation might face difficulties relating to thick and thin notions. Oona Hathaway contends that the historical path bringing about each new verdict or result straightforwardly influence or form which outcome or result in particular and systematic manner.[732] Consequently, the thought of transplantation of the rule of law into new framework is inevitable to face obstacles or difficulties. Therefore, chapter 7, in light of previous discussions, will undertake an analysis of possible future developments, way forward and the limits or obstacles of legal transplant considering thick and thin conceptions.

The thin notion normally contains formal or instrumental facets. It does not consider the ideology of politic, the democracy level, and the liberalism level. The thin conception basically restricts actors of State, gives practical procedures for law making, and need stability and consistency, with provisions being forced and by and considerable received by the public.[733] Conversely, the thick conception on the rule of provision is considered as a segment of social and political philosophy which deal with concerns or issues which exceed consistency, processes, limits, enforcing and stability.[734] It normally contains comprehensive thought relating to specific types of human right conceptions, shape of government and economic structures.[735] Essentially, it binds law and morality of politic together whereas the thin conceptions attempts to keep or consider them unconnected or separate.

The appearance of path dependence through incremental development or evolution revealed that Indonesia sees a shift slowly moving away from a traditional model based on deposits and loans, towards a business model that resembles that of large UK banks (wholesale funding and securitised bonds). This might highlight the potential flaws or regulatory concern of Indonesia banking regulation associating with not only controlling, supervising, regulating closely the bank activities relating to the growth of wholesale funding designed at the relationship of sale and repurchase agreement or bond or securities or commercial paper but also maintaining the

[732] Oona Hathaway, 'Path Dependence in the Law: The Course and Pattern of Legal Change in a Common Law System' (2001) 86 Iowa L Rev 601, 659.
[733] Randall Peerenboom, China's Long March toward Rule of Law (CUP 2002) 65
[734] Randall Peerenboom, China's Long March toward Rule of Law (CUP 2002) 65, 71
[735] Randall Peerenboom, China's Long March toward Rule of Law (CUP 2002) 65, 3.

soundness, safety and stability of banking system. There needs to be better control and supervision of bank activites, better quality and adequate capital and liquidity, lower leverage level, harmonization of information, better information, adequate supervisory review, better engagement with financial intermediary institutions and stricter internal controls. Therefore, the UK experience might assist to minimize the risks relating to bank activities, such as wholesale funding and securitized bond, and improve supervisory review, definition of liquidity, disclosure requirement and lower leverage.

Drawing upon the UK banking regulation framework, the thesis would submit in this chapter that the thin notion through the IFSA provision is required to perform legal reform or transplant for the Indonesia banking regulation including banking law and prudential provisions, specifically capital and liquidity provisions. Regulating banks, particularly in Indonesia is a complex concern, dynamic and challenging as it needs to consider path dependent aspects through incremental development or evolution. Matter of local circumstances and solutions require to be adapted or tailored to these circumstances.[736] This denotes that one size fit all kind of scheme for reform of the rule of provision ought to not be employed as it is unsuccessful to deem path dependent aspects.[737] If the legal amendments or reforms attempt to become successful, they require to consider the adaptive behavior of legal culture.[738] It denotes a system particular mode in which practices, manner, value and legal institutions are incorporated into the legal system functioning.[739] Indonesia sees a shift slowly moving away from a traditional model based on deposits and loans, towards a business model that resembles that of large UK banks (wholesale funding and securitised bonds). With comparing the UK banking regulation, there are several flaws of Indonesia regulatory structure relating to Indonesia banking law and provisions. Firstly, the meaning of 'other form' which is included in the term 'bank' is not clear and has the absence of a common definition or understanding of "other form". This absence allows either non-bank institutions or the shadow banking system to make and develop various products of financial innovation and also allows them to grow, mostly unregulated, and to provide competition with bank institutions directly in their part of the traditional market which might contain implicit threats or risks. Secondly, flaw of definition 'liquidity' might enhance moral hazard of the shareholders or Indonesia banks to maintain liquidity which cannot

[736] Prado, M. and Trebilcock, M. 2009. 'Path Dependence, Development, and the Dynamics of Institutional Reform' 59 UTLJ 341
[737] Jaakko Husa, 2015. A New Introduction to Comparative Law. Hart, 141
[738] Prado, M. and Trebilcock, M. 2009. 'Path Dependence, Development, and the Dynamics of Institutional Reform' 59 UTLJ 341, 358-64
[739] Jaakko Husa, 2015. A New Introduction to Comparative Law. Hart. P. 3-4

cover the net liquidity outflow and cannot ensure banks are liquid institutions. This might be incentive for bank institutions to maintain either poor quality asset or illiquid asset which is hard to be used to obtain cash quickly or is difficult to be converted into a liquid asset, like the case of Century Bank. Thirdly, inadequate supervisory review, particularly no aspect of disclosure requirements on the competent authorities might pose risks, notably wrong decision or strategy and the concern of moral hazard and inconsistency of supervisory reviews and evaluation and measurements, no transparency and accountability, uncertain quality of result of capital calculation, supervisory capture of assessment, and lack of clear measurement procedure. Finally, although the Indonesia Banking Statistic which includes quantitative terms and reports on the profile of Indonesia's banking industry which includes qualitative demonstrate the feature of disclosure requirement as being in line with Pillar 3 disclosure requirements, Basel III, Indonesia has not regulated this into the IFSA provision. To minimize these risks, there need to be legal reforms through the IFSA provisions to provide further design of the term 'bank' particularly further definition or understanding of "other form" and to regulate or restrict activities of bank institutions clearly. The further reform of IFSA provisions also are needed to design and improve the part of capital and liquidity provisions including comprehensive supervisory review regime particularly the disclosure requirement on the competent authorities, explicitly disclosure requirement and liquidity definition. The IFSA provision is important to maintain Indonesia banking regulation when there is a difficulty to reform Indonesia banking law relating to the thick conception.

7.2. The possibility of amendment of the term 'Bank'

In relation to discussion in Chapter 3, subchapter 3.2.1 and 3.2.2, Indonesia might need to design the term 'Bank' in line with the level and direction of the development of banking system due to unclear meaning of 'other form'. This might minimize or mitigate either potential hidden risky activities or particular unregulated activities which are performed by Indonesia bank institutions. Generally, the Banking Act 1998 has already provided the term 'bank' but it is argued that it does not reflect the level and direction of development of Indonesia banking system. In relation to section 2.3.3 in Chapter 2, there is a positive growth of business model in broad activities that resembles that of large UK banks, such as wholesale funding and debt securities. Therefore, the banking Act 1998 might need to be redesigned and amended in order to not only accommodate or facilitate the development of Indonesia banking system but also to promote banking stability in Indonesia through mitigating possible hidden risky activities or specific unregulated activities.

The possible change of the term 'bank' might face difficulties which is relating to thick notions which binds law and morality of politic together. The design of new term 'bank' must be performed by amendment of new banking Act or banking reform because if they are made by IFSA provision, there will be a conflict of interest between the IFSA provision and the Banking Act 1998. Furthermore, plan of new banking reform should be performed by regulatory authority or government to fulfil the need for a quick and proper response to changes in the market and financial conditions to protect banking from failure. The change of the term 'bank' could be merely performed by the reform of Indonesia Banking Act through potential two ways which might be considered by Government. Firstly, it might concentrate on amending or changing the old term 'bank' with new term 'bank' which focus on activities of bank institutions in order to accommodate, encourage and reflect the level and direction of development of Indonesia banking system. Otherwise, Indonesia law might drop or erase 'the other form' which is not clear in the term 'bank'. The bank activities might be limited, merely distributing funds and accepting funding. The possible amendment of banking regulation including either regulating broad activities or dropping 'the other form' might amplify bank exposure, which might influence the bank's balance sheet relating to asset connectedness and liability connectedness. If it is dropped, there will be additional to the aspect of banking act 1998 associating with providing limitation of banking activities clearly, completely and comprehensively.

However, the IFSA provision might be used to provide further explanation of definition or understanding of 'other form' in term 'bank' in case of concerns of banking law reform which is hard to deal with due to politics, law and long procedure. The IFSA provision does not mean that it is used to substitute or amend Indonesia banking act but it is used to provide further clarity or provision of banking activities which could be performed by Indonesia banks and not. It not only should prevent or restrict risky activities of Indonesia banks which is prohibited and threaten the soundness, safety, and stability of banking system but also control, supervise, regulate closely the bank activities relating to the growth of wholesale funding designed at the relationship of sale and repurchase agreement or bond or securities or commercial paper. Fernandez and Gonzalez contend that strict restraints on activities of a bank institution are not ineffective at lowering risks of banks.[740] Furthermore, further study signifies that its restraints are merely not ineffective at managing risks once aspects of both auditing requirements and

[740] Fernandez AI, Gonzalez F (2005) How accounting and auditing systems can counteract risk-shifting of safety nets in banking: Some international evidence. Journal of Financial Stability 1(4):466–500

disclosure of information are poorly developed.[741] If risks of activities of business model, particularly wholesale funding designed at at the relationship of sale and repurchase agreement or bond or securities or commercial paper are mitigated comprehensively and properly, it should contribute to protect banks from failure and potential increase stability of banking system.

Regulatory bodies, such as the IFSA, Bank Indonesia and IDIC will socialize the plan of banking reform including the scheme of the term 'bank' to all stakeholders. They would explain the background to the design of amendment of banking law, involving estimation of the benefits and cost of its proposal, unless in its view of evaluation or assessment or review is irrationally feasible or practicable. The proposal, direction, strategy, justification and assessment of the regulatory bodies, such IFSA, Bank Indonesia and a copy of document research and financial stability report would also be placed before debating the document or going through legislative procedure in the House of Representative.

The plan or proposal of Banking Act 1998 reform including scheme of amendment of the term 'bank' has several limitations. Firstly, its cost will be expensive. Regulatory bodies will need to spend a lot of fund to conduct research, pay particular expert or scientists and socialize its plan while bank institutions have to provide and spend a lot of cash to adjust their business model. Secondly, the plan will limit or restrict banking activities. It will influence their profit and competition. Furthermore, they might face greater or strong competitions when offering their products and services. The process of amendment of banking Act 1998 will be the long and time-consuming procedures. For example, the draft of its amendment has already been published since around ten years ago but until now there is no clear information about the certainty of its draft being the new banking reform. The proposal or draft or document of its amendment including the choice to include techniques that would allow the insertion or addition of primary changes in the existing banking act 1998 will be debatable or going through legislative procedure in the House of Representatives.

7.3. Part of capital and liquidity provision : Disclosure and supervisory regime and liquidity definition

In relation to discussion in Chapter 3, 4 and 6, Indonesia might need to design and improve the part of capital and liquidity provisions including comprehensive supervisory review regime, explicitly disclosure requirement and liquidity definition. Although the study does not conduct

[741] Pasiouras, F., Gaganis, C. Zopounidis, C. 2006. The impact of bank regulations, supervision, market structure, and bank characteristics on individual bank ratings: A cross-country analysis. Rev Quant Finan Acc (2006) 27, p.409

a research completely of all cases of failing banks in Indonesia to provide justification completely to the lack of these legal regime, based on the discussion of these chapter, the legal reform of the part of these provisions might assist to minimize or mitigate the risks of potential failing bank, like Century Bank case which revealed the possible concern of illiquidity, inaccuracy data, doubt of data, unstandardized data, and no consistency of bank financial report, and potentially uncertain quality of result or uncertain result of capital calculation but also disclosure requirement and inadequate supervision relating to either no technical criteria, untruthful reporting and methodologies being used for review and evaluation; or lack of clear measurement procedure. Furthermore, the development of risky activity in Indonesia will need a stong, close or strict supervision performed by the IFSA. Therefore, Indonesia legal regime particularly the parts of capital and liquidity provision need several changes or additional provisions to mitigate or minimize the possible concerns and a potential failing bank.

As already discussed in Chapter 4, subchapter 4.3.1.1, 4.3.1.4, 4.3.1.5 and 4.4, the framework of Indonesia capital provision involves several preliminary considerations but it does not highlight the importance of supervisory review. Furthermore, it comprises models of supervisory review including ICAAP, SREP and early intervention of supervision but it does not prescribe the process of supervisory review explicitly and no disclosure requirements on the competent authorities. In addition, Indonesia does not yet have provisions which regulate disclosure requirements explicitly but the Indonesia Banking Statistic which includes quantitative terms and reports on the profile of Indonesia's banking industry which includes qualitative both demonstrate the feature of disclosure requirement as being in line with Pillar 3 disclosure requirements, Basel III. Moreover, Indonesia liquidity provision has already provided the defition of liquidity but it might potentially facilitate or encourage bank institutions to maintain liquidity outflows more the inflow liquidity. Otherwise, it might enhance moral hazard of the shareholders or Indonesia banks to maintain liquidity which cannot cover the net liquidity outflow and cannot ensure banks are liquid institutions.

The disclosure requirement on the competent authorities, such as due diligence relating to the risks of a securitisation, criteria for credit granting, retention of loss exposure and additional risk weight, and disclosure requirement will be additional to the capital provision, particularly the frameworks of the 11 provision 2016 and the 34 provision 2016. Furthermore, the minimum result of the Indonesia LCR calculation, 1:1, not merely positive will be additional to the definition of liquidity provision. Otherwise, the definition of liquidity provision will be changed with liquidity outflows less the inflows of liquidity. This shows that the sum of the values of liquid assets could cover the net liquidity outflows. The IFSA will add these aspects of capital

and liquidity provisions in an approach that aims mitigate or minimize the possible concerns and a potential failing bank.

The IFSA will socialize or distribute the new provisions of capital and liquidity and provide particular time to Indonesia bank institutions in order to adjust their business with a new IFSA provisions. It would explain the background to the additional parts of these provisions, involving estimation of the benefits and cost of its provisions, unless in its view of evaluation is irrationally feasible. The direction, strategy or the choice to include techniques that would allow the insertion or addition or primary changes in the existing provision would be placed without the document being debated or going through legislative procedure in the House of Representative to provide proper and quick response to changes in the market and financial conditions to prevent Indonesia banks from failure. The IFSA will explain to Indonesia bank institutions how they would apply its approach or direction or strategy and also might issue a recommendation on the implementation timing alongside its approach or direction.

The new reform definition of liquidity should ensure that covered institutions are liquid institutions with adequate liquid assets as the sum of the values of liquid assets could cover the net liquidity outflows (liquidity outflows less the inflows of liquidity). The new reform of capital provisions including supervisory regime and disclosure requirement should enhance transparency which might contribute to the stability of banking system and accountability in order to minimize occurrence of abusive practices. It should also decrease bank official corruption, harmonize information and lower threat. Furthermore, there are several researches which highlight the benefits of these facets of capital and liquidity provisions. Fernandez and Gonzales denote that the significance of disclosure, involving both accounting and auditing could possibly lower bank risk taking. [742] They also demonstrated that a more strict disciplinary supervisory capacity over action of management seems to be effective or worthwhile in decreasing risk in countries which pose low auditing and accounting requirements. It could be assumed that the risks of not only possible growth of risky activities, notably insurance or securities, equity investment but also the similar case of Century Bank which highlighted no harmonisation of information or inaccuracy data which incentives bank institutions to provide the possibility of untruthful reporting to the IFSA might be able to be minimized or mitigated. It is expected that bank institutions in Indonesia will attempt to improve and promote bank transparency and the IFSA will have the common methodologies and criteria to evaluate

[742] Fernandez AI, Gonzalez F (2005) How accounting and auditing systems can counteract risk-shifting of safety nets in banking: Some international evidence. Journal of Financial Stability 1(4):466–500

compliance which need to be performed by Indonesia banks, such as due diligence relating to the risks of a securitisation, criteria for credit granting, retention of loss exposure and additional risk weight.

Furthermore, the amendment of liquidity definition is importance to ensure that liquidity outflows of Indonesia bank insitutions will be less than the inflow of liquidity and thereby expected to minimize moral hazard and potential risk of shareholders or banks which attempt to avoid the law or sanction or fine or punishment when they are going to be failing bank or bank failure. Golin contends that bank institution safeguards prudently and properly against risk of liquidity which would not own adequate assets, notably cash or funding to fulfil their obligation. [743] A bank institution might be a failing bank when they do not have funding or required liquidity to satisfy its obligations.

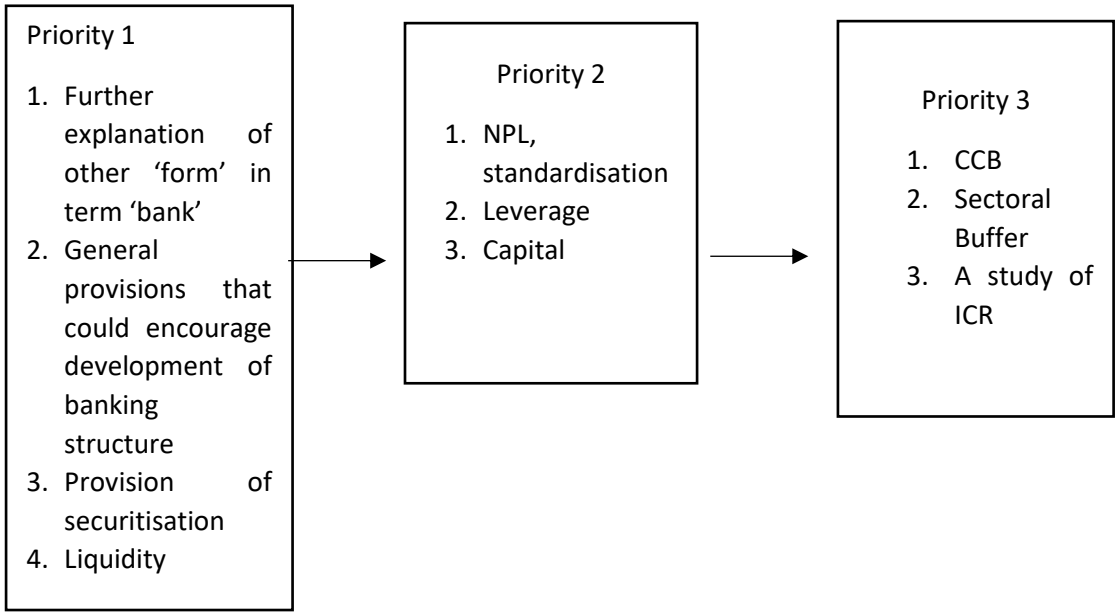
The plan of the change of IFSA prudential provisions, particularly liquidity and capital provisions has several limitation which are relatively similar to the limitation of proposal of Banking Act 1998 reform. These implications include potentially rising cost in the practice of real resources for the bank institutions and regulatory authority, potential concerns of slow development of banking business and the possible movement of activity to the centre where provisions are more lenient.

7.4. The possible reform of Indonesia banking provisions

BI and IFSA should arrange to make resolutions collaboratively in line with their tasks. Their provisions should not overlap or regulate relatively similar substantive facets. For example, BI would regulate CCB and sectoral whereas IFSA would concentrate on bank capital ratio. They have to set out clear objectives and more detail, have clear measures in place make provisions effectively and efficiently. They should prioritise resolving the basic concerns. This subchapter will discuss the possible reform, progressing from priority 1 to priority 3.

[743] Golin J (2001) The Bank Credit Analysis Handbook: A Guide for Analysts, Bankers and Investors. John Wiley & Sons (Asia) Pre LtdFotios Pasiouras · Chrysovalantis Gaganis · Constantin Zopounidis

Table 7.1.3



Priority 1 relates to amendment or introduction of general provision, including further explanation of other 'form' in term 'bank', provision of securitisation and amendment of liquidity provisions. Indonesia's regulatory authorities have to make provisions that would encourage the banking system's development. They can consider adopting components of the provisions from other countries, notably the UK that has, similar path dependence through incremental evolution from 2012 to 2017, experience and similar regulatory structure. The potential adoption of general provisions should be in line with the condition of Indonesia banks, Indonesia banking principles and written details. Therefore, although there is a need for further research in these areas, such a study would take a year or two years. It is important to note that the aim of study should be to boost the particular provisions to resolve several possible concerns, notably inaccuracy, standardisation, uncertainty, criteria and issues of transparency, clarity and disclosure which have already been discussed above. However, introduction of new provisions or amendments would increase not only the possibility of inefficiency of the financial system, but also increase cost and possibly reduce competition and the pace of financial innovation

The possible adoptions could be started by considering the option to recast techniques that would allow the insertion or addition of primary changes into existing provision without debating the document or legislative procedure through the House of Representatives. This could be performed through the provisions of IFSA or BI. In other words, introducing

provisions should not be reliant on amendment of the Indonesia Banking Act 1998 due to several factors, notably the long time period and political concerns. Furthermore, the description of a bank under the Indonesia Banking Act provides possibility to engage in risky activities or make financial innovation. The IFSA provision could be used as an alternative to provide further clarity or provision of banking activities which could be performed by Indonesia banks and not. Moreover, the Act of IFSA 2011 provides the legal base to encourage stable and continuous banking development,[744] organise an integrated regulatory and supervisory system[745], and perform tasks for regulating and supervising bank institution, capital market, insurance and other financial institutions[746]. Taking disclosure or securities provisions as an example, disclosure and transparency could augment the informational efficiency that would encourage an increase in the daily volume of trading. The traders generally ensure that prices of the various securities reflect all available information. Therefore, it has been argued that this could encourage or assist planning of securities development to boost bank capital. This could also prevent excessive resources from being based on speculation as distinct from raising capital because wholesale customers are mostly financially aware, and have enough knowledge, information, awareness, skill and expertise to analyse the bank quality.

IFSA should arrange to make or facilitate provisions of securities. These provisions could provide a legal base for developing banks, notably securities, as well as mitigating the risks of banking institutions through transferring risk via investment banks. Relying on a clear legal base and instruction for securities banks could mitigate their risks by transferring them to the capital market through investment banks. They also could perform plans certainly and safely in order to lower leverage and increase capital if the supervisory authorities include these schemes in their blueprints. The author argues that Indonesia's regulatory authority should consider the following factors in order to develop securitisation of assets:

1. Providing infrastructure for the provision of securitisation, notably the Act and provisions. If passing the Act would take a long time, the regulatory authority could make basic provisions for the legal base, notably definition, requirement or criteria of bank which could perform securitisation, and clear procedure or instructions.
2. Making and strengthening facilities and infrastructure which could boost efficiency of information, notably disclosure.

[744] Article 4 the Act of IFSA 2011
[745] Article 5 the Act of IFSA 2011
[746] Article 6 the Act of IFSA 2011

3. Providing legal infrastructure to avoid and tackle short termism. There is a need for clear remuneration schemes for managers, notably providing incentives that relate their incomes to the medium period

Another possible reform relates to liquidity. Indonesia banks still have high capital reserves but if they have plan to lower their capital, they need to ensure they have good liquidity. This is necessary to evade maturity mismatch and bank runs in the case of concern relating to capital decrease plans. If the supervisory authority concentrates on lowering capital directly without resolving liquidity concerns, this could potentially damage stability. It is suggested that the should IFSA resolve liquidity concerns and mitigate liquidity risk. Firstly, supervisory authorities could adopt the components of the UK provision on liquidity. They should amend the provisions in order to ensure banks having enough liquidity, with liquidity outflows less than the inflow of liquidity. Otherwise, they could insert substantive amendments into existing provisions, notably positive result with ratio of inflow and outflow that is minimally 1,01: 1. But this ratio could increase with clear measures and objectives once the plan for capital decrease is running. For example, if banks lower their capital to 18 from 22, this ratio changes to 2:1. Otherwise, each capital decrease will be followed by liquidity increase with clear measures and objectives. However, it is suggested that the IFSA conducts further research to determine measures for each increase of the liquidity ratio due to several potential impacts of higher liquidity requirement already discussed in the previous subchapter.

Secondly, the IFSA should add substantive amendments relating to items needed for obligation of reporting on stable funding through adopting the UK provisions. This is aimed to boost standardisation of reporting including clarity or transparency of clear measurement and criteria for reporting on stable funding. Although Indonesia banks, unlike UK banks, do not have a complex market, this could facilitate the growth of securitisation in line with the plan for securities provision already discussed above. Besides, there is a need to make clear guidelines or instruction, measurement and criteria to validate the report provided by bank institutions based on clear objectives regarding what, why and how they analyse the accuracy of data. All banks and the IFSA would use the same procedure for reporting and analysis. The IFSA would have its own checklist and perform analysis based on clear, detailed data or information. As a result, the IFSA could make assessment comprehensively, the reporting method could be harmonised and consistency of bank on reporting on stable funding could be established. However, there is still a need for further research relating to efficiency, impact of provision, clear measurements.

In general, banks face considerable potential risk of mismatching. The majority of assets have a maturity period of over one year whereas the majority of deposits have a maturity period of under three months. The mismatching risk might include not only mismatch in the maturity level between foreign currency business and rupiah but also the mismatching of assets and liabilities between wholesale banks and retail banks. Therefore, measures that could be used by the IFSA or supervisory authority in Indonesia would relate to the maturity mismatching between foreign currency business and rupiah, the ratio between retail banks and wholesale banks. Retail banks with a large number of small accounts should have a bigger ratio than banks with a small number of large accounts. This could lower the uncertainty of the cash flow in the bank balance sheet, but remaining uncertainty should be managed. Furthermore, banks should mitigate and handle concern over liquidity risk.

One of the fundamental strategies to mitigate liquidity risk is the practice of liability management. Bank institutions should have immediate access to either inter bank borrowing or other market-based deposits as funding sources to substitute any shortage in the withdrawn deposits or maturing event. Secondly, banks should manage asset risk and liquidity risk. Managing liquidity concern involves not only liability management but also reserve asset management.[747]

After considering priority 1, it is suggested that the supervisory authority analyses and sets priority 2 for research in order to tackle the concerns of NPL, RWA, capital and leverage. Possible schemes for these resolutions would take a fairly long time to implement or realise. It is therefore suggested that several stages or measures should be introduced or prepared before resolving the concerns of NPL, capital and leverage levels. First, blueprints of these resolutions should be provided so as to guide or enable better actions which would result in not only a decrease in NPL, capital and leverage level effectively and greater efficiency of operation but also economies of scale. Criteria, measurements or restraints should be introduced to provide a reasonably clear framework for action or decision. Another suggestion relates to development or use of information collection relating to customer data. Supervisory authorities and all banks will have similar data automatically when banks input customer data into the system. This could boost standardisation and the accuracy of data analysis and also lower the possibility of differences in data between supervisory authority and bank institutions. This also could lower the risk of bad management and hidden data, and increase transparency or disclosure, and also

[747] Mike Buckle&John Thompson, (2004) 'The UK Financial System: Theory and Practice' Manchester University Press p. 349

make it easier for banks to transfer the risk into investment banks or customers to move to or use the services of another bank.

Another proposal is to develop a system for harmonised calculation. Supervisory authorities and bank institutions will perform or use similar calculations. This could assist supervisory authorities in analysing and verifying data and checking the result of calculations precisely. Finally, another suggestion relates to establishing an integrated system for analysis and supervision. The system will integrate all the required data, notably NPL, capital and leverage. A well-designed system could provide automatic analysis of these data which would result in a good alarm system for supervision and assist in analysis before making decisions. ©The system could assist authorities in considering the next step for resolving the concerns which will be discussed below. Furthermore, the systems could provide alarms that would allow for effective and strict supervision. When the system provides information of an increase in NPL or leverage level excessing each measure that already made by financial authorities, this will trigger an alarm mechanism allowing supervisory authorities to look at the concern closely and consider measures and steps to minimise the risks. However, all the possible stages or measures above would need considerable funding or financial investment in cutting edge technology.

After implementing these stages or measures, Priority 2 would start with concentrating on concerns of NPL, capital and leverage. First, it refers to the scheme for reducing NPL level. It is suggested that financial authorities set primary objectives, notably standardisation of NPL calculation and a plan for lowering NPL level with several measures. Standardisation will ensure similar techniques of NPL calculation and increase clarity and certainty of the provisions. Furthermore, it is suggested that the supervisory authority should have a clear goal regarding the level that needs to be achieved, such as a decrease of 2% in two years. Then, supervisors should make clear measures to achieve this target. They should avoid use of capital to lower the NPL level due to the risk of high leverage level which will be discussed below. The plan to decrease the NPL level could be performed through securitisation of illiquid assets to be traded to a third party, but Indonesia has no securitisation provision yet. Alternatively, Indonesia banks could start with resolution of basic concerns within two years, such as bad management, the provision of credit, and moral hazards. This should be followed by clear measures. For example, collateral should fulfil a minimum of 10% above the level of credit which will be supplied. This could be achieved if IFSA provides guidelines or instruction on credit supply for all banks, including the collateral aspect. This could prevent moral hazard and also decrease the possibility of failure of credit repayment and establish an integrated, harmonised system. Another measure would be for successful credit to be agreed and

transferred to customers if banks meet underwriting standards of credit and input into the system that have already been discussed above. Otherwise, IFSA could determine other measures that could improve bank management and prevent moral hazard and mitigate the risks of bank specific factors. However, it is also suggested that all measures would need further research regarding their effectiveness and efficiency in order to mitigate the risks of raising cost, decreasing competition and reducing the pace of financial innovation.

Furthermore, priority 2 should concentrate on resolving the leverage level. Indonesia banks hold high leverage percentages, particularly foreign banks. The percentage is likely not ideal or proportional with the level of capital, as already discussed above. High risk of leverage level could potentially damage the banking system and stability. Therefore, it is argued that the supervisory authority should develop deleveraging strategy, a clear blueprint and well-designed measures to lower the leverage level. First, deleveraging by Indonesia bank institutions is expected to be performed over a medium or long period of time due to concerns of funding and capital-related pressures of a cyclical and, in particular, a structural nature. Reasons driving Indonesia banks to deleverage their balance sheets include, firstly, Indonesia banks have a heavy dependence on short term wholesale funding or less stable funding sources.[748] Indonesia banks have relatively high HQLA but they show high reliance on wholesale funding, potentially leading to concerns of maturity mismatching, illiquidity and bank run. The borrowing practice for short term funding from wholesale funding or less stable funding while extending long term credit to their customers could potentially become the source of banking risks in Indonesia. A mismatching of the structure of assets and liabilities on the bank's balance sheet could potentially make the bank institution vulnerable not only to interest rates but also fluctuations in availability of credit from wholesale funding. If the availability of short term funds starts to dry up, liquidity concern might affect Indonesia bank institutions. The illiquidity concern might derive from lender institutions in the wholesale credit market which might feel anxious or reluctant to provide credit. Indonesia banks might not experience serious solvency difficulty or rigorous lack of assets to cover their liabilities, but they might experience illiquidity concerns regarding reliance on sourcing short term funding from wholesale credit and therefore they need to adjust their business models to ensure long term viability. Several researches have demonstrated that bank institutions with high leverage levels and heavy reliance on wholesale funding were more fragile and experienced more considerable decreases in share price during

[748] IFSA, 2016. 'Report of Indonesia Banking Profile (RIBP)' Quarterly III

the volatility. [749] Secondly, the various failing banks and banking failures since 2000 have created uncertainty about the resilience of Indonesia's banking sector.

Indonesia banks might plan to deleverage either through reduction of assets, which might be performed to enhance their liquidity or capital position, or through adjustments to banks' liabilities and capital. They might raise capital, notably through retained earnings or issuance of equity or hybrid debt conversion, and augment their stable funding sources, notably either long term wholesale funding or retail deposits in order to achieve reduction of their assets. They might sell a business line or scale down their loan portfolio. Furthermore, adjustment to banks' liabilities and capital could be performed by Indonesia banks, but this would rely on the particular pressure of the balance sheet. If they have a concern relating to funding pressure, they could endeavour to sell their liquid assets within a short time period as Indonesia banks have relatively high HQLA that could be used to obtain more cash and address funding pressure. On the other hand, if they have a concern relating to their capital position, they could lower their risk weighted assets to boost their capital position. All Indonesia banks have relatively sufficient capital levels, so if they lowered the RWA or assets or raised new equity, it could boost their capital position to facilitate their deleveraging plan and prevent the need for large scale deleveraging.

The deleveraging scheme in Indonesia might result in several concerns, notably restriction of credit supply, or credit disruption due to funding and capital pressure or effect of enhancing the capital level or adjustment of their liabilities and capital position. This plan might affect small bank institutions, those in the categories BUKU 1, BUKU 2 or non BUKU, such as rural banks having difficulties in accessing more funding or facing concerns of funding and capital pressure, by resulting in potential tighter credit standards or possible increase in their credit cost. Furthermore, Indonesia banks should also consider potential concerns in securing US dollar funding. Moreover, Indonesia banks, particularly BUKU 4 which have foreign branches overseas, might lower their International activities in order to mitigate the impact of their exposure cross border on Indonesia's economy and concentrate on accomplishing their deleveraging scheme.

However, Indonesia authorities and bank institutions should work together to analyse and monitor the strategy and scope of Indonesia bank deleveraging in order to calculate the impacts of the process of deleveraging for Indonesia's economy. Firstly, Indonesia's bank institutions

[749] C. Raddatz, (2010) 'When the Rivers Run Dry: Liquidity and the Use of Wholesale Funds in the Transmission of the U.S. Subprime Crisis' World Bank Policy Research Working Paper Series, No 5203; Beltratti and Stulz, supra note 616

should have plans, notably medium- or long-term schemes, to restructure their size in order to lower dependence on wholesale funding and carry out deleveraging plans. This would involve reduction of their assets or selling their assets to third parties or other bank institutions which have a strong capital position or securitising their assets to be traded off. Secondly, Indonesia might adopt longer term refinancing operations in Europe to lower banks' market funding or funding and capital related pressures. Furthermore, Indonesia bank institutions might concentrate on the illiquid assets to be securitised and sold. Otherwise, Indonesia banks should reduce business which drives potentially NPL concern. However, the effort to perform deleveraging should include comprehensively considering their capital limit, the amount of wholesale funding, their structural funding and bank plans in order to mitigate the risk of deleveraging.

Furthermore, priority 2 should resolve the concern of capital level. Indonesia banks might face tighter capital requirements due to the proposed deleveraging scheme even though they hold sufficient capital levels, approximately 22%, which is higher than in the UK banks. They have several possibilities to address this concern, including reduction of asset size, rising equity and lowering lending to risky borrowers. Indonesia banks could lower their lending to risky borrowers in order to provide more capital and facilitate the deleveraging scheme, but it could lead to potential difficulty for small business firms, resulting in slowing down of the growth of Indonesia's economy. They might face difficulty in finding alternative funding sources due to heavy reliance on banks' credit. [750] Decreasing credit supply to small firms could reduce growth of the economy. [751] Peek and Rosengren revealed that a contraction of credit because of stress of bank capital could contribute to reduction in the real economy. [752]

Several studies provide explanation of why equity is not inexpensive and any rise in equity cost could be transmitted to debtors or borrowers. [753] Higher capital lowers ROE. The rationale is the reduction in net income because of the debt substitutions with extra costly equity. Bank institutions could raise their lending rates in order to maintain the current ROE level. [754] The

[750] Brewer III, E., H. Genay, W.E. Jackson III and P.R. Worthington (1996) 'How are small firms financed? Evidence from small business investment companies' Economic Perspectives-Federal Reserve Bank of Chicago 20, 2-18.
[751] Hancock, D. and J.A. Wilcox (1998) 'The credit crunch and the availability of credit to small business' Journal of Banking and Finance 22, 983-1014.
[752] Peek, Joe, and Eric Rosengren (2000) 'Collateral Damage: Effects of the Japanese Bank Crisis on Real Activity in the United States' American Economic Review 90(1), 30-45.
[753] BCBS (2010), "An assessment of the long-term economic impact of stronger capital and liquidity requirements", Interim report, August.
[754] King, M. (2010) 'Mapping capital and liquidity requirements to bank lending spreads' BIS Working Paper Series

primary concern is that higher rate of bank lending might lead to decreased lending and therefore a potential fall in the economy. Nevertheless, Modigliani and Miller reveal that equity is not necessarily costly as high capital levels make debt funding and equity more secure and safer, and thus the funding cost is lowered since there is an increase in capital requirements. [755] Admati et al also contend that the ROE comprises a risk premium which has to decline once bank institutions have extra equity. Therefore, the weighted average capital cost might not change since there is a rise in the capital to asset ratio. [756]

Indonesia has different types of banks and in different concentrations. Indonesia's authorities might use equity based on the Admati et al theory to increase capital requirements due to the constraints of funding sources in Indonesia but could also consider their concentrations in order to determine their capital levels; however, determining the equity capital level is a problematic issue. Admati et al contend that the ratio of a Tier 1 equity of 20-30 percent over unweighted assets would be socially optimal to create a safer and better banking system.[757] Conversely, Miles et al contend the ratio of unweighted assets should be up to 20 percent.[758] Their reasons for stipulating a high capital prerequisite are, firstly, to lower the public bail out probability and therefore lower the taxpayers exposure, and secondly, to lower the incentive for managers to take excessive risks.

After considering priority 2, it is suggested that supervisory authority concentrate on reviewing parts of the macroprudential provisions, notably CCB or sectoral buffer or ICR. This should not, however, be the first priority, for the following reasons. First, Indonesia banks still have basic concerns already discussed above. Taking high capital as an example, an increase in capital for CCB or a sectoral buffer will bring impacts as already discussed in chapter 3 and 6. Second, in Indonesia banks there is little possibility of fire sales as index prices are still relatively stable and the majority of Indonesia banks are now retail banks and therefore provide

[755] Modigliani, Franco, and Merton H. Miller (1958) 'The cost of capital, corporation finance and the theory of investment' The American Economic Review, 261-297.
[756] Anat R. Admati, Peter M. DeMarzo, Martin F. Hellwig, and Paul Pfleiderer (2011) 'Fallacies, Irrelevant Facts, and Myths in the Discussion of Capital Regulation: Why Bank Equity Is Not Expensive' Stanford GSB Research Paper No. 2065
[757] Anat R. Admati, Peter M. DeMarzo, Martin F. Hellwig, and Paul Pfleiderer (2011) 'Fallacies, Irrelevant Facts, and Myths in the Discussion of Capital Regulation: Why Bank Equity Is Not Expensive' Stanford GSB Research Paper No. 2065, revised 2013 edition
[758] Miles, D., J. Yang, and G. Marcheggiano. (2011) 'Optimal Bank Capital' CEPR Discussion paper 8333, April.

more safety than investment banks.[759] Finally, unlike UK banks, Indonesia banks do not have buy to let products.[760]

However, first, Indonesia might consider specifically regulating CCB level, starting with a low level, notably 0,1% rather than 0%, and the sectoral buffer might be 0%. The discussion above shows that Indonesia banks incur big risks because of either high RWA, NPL or a not ideal ratio between capital and leverage. The majority of credit collateral generally comprises property. If there are many credit failures and banks face liquidity, customers might sell their property. CCB could reduce the impact in the case of a possible externality. The supervisory authority should determine measures in line with bank condition or the country's economy or banking risks. For example, if banks can successfully reduce capital to 18% and leverage to 8%, they should consider implementing a strict CCB level based on stress testing, notably 1,5%. In other words, in setting the CCB level, aspects such as capital or leverage, and other measures should be considered. These measures include asset risk, profit, leverage, house price in a region, price reduction in a region, or RWA. It is suggested that the supervisory authority should provide guidelines or instructions including criteria and requirements at each level. Otherwise, they should develop clear procedure using well designed measures. Furthermore, while the supervisory authority might not concentrate on LTI or DTI to restrict growth of credit, they might consider these guidelines or instructions in order to establish a harmonised system, prevent possibility of credit failure and avoid speculation among debtors who want to buy other property. There is a potential risk of raising costs and decreasing the credit supply, but it might help banks to focus on resolving the basic concerns at the beginning of the reform scheme. However, financial supervisory authorities should conduct review and further research on the percentage, which should be adjusted in line with economic and bank conditions.

7.5. Conclusion

This chapter has highlighted possible future development, way forward and the limits or obstacles of legal transplant considering thick and thin conceptions. Indonesia sees a shift slowly moving away from a traditional model based on deposits and loans, towards a business model that resembles that of large UK banks (wholesale funding and securitised bonds). This is potential concern or problem as the Indonesia banking regulations including banking law and prudential provisions, particularly capital and liquidity have not mitigated or minimized these risks comprehensively. Thus imperfect regulatory structure and the risks could potentially

[759] Infra. Chapter 5
[760] Infra. Chapter 5

threaten the soundness, safety and stability of Indonesia banking system. The thesis analysed the argument that Indonesia banking law and provision have several flaws compared to the UK banking regulatory model. Firstly, the meaning of 'other form' which is included in the term 'bank' is not clear and has the absence of a common definition or understanding of "other form". Definition 'liquidity' is not robust and might not be able to ensure banks are liquid institutions. Inadequate supervisory review, particularly no aspect of disclosure requirements on the competent authorities might pose risks, notably wrong decision or strategy and the concern of moral hazard and inconsistency of supervisory reviews and evaluation and measurements, no transparency and accountability, uncertain quality of result of capital calculation, supervisory capture of assessment, and lack of clear measurement procedure. Finally, although the Indonesia Banking Statistic which includes quantitative terms and reports on the profile of Indonesia's banking industry which includes qualitative demonstrate the feature of disclosure requirement as being in line with Pillar 3 disclosure requirements, Basel III, Indonesia has not regulated this into the IFSA provision.

The thin notion through the IFSA provision is required to remedy the flaws of Indonesia banking regulation, particularly banking law and prudential provisions, specifically capital and liquidity provisions. The UK concept of the term 'bank', disclosure requirements on the competent authorities, definition 'liquidity' and disclosure requirements within banking regulation is a good approach to control and regulate bank activities relating to the growth of wholesale banking system designed at the relationship of sale and repurchase agreement or securities or commercial paper and bond, to maximise transparency and accountability and enhance consistency of supervisory reviews, evaluations and measures, to make harmonisation of information, and to ensure liquidity outflows less the inflows of liquidity. However, there is an obstacle or problems in transplanting the UK term 'bank' into Indonesia banking law due to the thick notion, long procedures, and costly. It is hope that regulatory bodies would study or look into this as soon as possible to address the likelihood of bankers circumventing regulation or legislation. This chapter also considered possible reforms to strengthen banking's regulatory structure in Indonesia. The author suggested a possible scheme and set priorities because Indonesia could not reform all banking concerns at the same time. In other words, the priorities are arranged based on the time needed to implement the reforms, specifically, short period of time, fairly long time or delay required. It is important to note that reform should start with addressing the basic concerns. There is a lot more to unpack, identify, and understand in terms of Indonesia banking regulation including banking law and prudential provisions, while research is also needed in relation to technical rules and measurements.

Chapter 8

8.1. Conclusion

In April 2013, Lagarde, C. The IMF Managing Director, expressed a view that

In too several events, from the US in 2008 to Cyprus, we have viewed what occurs when a financial intermediary sector selects quick or instant cash over the lasting advantage, backing a business pattern which undermine the economy ultimately. We merely could not possess pre instability banks in a post instability world. We require improvement or reform, even in the appearance of deep push back from industriousness sometime reluctance to abandon beneficial business lines.[761]

Quote of Lagarde emphasizes the significance of financial stability importance, a stakeholder method to bank institutions, and more traditional borrowing. She made addition later:

Specifically in the boundary, several bank institutions are still in an early repair phase – inadequate capital and a lot of bad credits on their balance sheet or books. Even outside the boundary, there is a necessity to enhance business pattern, lower dependence on wholesale funding, and shrink their books or balance sheets.[762]

This study agrees with proposal of Lagarde. This thesis began with the basis that banking provision is significant for two rationales. Firstly, its role of liquidity is significant for an economy of country. Individuals and businesses require financial intermediary institution in daily activities or life. Second, financial intermediary institutions run on reputation and confidence. Once a financial intermediary institutions has liquidity concerns, it produce possibly panic and a bank run. Then, this make systemic impact in not only the financial sector but also the economy. Therefore, Regulations of bank institution including banking provision and law are of public interest. Regulation of bank institution lower the concern of collective action in mirroring larger interest of stakeholder to ensure that bank risk taking and social costs are minimized or mitigated. Highly leveraged financial intermediary institutions kept and maintained the threats or risks and a solvency instability appeared

The appearance of path dependence through incremental development or evolution revealed that Indonesia sees a shift slowly moving away from a traditional model based on deposits and

[761] Aldrick, P. (2013) 'Big banks 'more dangerous than ever', IMF's Christine Lagarde says', *The Telegraph*, available:
http://www.telegraph.co.uk/finance/newsbysector/banksandfinance/9985280/Bigbanks-more-dangerous-than-ever-IMFs-Christine-Lagarde-says.html

[762] Aldrick, P. (2013) 'Big banks 'more dangerous than ever', IMF's Christine Lagarde says', *The Telegraph*,

loans, towards a business model that resembles that of large UK banks (wholesale funding and securitised bonds). This might highlight the potential flaws or regulatory concern of Indonesia banking regulation associating with not only controlling, supervising, regulating closely the bank activities relating to the growth of wholesale funding designed at the relationship of sale and repurchase agreement or bond or securities or commercial paper but also maintaining the soundness, safety and stability of banking system. There needs to be better control and supervision of bank activites, better quality and adequate capital and liquidity, lower leverage level, harmonization of information, better information, adequate supervisory review, better engagement with financial intermediary institutions and stricter internal controls.

The second quote of Lagarde earlier in this chapter encouraging for more conservative or traditional business patterns and less dependence on wholesale funding business model are in line with the findings or study result in chapter two of this thesis. The trend or rather the process of change faced by some Indonesia banks, whereby they are slowly moving away from a traditional model based on deposits and loans, towards a business model that resembles that of large UK banks, particularly wholesale funding and securitized bonds. These models of business are clear in portfolios of bank assets and in liabilities side between 2012 and 2017. The several UK and Indonesia banks had a similar positive rise in the trend of the possible use of wholesale funding in liability side from 2012 to 2017, around 0, 0,42%% and 0,59% respectively. Their ratios of the growth of loans and deposits (claim) and debt securities from 2012 and 2017 were relatively similar with around 1 : 5,74 in Indonesia and approximately 1 : 5,06 in the UK respectively. Comparing the UK and Indonesia bank institutions, the thesis revealed that the Indonesia bank institutions had on average, higher capital, ratio of liquid assets, ROE and ROA, but lower asset quality in 2017, higher leverage and NPL than the UK bank institutions. Interestingly, the percentage of capital and leverage was higher amongst Indonesia bank institutions than the UK bank institutions. The UK bank institutions had a better performance as their proportions of leverage, RWA, NPL and liquid assets to short term liabilities were managed or controlled. The changes of micro and macro prudential provisions are inevitable for the Indonesia financial sector. Indonesia banks ought to depend on more equity, deposit, and cash, and less short term wholesale funding and lower leverage level. Good quality assets and solvency are essential. There is a need or must to make balance between financial innovation and financial stability

The response to the level and direction of development of Indonesia banking system and potential concern is to demand further analysis of bank regulation including law, regulatory bodies and micro and macro prudential provisions which encourages the growth of banking

institution and mitigates this risks in Indonesia. A comparison of legal analysis between Indonesia and the UK is employed to reflect similar incremental evolution which is related to the debate on path dependence and legal transplant. Comparison of practical law might be mainly helpful and beneficial for transition of system where foreign pattern are employed as a methods of developing one's own provision with the purpose of either institutional development or legal reform.[763] The comparison of legal analysis was used to understand the UK banking regulation including particularly similarities and differences of their Banking law and provisions and to see what these weaknesses or what flaws of Indonesia banking regulation which could potentially increase the possibility of bank institutions failing or to see what segments in specific concern. Legal transplantation considers path dependence as a method of illustrating the significance of legal system in the past to legal transplant.[764] Path dependence could explain past legal reform failure and give several direction relating to future legal amendments.[765] It reveals what type of legal amendments is possible to be successful and what type of legal amendments is less possible to be effective. The thought of transplantation of the rule of law into new framework is inevitable to face obstacles or difficulties.

In general, the Indonesia Banking Act has not change since 1998. Under Section I, article 1 (2) of the Act 1998, a bank is a legal entity that accepts funding from society in the form of deposits and supplies funds to society in the form of credit and or other form in order to improve social welfare. The meaning of 'other form' which is not clear might allow an Indonesia bank institution to engage in broad activities which are categorized as risky business model, such as the growth of wholesale funding designed at the relationship of sale and repurchase agreement or bond or securities or commercial paper. Conversely, the UK responds to the development of banking system through CRD/ CRR, and ring fence into banking reform law 2013. CRD[766]/CRR[767] does not describe a bank specifically but provides a description of an institution that is either an investment entity or a credit institution, which is expressed as conducting activity of "taking deposits or other repayable from the public and granting credit". In contrast, the UK Banking Act 2009 provides different descriptions of a bank as defined in Article Part 1 Article 2. It is described as a UK institution that not only has authorisation but also fulfils Section 22 FSMA 2000 to engage in regulated activity in a particular type of business

[763] Jaakko Husa, 2015. A New Introduction to Comparative Law. Hart
[764] Jaakko Husa, 2015. A New Introduction to Comparative Law. Hart
[765] Prado, M. and Trebilcock, M. 2009. 'Path Dependence, Development, and the Dynamics of Institutional Reform' 59 UTLJ 341
[766] Article 3 (1) CRD
[767] Article 4 (1) CRR

associated with investment or claims management services or property or business model in the UK or administering a benchmark or information about a person's financial standing. The UK Banking Act 2009 provides limitation of bank interpretation under Article 2 (2). It also defines UK institutions under Article 2 (3) as an institution that is either established or incorporated under the UK law. The UK also implements ring fence into the Banking Reform Act 2013. Its aim is to segregate services of bank institutions which are vital to SMEs and individuals from distress elsewhere in either the wider system or large bank organisations through making it easier to handle distressed entities "in an orderly manner" without liability of the taxpayer or major disruption or trouble within the core banking services. The law prohibits ring-fenced companies from making investments in particular 'excluded activities' which will increase risk to insured funding sources and cause distress in the financial market. [768]

Indonesia and the UK have different institutional regulatory structure of the framework of regulatory bodies. The reason of the supervisory structure could be somewhat deemed as a reaction to the change of institutional circumstances that is typified by growing unification of not only securities, insurance and banks but also their respective service, instrument and product.[769] The IFSA is the single regulator for the financial services sector in Indonesia. Under the IFSA Act 2011, the IFSA is required to pursue three statutory objectives:[770] to ensure all business activities in financial sectors to (1) be reliable, fairness, transparent and accountable; (2) be able to realize a financial system that grows sustainably and stable, and (3) be able to protect the interest of consumers and society. The IFSA will provide integrated regulation and supervision to all financial institution,[771] notably the sector of banking, investment, insurance and other financial institution.[772] The IFSA Act 2011 also set out coordination and cooperation between institutions.[773] IFSA performs coordination with Bank of Indonesia to make supervised regulation for banking institution, notably capital, integrated system of banking information, banking product and other activities, and systemically important bank.[774] The IFSA, Bank of Indonesia and IDIC must build and maintain integrated sharing of information.[775] In addition, in order to maintain financial stability in Indonesia, the Act creates

[768] HM Treasury. (2012) 'The Financial Services Bill: the Financial Policy Committee's macroprudential tools'
[769] C˘ihak, M. and Podpiera, R. (2006) Is one watchdog better than three? International experience with integrated financial sector supervision, IMF Working Paper 06/57, Washington, DC
[770] Article 4, The IFSA Act 2011
[771] Article 5, The Act of Indonesia Financial Service Authority 2011
[772] Article 6, The IFSA Act 2011
[773] Section X, The IFSA Act 2011
[774] Article 39, The IFSA Act 2011
[775] Article 43, The IFSA Act 2011

coordination forum of financial stability (CFFS) involving finance ministry as a principal coordinator and member, Governor of Bank Indonesia as a member, Principal Director of IFSA as a member, and Principal Director of IDIC as a member.[776] In normal condition, CFFS attends meeting at least four times a year and do information sharing,[777] but when indication of financial instability occor, each of member could propose a meeting to CFFS to determine strategy to prevent or resolve crisis.[778] On the other hand, twin peaks model in the UK is an institutional framework where each of two regulatory bodies have task to secure one of the two primary goals of provision including consumer protection and prudential provision. [779] Pattern of twin peak is an alternative method to supervision and regulation that was suggested by Goodhart[780] and Taylor.[781] Such supervision denotes establishing two separate integrated agencies. The Financial Service Act 2012 transforms a single financial regulator or the FSA into the Prudential Regulation Authority (PRA) and the Financial Conduct Authority (FCA).[782] The PRA is required to pursue primary statutory objectives: (a) promoting the soundness and safety of PRA authorised person;[783] (b) seeking to safeguard the transactions of PRA authorised persons conducted in a system which minimises and circumvents any adverse impacts on financial stability in the UK[784]. The FCA is now responsible for regulating and supervising the conduct of all financial institutions and to ensure that the market performs well with operational goals for safeguarding an appropriate level of consumer protection, augmenting the financial system integrity and promoting effective competition in the consumer's interest.

Generally, the UK and Indonesia have similar response to the trend in banking business model in terms of micro and macro prudential provisions in line with Basel III but their banking provisions have some different component and facets of capital and liquidity. Indonesia and the UK capital provisions are similar in which banks have to maintain minimum capital of 8% which is in line with Basel 3. In practice, capital levels held by banks in Indonesia and the UK

[776] Article 44, The IFSA Act 2011
[777] Article 45 (1), The IFSA Act 2011
[778] Article 45 (2), the IFSA Act 2011
[779] Akinbami, F. and Ngwu, F. N. 2016. Overhauling the institutional structure of financial regulation in Nigeria: The unfinished reform. Journal of Banking Regulation Vol 17, 4, 311-331. Macmillan Publishers. www.palgrave.com/journals
[780] Goodhart, C., & Schoenmaker, D. (1995). Should the functions of monetary policy and banking supervision be separated?. Oxford Economic Papers, 539-560.
[781] Taylor, M. (1995). " Twin Peaks": A Regulatory Structure for the New Century. Centre for the study of financial innovation.
[782] Kokkinis, Andreas (2013) *The financial services act 2012 : the recent overhaul of the United Kingdom's financial regulatory structure.* International Company and Commercial Law Review, Volume 24 (Number 9). pp. 325-328.
[783] FSMA, s 2B(2)
[784] Widely defined in FSMA, s 1T

are dissimilar. Banks in Indonesia maintain higher capital, with average Tier 1 capital of around 19.25%, compared to those in the UK, approximately 15,65%. The ratio of RWA to total asset in Indonesia is high, around 70.61% compared to the UK approximately 33,14%. These ratios of RWA to total assets might reveal that Indonesia banks have higher exposure to risk than the UK, and Indonesia bank institutions have higher capital level than the UK banks. Another aspect is relating to supervisory review. Both the UK and the Indonesia regulatory framework implement a similar supervisory review process including interaction between ICAAP and SREP. Its difference is relating to disclosure requirements on the competent authorities, which can be of significant concern. Under article 143 of the CRD, the UK imposes general disclosure requirements whereas Indonesia has not yet done this. Indonesia norms define briefly and simply the tasks and powers of supervisory authorities. There are also differences relating to disclosure requirements between Indonesia and the UK. Regulation is conducted under CRD/CRR whereas Indonesia has not regulated this into the IFSA provision but the Indonesia Banking Statistic which includes quantitative terms and reports on the profile of Indonesia's banking industry which includes qualitative both demonstrate the feature of disclosure requirement as being in line with Pillar 3 disclosure requirements, Basel III. Furthermore, the definitions of LCR between the UK and Indonesia are different. The LCR in Indonesia requires all covered banks to maintain or fulfil the LCR with a minimum of 100 percent continually, calculated by dividing HQLA by the total amount of its net cash outflow over a 30 days period of stress scenario. The EU LCR ensures covered institutions are liquid institutions with adequate liquid assets as the sum of the values of liquid assets could cover the net liquidity outflows (liquidity outflows less the inflows of liquidity).

The regulatory structures of both countries regulate a relatively similar percentage of CCB level, but in practice the different banks' CCB levels in these countries are a significant concern. It is interesting to note that the CCB level owned by banks in Indonesia and the UK are not similar. Banks in the UK maintain higher CCB levels, with an average CCB level of around 2%[785] in 2019 compared to the Indonesia banks' level of around 0%. The UK provision regulates sectoral buffers under the CRR and CRD whereas Indonesia has not regulated the sectoral buffer. Both the UK and the Indonesia regulatory framework, in general, highlight an importance of leverage ratio but the differences in leverage levels between these countries is a significant concern. Indonesia banks have larger leverage ratios than the UK banks. Indonesia

[785] Bank of England. Financial Stability. Latest announced rate of UK CCB with binding impact from December 16 2020

banks, with an approximate average of 14%, have ratios almost one quarter higher than those of the UK banks (5,18%). Interestingly, foreign banks in Indonesia have a significantly high level of leverage of around 40%[786]. Both the UK and the Indonesian regulatory framework, in general, highlight a similar stable funding provision including obligation of long term funding but there are differences between the UK and Indonesia, particularly in terms of clarity or transparency of items requiring stable funding or asset composition and items providing stable funding. The UK imposes items needed for obligation of reporting on stable funding[787] whereas Indonesia has not described these specifically and explicitly yet. Both the UK and the Indonesian regulatory framework, in general, highlight the importance of macroprudential tools for credit but The UK employs tools of LTV, LTI and DTI including ICR. The UK uses these instruments because of concern not only that the development of the housing market might carry risks to banking stability but also to develop tools or strategy to tackle such risks.[788] Restriction using the macroprudential tools, notably LTV ratio and ICR, to measure underwriting standards in buy to let residential lending can lower not only the default probability and the loss given default on individual residential lending but also the possibility that borrowers of buy to let residential mortgages will fall into default or arrears on their loan. Indonesia uses mainly LTV and the RR instrument plus LDR, and also the interaction of monetary instruments, particularly interest rate and macroprudential instruments. Dana argued that the LTV instrument can lower growth of credit but not mitigate procyclicality. She also contended that the application of CCB and RR plus LDR policies can mitigate procyclicality.[789] Although both the UK and Indonesia highlight the importance of banking regulations including banking law and micro and macro prudential provisions, particularly facets of capital and liquidity, the UK legislation is more comprehensive and robust than those of Indonesia

With comparing the UK banking regulation, there are several flaws of Indonesia regulatory structure relating to Indonesia banking law and provisions. Firstly, the meaning of 'other form' which is included in the term 'bank' is not clear and has the absence of a common definition or understanding of "other form". This absence allows either non-bank institutions or the shadow banking system to make and develop various products of financial innovation and also allows them to grow, mostly unregulated, and to provide competition with bank institutions directly

[786] The IFSA, December 2017, Indonesia Banking Statistic vol 16, No.1
[787] Article 427 and Article 428 CRR.
[788] HM Treasury, (November 2016) 'Consultation outcome: Financial Policy Committee powers of direction in the buy to let market'
[789] Dana, B. S. (2018) 'Evaluation of Macro-prudential Policy on Credit Growth in Indonesia: Credit Registry Data Approach.' Etikonomi: Jurnal Ekonomi. Vol. 17 (2): p. 205-208

in their part of the traditional market which might contain implicit threats or risks. Secondly, flaw of definition 'liquidity' might potentially facilitate or encourage bank institutions to maintain liquidity outflows more the inflow liquidity. Otherwise, it might enhance moral hazard of the shareholders or Indonesia banks to maintain liquidity which cannot cover the net liquidity outflow and cannot ensure banks are liquid institutions. This might be incentive for bank institutions to maintain either poor quality asset or illiquid asset which is hard to be used to obtain cash quickly or is difficult to be converted into a liquid asset, like the case of Century Bank. Thirdly, inadequate supervisory review, particularly no aspect of disclosure requirements on the competent authorities might pose risks, notably wrong decision or strategy and the concern of moral hazard and inconsistency of supervisory reviews and evaluation and measurements, no transparency and accountability, uncertain quality of result of capital calculation, supervisory capture of assessment, and lack of clear measurement procedure. Finally, although the Indonesia Banking Statistic which includes quantitative terms and reports on the profile of Indonesia's banking industry which includes qualitative demonstrate the feature of disclosure requirement as being in line with Pillar 3 disclosure requirements, Basel III, Indonesia has not regulated this into the IFSA provision.

The findings including path dependence through incremental evolution, similarties and differences of the UK and Indonesia banking regulations and these flaws or what segments in specific concern were used to analyse what components of the UK measures or provisions or law which could be adopted and which could not into Indonesia bank regulations. There are apparent signals which Indonesia could adopt from general UK provisions or might consider to transplant facets of capital and liquidity provisions including the aspects of liquidity provision including the definition of the UK liquidity provision and the items requiring stable funding and facets of capital provisions, notably supervisory review regime including disclosure requirement on the competent authorities, reduction of leverage ratio, and explicitly disclosure requirement. There are also signals which Indonesia could not implement directly parts of the UK regulatory structure associated with technical rules and measurements due to considerations including bank conditions, the national economy, and Indonesia's banking structure. It is better for Indonesia to not adopt ring fence currently, the UK capital level, the CCB level, and the UK ICR. The possible adoption of component or levels of the UK provision, such as leverage level might provide the possible impacts for Indonesia bank institutions. These include not only business models of Indonesia bank institutions and restructuring of the legal entity and business model reorganization involving issuance of new equity, rise in retained earnings and reduction in size of loan portfolios but also impacts of reforming business patterns

comprising profitability, lending, cost, and impacts of possible adoption of the UK provision on financial stability. It is therefore suggested that adopting the UK prudential provision is advisable.

The possible legal transplant might face difficulties, notably the reform of banking law relating to thick notions which binds law and morality of politic together. To minimize the risks and flaws of Indonesia banking regulations, there need to be legal reforms relating to the thin conception which attempts to keep or consider them separate through the IFSA provisions to provide further design of the term 'bank' particularly further definition or understanding of "other form" and to regulate or restrict activities of bank institutions clearly. The IFSA provision does not mean that it is used to substitute or amend Indonesia banking act in case of concern of banking law reform due to politics, law and long procedure but it is used to provide further clarity or provision of banking activities which could be performed by Indonesia banks and not. It should be used by the IFSA as a base to not only prevent risky activities of Indonesia banks which is prohibited and threaten the soundness, safety, and stability of banking system but also control, supervise, regulate closely the bank activities relating to the growth of wholesale funding designed at the relationship of sale and repurchase agreement or bond or securities or commercial paper. The further reform of IFSA provisions also are needed to design and improve the part of capital and liquidity provisions including comprehensive supervisory review regime particularly the disclosure requirement on the competent authorities, explicitly disclosure requirement and liquidity definition. The reform of definition of liquidity provision should ensure that the sum of the values of liquid assets could cover the net liquidity outflows or Indonesia bank institutions maintain liquidity outflows less the inflows of liquidity. The reform of aspects of capital provision should enhance transparency which might contribute to the stability of banking system and accountability in order to minimize occurrence of abusive practices. It should also decrease bank official corruption, harmonize information and lower threat. The IFSA provision is important to maintain Indonesia banking regulation when there is a difficulty to reform Indonesia banking law relating to the thick conception.

8.2. Proposal

To move forward in banking regulations involving banking law and provisions, it is submitted that there are several steps or proposals that ought to be taken. Firstly, the Indonesia Banking Act 1998 has a flaw or would not address the potential risky activities comprehensively. What is important is that path dependence through incremental development

or evolution ought to be considered or learnt. The new reform of Banking Act should regulate closely or restrict the bank activities relating to the growth of wholesale funding which might be designed at the relationship of sale and repurchase agreement or bond or securities or commercial paper. The possible obstacle of new banking reform is relating to thick notions which binds law and morality of politic together in case of concern of banking law reform due to politics, law and long procedure. The potential legal reform is relating to the thin conception which attempts to keep or consider them separate through the IFSA provisions. It should provide a base for the IFSA to prevent and prohibit risky activities which could threaten the soundness, safety, and stability of banking system and to closely control, supervise and regulate bank activities which relate to wholesale funding or bond or securities.

Secondly, the flaws of prudential provision, particularly facets of capital and liquidity is of concern. The weak definition of liquidity might facilitate or encourage bank institutions to maintain liquidity outflows more the inflow liquidity. No explicitly disclosure requirement and inadequate supervisory review, particularly no aspect of disclosure requirements on the competent authorities might pose risks, notably wrong decision or strategy and the concern of moral hazard and inconsistency of supervisory reviews and evaluation and measurements, no transparency and accountability, uncertain quality of result of capital calculation, lack of harmonization of information, supervisory capture of assessment, and lack of clear measurement procedure. To minimize these risks, it is recommended that the IFSA should amend the definition of liquidity to ensure that covered institutions are liquid institutions with adequate liquid assets as the sum of the values of liquid assets could cover the net liquidity outflows (liquidity outflows less the inflows of liquidity). Otherwise, new liquidity provision should make additional LCR provision to prescribe the minimum result of the Indonesia LCR calculation, 1:1, not merely positive. To minimize the risks of inadequate supervisory review and no disclosure requirements, a disclosure requirement of competent authorities are adopted. It should enhance transparency which might contribute to the stability of banking system and accountability in order to minimize occurrence of abusive practices. It should also decrease bank official corruption, harmonize information and lower threat.

Thirdly, healthy financial proportions about quality of assets, leverage and capital are very essential to maintain the soundness, healthy, stability of banking system and to protect banking from failure. Incremental evolution from 2012 and 2017 revealed the potential problem or concerns established by high leverage, NPL and ratio of RWA to total assets. Kiema and

Jokivuolle showed that leverage influences the bank failure. [790] Jin et al contend that NPL have a positive connection with failures of bank institutions.[791] Indonesia banking system is still on the repair or mend, so there is no space for disapproving or complacency.

The pendulum ought to move or shift towards stability of banking sector but without threatening the development of economy. Basel 3 has provided appropriate proposals but it is not adequate. Better banking law, provision, supervision and risk management are needed. Better capital quality is essential to cover either externalities or potential unexpected losses. Preventing or regulating or controlling risky activities which is relating to wholesale funding designed at the relationship of sale and repurchase agreement or bond or securities or commercial paper is required to maintain soundness, safety, and stability of banking system. Lower proportions of leverage and NPL are necessary to minimize or mitigate the potential bank failure. Better law and provisions are needed.

[790] Kiema, I., Jokivuolle, E. (2014) 'Does a leverage ratio requirement increase bank stability. Journal of Banking and Finance 39' 240-254. p. 248. www.elsevier.com

[791] Jin, J., Kanagaretnama, K. and Lobo, G. (2011) 'Ability of accounting and audit quality variables to predict bank failure during the financial crisis', *Journal of Banking & Finance*, 35(11), pp. 2811-2819.

Bibliography

A

A. Admati and M. Hellwig, *The Banker's New Clothes: What's wrong with banking and what to do about it* (Princeton University Press, Princeton, 2013).

Abel, E. and Repullo, R. (2007) 'Economic and Regulatory Capital in Banking: What Is the Difference?' International Journal of Central Banking

Abrams, R. and Taylor, M. (2000) 'Issues in the unification of financial sector supervision' IMF Working Paper

Acemoglu, D. and F. Zilibotti (1997), "Was Prometheus Unbound by Chance? Risk, Diversification, and Growth", Journal of Political Economy, 105

Acharya, V. V. (2009) 'A theory of systemic risk and design of prudential bank regulation' J. Financ. Stab.

Acharya. V.V. (2010) 'The Dodd-Frank Act and Basel III: Intentions, Unintended Consequences, Transitiion Risks, and Lessons for India'

----------, Mehran, H. and Thakor. A.V.(2012) 'Caught between Scylla and Charybdis? Regulating Bank Leverage When There Is Rent-Seeking and Risk Shifting.' Centre for Economic Policy Research Discussion Paper

Acharya, V. V., Philippon, T. and Richardson, M. (2009) 'The Financial Crisis of 2007-2009: Causes and Remedies.' in Acharya, V. V. and Richardson, M., eds., *Restoring Financial Stability: How to Repair a Failed System*, New Jersey: John Wiley & Sons

Adams, G. and Schvaneveldt, J. (1991) *Understanding Research Methods* Second ed., New York: Longman.

Adelino, M., Schoar, A., Severino, F (2012) 'Credit supply and house prices : evidence from mortgage market segmentation' National Bureau of Economic Research. Working Paper

Adrian, T., & Shin, H. S. (2010) 'Liquidity and Leverage' Federal Reserve Bank of New York Staff Reports

A.D. Morrison and L. White, 'Crises and Capital Requirements in Banking', *The American Economic Review* 95(5) (Dec. 2005) 1548-1572.

Agénor, P and L A Pereira da Silva (2013) 'Inflation targeting and financial stability' BIS and CEMLA. Banco Central Do Brasil

Aghion P., Bolton P., 1992. Distribution and growth in models of imperfect capital markets. European Economic Review 36, 603—611

Aghion, P., M. Dewatripont, and P. Rey (1999), "Competition, Financial Discipline and Growth", Review of Economic Studies

Agoraki, M.-E.K., Delis, M.D. and Pasiouras, F. (2011), "Regulations, competition and bank risk-taking in transition countries", Journal of Financial Stability, Vol. 7 No. 1

Aikman, D, Bridges, J., Kashyap, A., and Siegert, C (2018) 'Would macroprudential regulation have prevented the last crisis?' Staff Working Paper No. 747, Bank of England

Aiyar, S., Calomiris, C., Hooley, J., Korniyenko, Y., & Wieladek, T. (2014) 'The international transmission of bank capital requirements: Evidence from the UK' Journal of Financial Economics

Akinbami, F. (2013) 'Is meta-regulation all its cracked up to be? The case of UK financial regulation' Journal of Banking Regulation

Akinbami, F. and Ngwu, F. N. 2016. Overhauling the institutional structure of financial regulation in Nigeria: The unfinished reform. Journal of Banking Regulation Vol 17, 4, 311-331. Macmillan Publishers.

Akinci, Ozge and Jane Ohmstead-Rumsey (2017) 'How Effective are Macroprudential Policies? An Empirical Investigation' Journal of Financial Intermediation

Aldrick, P. (2013) 'Big banks 'more dangerous than ever', IMF's Christine Lagarde says', *The Telegraph*

Alexander, K. (2006) 'Corporate Governance and banks: the role of regulation in reducing the principal-agent problem', *Journal of Banking Regulation,* 7(1)

Alexander, Kern, (2015) 'Regulating the Structure of the EU Banking Sector' Eur Bus Org Law Rev 16

Allen, W. A. (2017) Quantitative Easing and The Independence of the Bank of England. National Institute Economic Review No. 241.

Allen, Franklin, Babus, A. and Carletti, E. (2010) 'Financial Connections and Systemic Risk' NBER WP

Allen, Franklin, and Elena Carletti, (2011) 'Systemic Risk and Macroprudential Regulation' mimeo, University of Pennsylvania

Allen, Franklin and Douglas Gale, (1994) 'Limited Market Participation and Volatility of Asset Prices' American Economic Review

---------- (2000) "Financial Contagion," Journal of Political Economy

A---------- (2004) 'Financial intermediaries and markets' Econometrica

---------- (2005) 'From cash-in-the-market pricing to financial fragility' Journal of the European Economic Association

Allen, F. and D. Gale (1997), "Financial Markets, Intermediaries, and Intertemporal Smoothing", Journal of Political Economy, 105: 523-546.

Altunbas, Y, and Molyneux, P. (2001) 'Technical change in European Banking', in E. Gardener and P. Versluijs (eds) Bank Strategies and Challenges in the New Europe' Basingstoke, UK: Palgrave

Ambler, T. (2011) 'How Basel III Treatens Small Business', Briefing Paper, Adam Smith Institute.

Anat R. Admati, (2012) ‘Examining the Impact of the Proposed Rules to Implement Basel III Capital Standards’

---------- and Martin Hellwig, (2013) ‘The Bankers’ New Clothes: What’s Wrong with Banking and What to Do about It’ Princeton University Press

---------- Peter M. DeMarzo, Martin F. Hellwig, and Paul Pfleiderer, (2011) ‘Fallacies, Irrelevant Facts, and Myths in the Discussion of Capital Regulation: Why Bank Equity Is Not Expensive’ Stanford GSB Research Paper

Andenas, M. and Hadjiemmanuil, C. (1997) ‘Banking Supervision, the Internal Market and European Monetary Union, in M. Andenas, L. Gormley, C. Hadjiemmanuil and I. Harden (eds) European Economic and Monetary Union: the Institutional Framework’ The Hague: Kluwer Law International.

Andy Gotlieb, (2000) ‘Non PerformingLoans On The Rise’ PHILA. Bus. J.

Arcand, J.-L., E. Berkes, and U. Panizza. (2012) ‘Too Much Finance?’ IMF Working Paper No. 12/161

Athanasoglou, P., Brissimis, S. and Delis, M. (2005) 'Bank specific, industry specific and macroeconomic determinants of bank profitability', *Journal of International Financial Markets, Institutions and Money,* 18(2)

Atkin, H. I. 2003. Letter to Basel Committee on Banking supervision

Avgouleas, E. (2016) ‘Fundamentals of Bank Supervision and the Lender of Last Resort in the Post-2008 Era: A Critical Appraisal and Forward Looking Recommendations’ working paper, National University of Singapore

---------- (2005) ‘The Mechanics and Regulation of Market Abuse: A Legal and Economic Analysis’ Oxford: Oxford University Press

---------- (2015) ‘Bank Leverage Ratios and Financial Stability: A Micro- and Macroprudential Perspective’ University of Edinburgh, Levy Economics Institute of Bard College, Working Paper No. 849

---------- and Cullen, Jay,(2014) ‘Excessive Leverage and Bankers’ Pay: Governance and Financial Stability Costs of a Symbiotic Relationship’ Columbia Journal of European Law, Vol. 21, No. 1, 2015,

A. Wilkinson and D. Turing, ‘Regulation and Insolvent Bank’, *Journal of Financial Regulation and Compliance* 4(4) (1996) 331.

B

Bagehot, W. (1873) ‘Lombard Street: A Description of the Money Market’ Henry .S. King & Co. London

Bagchi, S., Svejnar, J., 2015. Does wealth inequality matter for growth? The effect of billionaire wealth, income distribution, and poverty. Journal of Comparative Economics 43

Baker, A. (2013) ‘The gradual transformation? The incremental dynamics of macroprudential regulation’ Regulation and Governance, 7(4), 417-434.

Balluck, K. and Galiay, A. (2016) 'The small bank failures of the early 1990s: another story of boom and bust' Bank of England. Quarterly Bulletin Q1

Banerjee, R. and Hio, M. (2014) 'The impact of liquidity regulation on banks.' BIS Working Papers

Banerjee, A.V., Newman, A.F., 1993. Occupational choice and the process of development. Journal of Political Economy 101, 274—298.

Bank Indonesia (2019) 'A survey of residential property price'

https://www.bi.go.id/id/publikasi/survei/harga-properti-primer/Documents/Triwulan%20III%20-%202019.pdf

Bank of England, (2019) 'Banking Sector regulatory capital'

Bank for International Settlements. (2010) 'Assessing the Macroeconomic Impact of the Transition to Stronger Capital and Liquidity Requirements' Macroeconomic Assessment Group Final Report

Barbara Pinckney, (1999) 'Banks Must GuardAgainst Loose Lending In Competitive Market' Cap. District Bus. Rev

Barley, S. R., & Tolbert, P. S. (1997). Institutionalization and structuration: studying the links between action and institution. Organization Studies, 18(1)

Barth, J., Caprio, G. and Levine, R., eds. (2006) *Rethinking Bank Regulation: till angels govern,* New York: Cambridge University Press

Barth, A., and Seckinger, C., (2018) 'Capital regulation with heterogenous banks – Unintended consequences of a too strict leverage ratio' Journal of Banking and Finance 88

Basso, H. S. and Costain, J. (2016) 'Macroprudential Theory: Advances and Challenges' Documentos Ocasionales.

Basten, C., & Koch, C. (2015) 'Higher Bank Capital Requirements and Mortgage Pricing: Evidence from the Counter-Cyclical Capital Buffer (CCB)' BIS Working Paper No.511

BCBS (2009) 'Enhancements to the Basel II framework'

----------(2008) 'Liquidity Risk: Management and Supervisory Challenges'

--------- (revised June 2011)'Basel III: A Global Regulatory Framework for more resilient banks and banking system' BIS, Basel, Switzerland

---------(2010) 'Guidance for National Authorities Operating the Countercyclical Capital Buffer'

BCBS, 'Basel III: International Framework for Liquidity Risk Measurement, Standards and Monitoring', December 2010, 3 (BCBS, International Framework).

BCBS, 2010, The Basel Committee's Response to the Financial Crisis: Report to the G20, Basel: Bank for International Settlement, October

--------- (2011) ‘Basel III: A Global Regulatory Framework for more Resilient Banks and Banking Systems’ http://www.bis.org/publ/bcbs189.pdf.

---------- (November 2011) ‘The assessment methodology rules for globally systemic important banks (G-SIBs)’

----------(October 2012) ‘A Framework for dealing with DSIB’ BIS.

---------- (2012) ‘Models and tools for macroprudential analysis’ BIS, Working Paper No. 21

BCBS. (2012b). “Revisions to the Basel Securitisation Framework,” December (www.bis.org/publ/bcbs236.pdf)

---------- (2013) ‘Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools’

---------- (2014) ‘Regulatory Consistency Assessment Programme (RCAP) Assessment of Basel regulations –European Union’

---------- (2014) ‘Basel III: the net stable funding ratio’

---------- (2015) ‘Standard: Pillar 3 disclosure requirements – updated framework.’ BIS.

---------- (2016) ‘Literature review on integration of regulatory capital and liquidity instruments’ Working Paper

----------(2010) ‘Macroprudential instruments and frameworks: a stocktaking of issues and experiences’ CGFS Papers No 38

---------- (2016) ‘RCAP Assessment of Basel III risk-based capital regulations – Indonesia’ BIS

---------- (2017) ‘Basel III: Finalising post crisis reforms’ BIS

----------(July 2017) ‘RCAP Assessment of Basel III LCR regulations –European Union’

------- (July 2017) RCAP Assessment of Basel III LCR regulations –Indonesia

BCBS. 2018. Structural changes in Banking after the crisis. CGFS Papers No. 60.

Beck, T., Demirgu¨xc-Kunt, A., and Levine, R. (2006) Bank supervision and corruption in lending, Journal of Monetary Economics 53

Bech M, Keister T (2012) ‘On the liquidity coverage ratio and monetary policy implementation’ BIS Q Rev

Beck, R., Jakubik, P. & Piloiu, A. (2013) ‘Non-performing loans: what matters in addition to the economic cycle?’ European Central Bank , Working Paper Series

Beck, T. and R. Levine (2002), “Industry Growth and Capital Allocation: Does Having a Market- or Bank-Based System Matter?”, Journal of Financial Economics, 64

Beck, T., Levine, R., Levkov, A., 2010. Big bad banks? The winners and losers from bank deregulation in the United States. The Journal of Finance 65, 1637—1667

Behrens, K., Robert-Nicoud, F., 2014a. Survival of the fittest in cities: Urbanisation and inequality. The Economic Journal 124, 1371—1400.

Bekaert, G., C. R. Harvey and C. Lundblad (2004), "Does Financial Liberalization Spur Growth?", Journal of Financial Economics

Beltratti, A. and R.M. Stulz (2012) 'The credit crisis around the globe: Why did some banks perform better?' Journal of Financial Economics 105

Beltratti, A. and Stulz, R. (2009) *Why Did Some Banks Perform Better During the Credit Crisis? A Cross-Country Study of the Impact of Governance and Regulation*, NBER Working Paper No. 15180: unpublished.

Bencivenga, V. R. and B. D. Smith (1991), "Financial Intermediation and Endogenous Growth", Review of Economics Studies, 58: 195-209.

Bencivenga, V. R. and B. D. Smith (1993), "Some Consequences of Credit Rationing in an Endogenous Growth Model", Journal of Economic Dynamics and Control, 17: 97-122.

Bende-Nabende, A. (2002) 'Globalisation, FDI, Regional Integration and Sustainable Development: Theory, Evidence and Policy' Aldershot: Ashgate

Blundell-Wignall, A. and Atkinson, P. (2010) 'Thinking beyond Basel III: Necessary solutions for capital and liquidity', *OECD Journal: Financial Market Trends, Vol. 1*.

Bennett, Robert A. (2000) 'Logical But Dangerous' 110 U.S. Banker 8

Berger, Allen N., and Christa H. S. Bouwman. (2013) 'How Does Capital Affect Bank Performance during Financial Crises?' Journal of Financial Economics

Berger, A. N., and R. DeYoung. (1997) 'Problem loans and cost efficiency in commercial banks' Journal of Banking & Finance 21

Bernanke, B, and Gertler, M. (2000) 'Monetary policy and asset price volatility' National Bureau of Economic research, Working Paper No. 7559

Bhaksar, R., ed. (2008) Realist theory of science, First ed., London: Routledge.

Binham, Caroline and Arnold, Martin. (2017) 'BoE tells banks to hold extra £6bn buffer for risks beyond Brexit' Financial Times accessed 7 February 2020.

BIS. 2021. BIS Statistic Explorer. Locational banking statistics.

BIS (2010) 'Assessing the Macroeconomic Impact of the Transition to Stronger Capital and Liquidity Requirements' Macroeconomic Assessment Group Final Report.

Blau, F., Kahn, L., 2015. Immigration and the distribution of incomes. In: Chiswick, B. R., Miller P. W. (Eds.), Handbook of the Economics of International Migration. Elsevier, Amsterdam, 793—843.

Blinder, A. (2010) 'How central should the central bank be? ', *Journal of Economic Literature,* 48(1), pp. 123-133.

Bliss, R., & Kaufman, G. (2003) 'Bank procyclicality, credit crunches, and asymmetric monetary policy effects: A unifying model' Journal of Applied Finance

Blum, J. and Hellwig, M. (1995) 'The macroeconomic implications of capital adequacy requirements for banks' European Economic Review

Blundell-Wignall, A. and P. Atkinson (2010) ‘Thinking Beyond Basel III: Necessary Solution for Capital and Liquidity’, Financial Market Trends

Boissay, F., and F. Collard (2016) ‘Macroeconomics of Bank Capital and Liquidity Requirements’ BIS Working Paper No. 596

Bonner, C. (2012) ‘Liquidity Regulation, Funding Costs and Corporate Lending’ DNB Working Paper

Bonner, C. (2014) ‘Liquidity regulation and bank behaviour’ Tilburg: Center for Economic Research

Bonner C, Eijffinger S (2013) ‘The impact of liquidity regulation on financial intermediation.’ CEPR Discussion Paper

Bonner, C. & Hilbers, P. (2014) ‘Global liquidity regulation - Why did it take so long?’ Working Paper

Bonner, C.,·Van Lelyveld, I., Zymek, R. (2015) ‘Banks’ Liquidity Buffers and the Role of Liquidity Regulation’ J Financ Serv Res

Borak, D., (2011) ‘Liquidity, the Other Basel III’ Bombshell, American Banker

Borchgrevink, Henrik., Ellingsrud, Sigmund., Hansen, Frank. (2014) ‘Macroprudential Regulation: What, Why and How?’ Norges Bank, Staff Memo No. 13

Borio, Claudio, (2012) ‘The Financial Cycle and Macroeconomics: What have we learned?’ BIS Working Paper 395

----------, Drehmann, M., Gambacorta, L., Jiménez, G., & Trucharte, C. (2010) ‘Countercyclical Capital Buffers: Exploring Options’ BIS Working Paper 317.

----------., Drehmann, M. and Tsatsaronis, K, (2011) ‘Stresstesting macro stress testing: does it live up to expectations?’ BIS

Boyd, J. H. and E. C. Prescott (1986), "Financial Intermediary-Coalitions”, Journal of Economics Theory, 38

Boyd, J., Runkle, D. (1993) ‘Size and Performance of Banking Firms’ Journal of Monetary Economics

Brewer III, E., H. Genay, W.E. Jackson III and P.R. Worthington (1996) ‘How are small firms financed? Evidence from small business investment companies’ Economic Perspectives-Federal Reserve Bank of Chicago 20

Breyer, S. G., (1982) ‘Regulation and its reform’

Brian Tamanaha, ‘The Primacy of Society and the Failures of Law and Development’ (2011) 44 Cornell Intl LJ 209

Brunnermeier, M.K., (2009) ‘Deciphering the Liquidity and Credit Crunch 2007–2008’ Journal of Economic Perspectives

---------- (December 2, 2011) ‘A Survey of Systemic Risk Analytics’ Discussion, Office of Financial Research

----------, Crocket, A., Goodhart, C., Persaud, A.D., Shin, H. (2009) 'The Fundamental Principle of Financial Regulation' Geneva Reports on the World Economy 11., International Center for Monetary and Banking Studies

----------. & Pedersen, L.H. (2009) 'Market Liquidity and Funding Liquidity' 22 Rev. Fin. Stud. 2201-2238

Bush, O., S. Knott, and C. Peacock (2015) 'Why is the UK banking system so big and is that a problem?' Bank of England Quarterly Bulletin 2014

C

Caballero, R., T., Hoshi and Kashyap, A. (2008) 'Zombie Lending and Depressed Restructuring in Japan' American Economic Review

Calderon C., Serven, L., 2004. The effects of infrastructure development on growth and income distribution. World Bank Policy Research Working Paper 3400.

Campbell, A., Protecting Creditors of Insolvent Banks: How should the rights of different types of creditors be best managed, in Financial Crisis Management and bank resolution ed. Labrosse, J.R., Olivares-Caminal R., Singh D., Informa 2009

Cappucci, M.T (2014) 'Prudential regulation and the knowledge problem: towards a new paradigm of systemic risk regulation' Vol 9 No 1 Virginia Law & Business Review

Caruana, J. (2014) 'How much capital is enough? IESE Business School conference on Challenges for the future of banking: regulation, supervision and the structure of banking' London

Caruana, J. 2010. 'Why Basel III matters for Latin American and Caribbean Financial Markets', ASBA-FSI High – Level Meeting on the Emerging Framework to Strengthen Financial Stability and Regulatory Priorities in the Americas, Antigua, Guatemala, 19 November

Cecchetti, S. and Schoenholtz, K. (2016) 'Transparent stress tests?' moneyandbanking.com.

CGFS. (2010) 'Macroprudential instruments and frameworks: a stocktaking of issues and experiences.' CGFS Papers No 38. Committee on the Global Financial System, Basel.

Chapman and Cutler LLP, The Regulation Of Marketplace Lending: A Summary Of The Principal Issues (2015 UPDATE) 2–3 (April 2015)

Case, K.E., Quigleyt, J.M., Shiller, R.J. (2005) 'Comparing wealth effects: the stock market versus the housing market' Adv. Macroecon

Cerutti, Eugenio, Stijn Claessens, and Luc Laeven. (2015) 'The Use and Effectiveness of Macroprudential Policies: New Evidence' Journal of Financial Stability

Cetin, N. (2011) 'Enforcement of Prudential standards in Turkish banking law' Vol 14 No. 3, Journal of Money Laundering Control

Charles w. Shekhar Aiyar, Wieladek, Calomiris Tomasz. (2014) 'Does Macro-Prudential Regulation Leak? Evidence from a UK Policy Experiment' Journal of Money, Credit and Banking

Chatterjee, Satyajit, Dean Corbae, Makoto Nakajima, and Jose-Victor R` Ios-Rull. (2007) 'A Quantitative Theory of Unsecured Consumer Credit with Risk of Default' Econometrica, 75

Chen, Y. and Hasan, I. (2006) The transparency of the banking system and the efficiency of information-based bank runs, Journal of Financial Intermediation 15, 307–331.

Cherowbrier, J. (2020) 'Leading UK banks 2019 by total assets' Statista

Chikoko, L., Mutambanadzo, T., and Vhimisai, T, (2012) 'Insights on Non-Performing Loans:

Evidence from Zimbabwean Commercial Banks in a Dollarised Environment (2009-2012)'

Journal of Emerging Trends in Economics and Management ciences

Chiuri, M. C., Ferri, G., & Majnoni, G. (2002) 'The macroeconomic impact of bank capital requirements in emerging economies: Past evidence to assess the future' Journal of Banking and Finance

Christoph Basten and Cathérine Koch. (2015) 'Higher Bank Capital Requirements and Mortgage Pricing: Evidence from the Countercyclical Capital Buffer (CCB)' BIS Working Papers No 511

Cifuentes, R., Ferrucci, G., and Shin, H. (2005) 'Liquidity risk and contagion' Journal of the European Economic Association 3

Cˇ ihak, M. and Podpiera, R. (2006) Is one watchdog better than three? International experience with integrated financial sector supervision, IMF Working Paper 06/57, Washington, DC

Clarotti, P. (1982) 'La coordination des legislations bancaires' Revue du Marche Commun 254

Claessens, S. (2014) 'Capital and Liquidity Requirements: A Review of the Issues and Literature' Vol 31 Issue 3 Yale Journal on Regulation

Clement, P. (2010) 'The term "macroprudential": origins and evolution' BIS Quarterly Review

Coates, D, Lyndon, R, McCarthy, Y. (Vol 2015) 'House price volatility: the role of different buyer types' Central Bank of Ireland Economic Letter Series

Cull, R., Peria, M.S.M., and verrier, J. (2017) Bank Ownership: Trend and Implications. IMF Working Paper WP/17/60

Cullen, J. (2012) 'The futility of stock-based compensation in light of imperfect market pricing' University of Manchester

Cullen, J. (2014) 'Executive Compensation in. Imperfect Financial Markets' Elgar

Cummings, J., R., and Wright, S. (2016) 'Effect of Higher Capital Requirements on the Funding

Costs of Australian Banks' The Australian Economic Review, vol. 49

Cottrell, S.P., 2015. What Drive Bank Wholesale Funding Spreads? Empirical Evidence from

Australia. Flinders University

D

Dana, B. S. (2018) 'Evaluation of Macro-prudential Policy on Credit Growth in Indonesia: Credit Registry Data Approac'. Etikonomi: Jurnal Ekonomi. Vol. 17 (2)

David VanHoose (2007) ‘Theories of bank behavior under capital regulation’ 31 issue 12 Journal of Banking and Finance

Davis, E.P., Zhu, H., (2009) ‘Commercial property prices and bank performance’ Q. Rev. Econ. Finance 49

De Haan, L & Van den End, J. W. (2013) ‘Bank liquidity, the maturity ladder, and regulation’ Journal of Banking and Finance

De la Fuente, A. and J. M. Marin (1996), “Innovation, Bank Monitoring, and Endogenous Financial Development”, Journal of Monetary Economics, 38: 269-301.

Delgado, F. L., Meza, M., (2011) ‘Developments in Financial Supervision and the Use of Macroprudential Measures in Central America’ IMF, Working Paper

Dell’Ariccia Igan, D., and Hui Tong, (2012) ‘Policies for Macrofinancial Stability: How to Deal with Credit Booms’ IMF Staff Discussion Note 12/06

Demirgu¨xc-Kunt, A., Detragiache, E., and Tressel, T. (2008) Banking on the principles: Compliance with Basel Core Principles and bank soundness, Journal of Financial Intermediation 17

Demyanyk, Yuliya, and Otto Van Hemert. (2009) ‘Understanding the Subprime Mortgage Crisis.’ Review of Financial Studies

Dermine, J. (1996) ‘European Banking Integration, Ten Years After’ European Financial Management 2 (3)

Dermine, J. (2013) ‘Bank regulations after the global financial crisis: good intentions and unintended evil’ European Financial Management

Dermine J. 2015. Basel III leverage ratio requirement and the probability of bank runs. Journal of Banking & Finance 53 (2015) 266–277

D’Hulster, Katia. 2009. The Leverage Ratio: A New Binding Limit on Bank. Crisis Response Note; No. 11. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/10224 License: CC BY 3.0 IGO.”

Diamond, D. W. (1984), "Financial Intermediation and Delegated Monitoring”, Review of Economic Studies, 51: 393-414.

Diamond, Douglas W. (1991) ‘Monitoring and Reputation: The Choice between Bank Loans and Directly Placed Debt’ Journal of Political Economy

Diamond, D. W. and P. H. Dybvig (1983), "Bank Runs, Deposit Insurance, and Liquidity”, Journal of Political Economy, 91: 401-419.

Diamond, D W and A K Kashyap (2015) ‘Liquidity requirements, liquidity choice and financial stability’ NBER WP

Diamond, D.W., and Rajan, R.G. (2000) ‘A Theory of Bank Capital’, Journal of Finance 55

Diamond, D. and Rajan, R. (2005) ‘Liquidity shortages and banking crises.’ Journal of Finance 60

Dierick, F., (2004) ‘The supervision of mixed financial services groups in Europe’ Occasional paper 20. European Central. Bank, Frankfurt

Dimitrios Bisias, et al, (2012) ‘A Survey of Systemic Risk Analytics’ Office of Financial Research, U.S. Department of the Treasury, Working Paper

Distinguin, I., Roulet, C. and Tarazi, A. (2013) ‘Bank regulatory capital and liquidity: evidence from US and European publicly traded banks’ Journal of Banking and Finance

D’Onofrio, A., Minetti, R., and Murro, P., 2016, Banking Development, socioeconomic structure and income inequality. Journal of Economic Behavior & Organization

Douglas, D. and Dybvig, P. (1983) ‘Bank Runs, Deposit Insurance, and Liquidity’ Journal of Political Economy 91

Douglas W. Diamond and R.G. Rajan, ‘A Theory of Bank Capital’, *Journal of Finance* 55(6) (2000) 2431-65.

Dowd, K. (2009a) ‘Moral Hazard and the Financial Crisis’, Cato Journal, 29, 141-66

Dowd, K. (2009b) ‘The Failure of Capital Adequacy Regulation’, in P. Booth (ed) Verdict on the Crash Causes and Policy Implications, London: Institute of Economic Affairs.

Dowd, K., M. Hutchinson, S. Ashby and J. M. Hinchcliffe (2011) Capital inadequacies: The Dismal Failure of the Basel Regime of Capital Regulation’, Policy Analysis, No. 681, July.

Drehmann, M., & Gambacorta, L. (2012) ‘The effects of countercyclical capital buffers on bank lending’ Applied Economics Letters

Drehmann, M. & Nikolaou, K. (2010) ‘Funding liquidity risk: Definition and measurement’ Journal of Banking & Finance

Drehmann, M., & Tsatsaronis, K. (2014) ‘The Credit-to-GDP Gap and Countercyclical Capital Buffers : Questions and Answers’ BIS Quarterly Review

Duffie, Darrell (2011) ‘How Big Banks Fail.’ Princeton University Press, Princeton, NJ

Duncan, Alfred and Nolan, Charles, (2015) ‘Objectives and Challenges of Macroprudential Policy’ prepared for Annual MMF UK Monetary and Financial Conference 25th September 2015 Bloomberg, London

E

Economist, The , 2012, ‘The mathematics of Markets’, 14 January

Eckhart Tolle, (February 2014) ‘The most rigid structures, the most impervious to change, will collapse first – Structure Evolving Banking Regulation’ Chapter 2, KPMG

Edelson, D.B. 2003. Letter to Basel Committee on Banking Supervision

Eichengreen, B. and Arteta, C. (2000). ‘Banking Crises in Emerging Markets: Presumptions and Evidence’, Working Paper 115, Center for International and Development Economics

Elliott, D. J. (2010) ‘A Primer on Bank Capital’ The Brookings InstitutionElliot, D. J. (2014) ‘Bank Liquidity Requirements: An Introduction and Overview.’ The Brooking Institution

Elliot, D. (2010) ‘Quantifying the effects on lending of increased capital requirements’ The Brookings Institutions

Emily Lee, (2013) ‘Basel III: post-financial crisis international financial regulatory reform’ Journal of International Banking Law and Regulation

Erlend Nier, (2011) ‘Macroprudential Policy-Taxonomy and Challenges’ 216 Nat’L Econ. Rev. R1

European Central Bank, (2015) ‘the impact of the CRR and CRD IV on financing: Eurosystem response to the DG FISMA consultation paper’

European Council (EC) (Council of the European Union), ‘Capital Requirements for the banking sector’

Evanoff D.D and Wall L. D. 2001. SND Yield Spread as Bank Risk Measures, Journal of Financial Services Research, 19

F

Farag,M.,Harland,D.,and Nixon,D.(2013) ‘Bank capital and liquidity’ Bank of England Quarterly Bulletin

Farhi, E., Golosov, M., and Tsyvinski, A. (2013) ‘A theory of liquidity and regulation of financial intermediation’ Review of Economic Studies 76

Fathurohman, I. (2020) ‘Undang Kegaduhan, Ini alasan DPR RI Revisi UU Bank Indonesia. Idntimes.com

Fathurohman, I. Sept 3, 2020. Revisi UU Bank Indonesia: OJK Gagal Melakukan Fungsi Pengawasan Bank. Idntimes.com

Fauzia, Mutia, (June 2018) ‘BI longgarkan LTV, Pembeli Rumah Pertama Bisa Bebas Uang Muka’ Ekonomi Kompas.com

FSCS Team, January 30, 2017. Updated £85,000 deposit limit. FSCS.org.uk

Fendoğlu, S. (2017) ‘Credit Cycles and Capital flows: Effectiveness of The Macroprudential Policy Framework In Emerging Market Economies’ Journal of Banking and Finance. Vol. 79

Fernández, A.I. and Gonzalez, F. (2005), “How accounting and auditing systems can counteract riskshifting of safety-nets in banking: some international evidence”, Journal of Financial Stability, Vol. 1 No. 4

Financial Policy Committee (2014a) ‘Record of the Financial Policy Committee Meetings 17 and 25 June 2014’ Bank of England

Financial Policy Committee (2015a) ‘The Financial Policy Committee’s powers over Leverage ratio tools’ Bank of England, A policy statement

Financial Services Authority (2010) 'Financial Services Authority, Summary of feedback to the Turner Review Conference Discussion Paper (DP09/4)'

Francis, W. and M. Osborne (2009), Bank regulation, capital and credit supply: measuring the impact of prudential standards, FSA Occasional Paper 36.

FSB,(2012) ‘Identifying the effects of regulatory reforms on emerging market and developing economies: A review of potential unintended consequences’ available at www. Financialstabilityboard.org/publications/r_120619e.pdf.: Scott., H. S., supranote 52 ,179.

FSB. 2012-2017. Total Financial Assets. NBFI Report

Fitzpatrick, T., McQuinn, K. (2007) ‘House Prices and Mortgage Credit : Empirical Evidence for Ireland’ The Manchester School

Flavin, M., Yamashita, T., (2002) ‘Owner-occupied housing and the composition of the household portfolio’ Am. Econ. Rev.

Foot, M. (2012) ‘Can Macroprudential Regulation Reduce Financial Instability?’ The Manchester School

FSB, IMF, BIS, (2011) ‘Macroprudential Policy Tools and Frameworks; Progress Report to G20.’ IMF, Washington

G

Gaia, Prasanna, Andrew Haldane, Sujit Kapadiab, (2011) ‘Complexity, concentration and contagion’ Journal of Monetary Economics

Gelain, P., Lansing, K.J., Mendicino, C., (2013) ‘House prices, credit growth, and excess volatility: implications for monetary and macroprudential policy.’ International Journal of Central Banking 9

Gale, D. & Ozgir O. (2005) ‘Are Bank Capital Ratios Too High or Too Low? Risk Aversion, Incomplete Markets, and Optimal Capital Structure’ 3 J. Eur. Econ.

Galor, O., Moav, O., 2004. From physical to human capital accumulation: Inequality and the process of development. The Review of Economic Studies 71, 1001—1026.

Gambacorta, Leonardo and Shin, Hyun song. 2016. Why Bank Capital matters for monetary policy. BIS Working Papers No. 558.

Gauthier, H. The Promises of Comparative Research,. Paper prepared for the European Panel Analysis Group (2000)

Gay, L.R., Mills, G.E. and Airasian, P. (2009) Educational Research Competencies for Analysis and Applications. Pearson, Columbus

Gerlach, S., Peng, W., (2005) ‘Bank lending and property prices in Hong Kong.’ 29 J. Bank. Financ.

Gimeno, R., Martinez-Carrascal, C., (2010) ‘The relationship between house prices and house purchase loans: the Spanish case’ 34 J. Bank. Financ.

Gohari, Behzad and Woody, Karen E., (2014) ‘The new global financial regulatory order: can macroprudential regulation prevent another global financial disaster?’ Journal of Corporation Law, Issue 2, Vol 40

Goldstein, M. 2008. The Subprime and Credit Crisis, Paper based on transcript of speech presented at the global economic prospects meeting, Peterson Institute for International Economics, 3 April.

Golin J (2001) The Bank Credit Analysis Handbook: A Guide for Analysts, Bankers and Investors. John Wiley & Sons (Asia) Pre LtdFotios Pasiouras · Chrysovalantis Gaganis · Constantin Zopounidis

Goodhart, C. (2010) 'The future of Finance: The LSE Report, Chapter 5 in A. Turner and others' London School of Economics and Political Science.

Goodhart, C.A. and Charle, G. (1998) 'Financial Regulation: Why, How and Where Now?' Routledge, London, pp. 10-12

Goodhart, C., Hofmann, B. (2008) 'House prices, money, credit, and the macroeconomy' Oxf. Rev. Econ. Policy

Goodhart, C., & Schoenmaker, D. (1995). Should the functions of monetary policy and banking supervision be separated?. Oxford Economic Papers

Gorton, G. and Metrick, A. 2012. The Financial Crisis of 2007-2009. Yale ICF Working Paper No. 12-20.

Grandia, R., Hanling, P., Lo Russo, M., and Aberg, P. (2019) 'Availability of high-quality liquid assets and monetary policy operations: an analysis for the euro area' ECB Occasional Paper Series

Greenwood, J. and B. Jovanovic (1990), "Financial Development, Growth, and the Distribution of Income", Journal of Political Economy, 98: 1076-1107.

Greenlaw, D, A Kashyap, K Schoenholtz and H Shin (2011) 'Stressed out: macroprudential principles for stress testing', paper presented at the US Monetary Policy Forum, New York.

Greenwood, J. and B. Smith (1996), "Financial Markets in Development, and the Development of Financial Markets", Journal of Economic Dynamics and Contro l, 21: 145-181.

Group of Thirty (2010) 'Enhancing Stability and Resilience Macroprudential Policy, Tools, and Systems for the Future' Washington, D.C.

Gros, D. and Lannoo, K. (2000) 'The Euro Capital Market' Chichester: John Wiley & Sons.

Grossman, S. J. & Miller, M.H. (1988) 'Liquidity and Market Structure' 43 J. Fin

H

Haas R, Lelyveld I, 2005, Foreign banks and credit stability in central and eastern Europe. A panel data analysis. Journal of Banking and Finance

Hadfield, G. K., (2008) 'The levers of legal design: institutional determinants of the quality of law' Vol. 36, Journal of Comparative Economics

Hadjiemmanuil, C. (1996a) 'Financial Reporting and Auditing in the Regulated Sector' Journal of International Business Law

Haldane, A. G. (2011) ‘Capital Discipline. Remarks Based on a Speech Given at the American Economic Association’ Denver, Colorado

---------- (2014) ‘Central Banks and Macroeconomic Ambidexterity’ Business Economics

---------- (2012) ‘The Dog and the Frisbee’ (Paper presented at the Federal Reserve Bank of Kansas City’s Economic Policy Symposium

Hancock, D. and J.A. Wilcox (1998) ‘The credit crunch and the availability of credit to small business’ Journal of Banking and Finance 22, 983-1014.

Hannoun, H. (2010) ‘Towards a Global Financial Stability Framework’ BIS Publications

Hantrais, L., Mangen, S. Cross-national Research Methods in the Social Sciences: Method and management of cross-national social research. Pinter, London,1998.

Harrison, P., O. Sussman and J. Zeira (1999), “Finance and Growth: Theory and Evidence”, Washington, DC: Federal Reserve Board (Division of Research and Statistics), mimeo.

Hellmann, T. F., Murdock, K. C. & Stiglitz, J. E. (2014) ‘Liberalization, Moral Hazard in Banking, and Prudential Regulation: Are Capital Requirements Enough?’ 90 am. Econ. Rev

Herring, R.J. and Litan, R.E. (1995) ‘Financial Regulation in a Global Economy’ Washington, DC: Brookings Institution

Herring, R. & Schuermann, T. Capital Regulation for Position Risk in Banks, Securities Firms, and Insurance Companies , in Capital Adequacy Beyond Basel: Banking, Securities, and Insurance 15, 19 (Hal S. Scott ed., 2005)

Hirte, H. And Heinrich, T. A. (2002) ‘Principles and Technical Instruments for Prudential Regulation’, in G. Alpa and F. Capriglione (eds) Diritto bancario communitario, Torino: UTET

HM Treasury, (2012) ‘Department for Business Innovation and Skills’ BIS

HM Treasury. (2012) ‘The Financial Services Bill: the Financial Policy Committee’s macroprudential tools’

HM Treasury (2012a) ‘Banking reform: delivering stability and supporting a sustainable economy’

HM Treasury (2012b) ‘Sound banking: delivering reform’. Cm 8453, October Stationery Office Limited

HM Treasury, (November 2016) ‘Consultation outcome: Financial Policy Committee powers of direction in the buy to let market’

HSBC, (23 January 2020) Mortgage rate from www.hsbc.co.uk/mortgages/our-rates/

Ho, C. T. and Wu, S. (2006) 'Benchmarking Performance Indicators for Banks', *Benchmarking,* 13(1)

Hockett, R. C., and Omarova, S.T., (2017) The Finance Franchise. 102 Cornell L. Rev. 1143, 1201

Holloway, I. and Wheeler, S., eds. (2002) Qualitative research for nurses, Second ed., Oxford: Blackwell Science

Holmstrom, Bengt, and Jean Tirole. (1997) 'Financial Intermediation, Loanable Funds, and The Real Sector.' Quarterly Journal of Economics

Hong, H, J-Z Huang and D Wu (2014) 'The information content of Basel III liquidity risk measures' Journal of Financial Stability

Hou, Y. (2007) 'The Non-performing Loans: Some Bank-level Evidences.' The 4th Advances in Applied Financial Economics, the Quantitative and Qualitative Analysis in Social Sciences conferences

HSBC, (23 January 2020) 'Mortgage rate' from www.hsbc.co.uk/mortgages/our-rates/

Huang, R., Ratnovski, L., 2011. The dark side of bank wholesale funding. *Journal of Financial Intermediation* 20 (2), 248-263.

Hupkes, Eva H.G.(2000) 'The Legal Aspect of Bank Insolvency: A Comparative Analysis of Western Europe' the United States and Canada, Kluwer Law International, Boston, MA

Hutchinson, T. (2013) 'Doctrinal research: Researching the jury' in Watkins, K. and Burton, M., eds., Research Methods in Law, Great Britain: Routledge

Hyytinen, A. and Takalo, T. (2002) Enhancing bank transparency: A re-assessment, European Finance Review 6

I

IFSA, 2017. 'Report of Indonesia Banking Profile' Quarterly IV

Igan, D., and Kang, H. (2011) 'Do Loan-to-Value and Debt-to-Income Limits Work? Evidence from Korea' International Monetary Fund, Working paper, No. 11/197

IMF (April 2008) 'Global Financial Stability Report'

IMF. 2012 – 2017. Table Annex 3. Sectoral Financial Statement: Deposit Takers – Balance Sheet

IMF. (June 2013) 'Key aspects of macroprudential policy'

IMF (2013b) 'The Interaction of Monetary and Macroprudential Policies'

IMF (2006) Spain: Financial Sector Assessment Program – Technical Note – Supervision of Insurance: Alternative Models for an Independent Agency, Country report no. 06/217, Washington, DC

IMF. 2016. Table Annex 1. Institutional Coverage for Deposit Takers and OFCs. Data IMF.

IMF. 2018. Financial Development Index Database. IMF Data

IMF. 2021. Core FSIs for Deposit Takers. Data IMF

IMF. 2021. Sectoral Financial Statement: Deposit Takers – Balance Sheet.

IMF.2021. Table Annex 4: Sectoral Financial Statement: Deposit Takers – Memorandum items.

In ‘‘A Special Report on International Banking’’, The Economist, 19 May, 2007.

Independent Commission on Banking (2011) ‘Final Report: Recommendations’. London: Domarn Group

Indonesia Financial Service Authority (Otoritas Jasa Keuangan “OJK”), (2017) ‘Report of Indonesia Banking Profile’ Quarter 2

Infra. Chapter 3. Subchapter 3.3.1.

International Monetary Fund (2016) ‘Financial Sector Assessment Program : Financial System Stability Assessment’ IMF Country Report No 16/167

Institute of International Finance (IIF). (2011) ‘The Cumulative Impact on the Global Economy of Changes in the Financial Regulatory Framework.’

Isabelle Vaillant, (2012) ‘Banks’ Remuneration Rules (CRD III): Are they implemented and do they work in practice?’ Workshop Implementation of Banks’ Remuneration Rules (CRD III), Brussel, European Banking Authority.

J

Jaakko Husa, 2015. A New Introduction to Comparative Law. Hart,

Jackson, P., Furfine, C., Groeneveld, H., Hancock, D., Jones, D., Perraudin, W., et al. (1999) ‘Capital requirements and bank behavior: The impact of the Basel accord. Basel Committee on Banking Supervision’ Working Paper No. 1, April

Jaromir Benes a, Michael Kumhof b,n, (2015) ‘Risky bank lending and countercyclical capital buffers’ Journal of Economic Dynamics & Control 58

Jarrow, Robert, (2013) ‘A leverage ratio rule for capital adequacy’ Journal of Banking and Finance 37

Jay Cullen (2017) ‘Securitisation, Ring-Fencing and Housing Bubbles: Financial Stability Implication of UK and EU Bank Reforms.’

Jeffery Atik, (2011) ‘Basel II: A Post-Crisis Post-Mortem.’ Transnat'l L. & Contemp. Probs.

Jenkinson, N. (2009) ‘Containing System-Wide Liquidity Risks: Some Issues and Challenges.’ European Business Organization Law Review

Jiménez, Gabriel, Steven Ongena, José Luis Peydró and Jesús Saurina, (2012) ‘Macroprudential Policy, Countercyclical Bank Capital Buffers and Credit Supply: Evidence from the Spanish Dynamic Provisioning Experiments’ Barcelona GSE Working Paper

Jin, Justin Yiqiang & Kanagaretnam, Kiridaran & Liu, Yi, 2018. "Banks' funding structure and earnings quality," International Review of Financial Analysis, Elsevier, vol. 59(C), pages 163-178.

Jin, J., Kanagaretnama, K. and Lobo, G. (2011) 'Ability of accounting and audit quality variables to predict bank failure during the financial crisis', *Journal of Banking & Finance,* 35(11), pp. 2811-2819.

Joan MacLeod Heminway & Shelden Ryan Hoffman, *Proceed at Your Peril: Crowdfunding and the Securities Act of 1933,* 78 TENN. L. REV. 879, 881 (2011).

João A. C. Santos, J. A.C. (2010) 'Bank capital regulation in contemporary banking theory: A review of the literature' Financial Markets, Institutions, and Instruments

Johnson, R. and Onwuegbuzie, A. (2004) 'Mixed Methods Research: A Research Paradigm Whose Time Has Come', *Educational Researcher*

Johnson, Simon, Kwak, James, (2010) '13 Bankers: The Wall Street Takeover and the Next Financial Meltdown' Pantheon Books, New York

Jones G (1993) 'British multinational banking 1830–1990' Oxford University Press, Oxford

Jorda O, Richter B, Schularick M, Taylor A. M (2017) 'Bank capital redux: Solvency, Liquidity, and Crisis' Federal Reserve Bank of San Francisco Working Paper

Jose Pagliery, Bitcoin and The Future of Money 6 (2014)

Juselius, M and M Kim (2011) 'Sustainable financial obligations and crisis cycles', Helsinki Economic Centre of Research Discussion Papers,313

A Justiniano and others, (2015) 'Credit Supply and the Housing Boom' Federal Reserve Bank of New York Staff Report

K

Kahn-Freund, O. (1966) 'Comparative Law as an Academic Subject', Law Quarterly Review,82

Kashyap, A. and Stein, J. (2004) 'Cyclical implications of the Basel II capital standards' Economic Perspectives, Federal Reserve Bank of Chicago

Kashyap, A. K., Stein, J. C. and Hanson, S. (2010) 'An analysis of the impact of "substantially heightened" capital requirements on large financial institutions', Working Paper, University of Chicago

Kashyap, A K, Tsomocos D P, and A P Vardoulakis, (2015) 'How does macroprudential regulation change bank credit supply?' revision of National Bureau of Economic Research working paper

Kay, J. (2009b) 'The future of financial services regulation, London: Centre for the Study of Financial Innovation.

Kay, J. 2010. 'Should we have 'narrow banking'?' in The Future of Finance, The LSE Report

Kenc, T. (2016) 'Macroprudential regulation: history, theory and policy' BIS Papers

Kevin Wack et al., *Innovation of the Year: Online Marketplace Lending,* AM. BANKER (Dec. 17, 2014)

Keynes, J. M. (1936) 'The General Theory of Employment, Interest and Money' London

Khan A, Dewan H (2011) 'Deposit insurance scheme and banking crises: a special focus on less-developed countries' Empir Econ

Kiema, I., Jokivuolle, E., (2014) 'Does a leverage ratio requirement increase bank stability' 39 Journal of Banking and Finance.

King, M. (2010) 'Mapping capital and liquidity requirements to bank lending spreads' BIS Working Paper Series

KPMG. 2013. 'Basel 4 – Emerging from the Mist', http://www.kpmg.com/LU/en/Issuesandinsight/articlespublications/Documents/Basel-emerging-from-the-mist.pdf.

Knies, K. (1876) 'Geld und Credit' Vol. 2, Berlin, Weidmann, Leipzig

Koch, Catherine (September 2016) 'The United Kingdom as a hub for international banking' BIS Quarterly Review

Kohn, M..1987. Cross-National Research as an Analytic Strategy. American Sociological Review

Kokkinis, Andreas (2013) *The financial services act 2012 : the recent overhaul of the United Kingdom's financial regulatory structure.* International Company and Commercial Law Review, Volume 24 (Number 9).

Korhonen, P. (2013) 'Do macroprudential tools require micro-data?' Proceedings of the

Porto Workshop on 'Integrated management of micro-databases', BIS

Kremers, J., Schoenmaker, D., & Wierts, P., 2003. Cross-Sector Supervision: Which Model?

Brookings-Wharton Papers on Financial Services

Krishnamurthy, P. (2010) 'How debt markets have malfunctioned in the crisis.' Journal of Economic Perspectives 24

Krishnamurthy, P. (2014) 'Regulating Capital' 4Harv. Bus. L. Rev < http://scientistship.law.berkeley.edu/facpubs/2463/> accessed 26 September 2017

Krishnamurthy, P (2014) 'Rules, Standards, and Complexity in Capital Regulation' 43 Journal of Legal Studies

Kuhn, T., ed. (1970) The Structure of Scientific Revolutions, Third ed., Chicago: University of Chicago Press.

Kurniasari, W., Juni 2012, "Analisis Neraca Kasus Pemberian Dana Talangan (Bailout) Bank Century", Jurnal InFestasi, Vol 8 No. 1, p. 97-106

Kurniawan, Ari and Shomad, A. (2019) 'Reflection on Century Bank: A Failed Bank in Indonesia.' International Corporate Rescue. Chase Cambria UK

Kurowski, P. 2010. 'Comment', 15 September, http://blogs.reuters.com/financial-regulatory-forum/tag/basel-iii

Kyle A (1985) ‘Continuous auctions and insider trading’ Econometrica 53

L

Lallour, A., & Mio, H. (2016) ‘Do we need a stable funding ratio? Banks’ funding in the

global financial crisis’ Bank of England Staff Working Paper No. 602

Lamoreaux, N. (1995), Insider Lending: Banks, Personal Connections, and Economic Development in Industrial New England, New York: Cambridge University Press.

Laursen, Christopher, et al (2010) ‘why too big to fail is too short sighted to succeed: problems with reliance on firm size for systemic risk determination’ PCI White Paper

Legrand, P. (1995) 'Comparative Legal Studies and Commitment to Theory', Modern Law Review, 58

Legrand, P. (2009) Le droit compare, 3rd ed., Presses Universitaires France.

Levine, R. 2004. Finance and Growth: Theory and evidence. NBER Working Paper Series

Levine, R., 2004. Finance and growth: theory and evidence. In Aghion, P., Durlauf, S. N., Handbook of Economic Growth (Eds.), Volume 1A, Amsterdam, Elsevier North Holland

Lim, C., Columba, F., Costa, A., Kongsamut, P., Otani, A., Saiyid, M., Wezel, T. and Wu, X. (2011) ‘Macroprudential Policy: What Instruments and How to Use Them? Lessons from Country Experiences’ IMF, Working Paper

Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, 79 Fed. Reg. 197

Llewellyn, D.T. (1999c) ‘The Institutional Structure of Regulatory Agencies, in Central Banking Publications, How Countries Supervise their Bank, Insurers and Securities Markets’ London: Central Banking Publications

Llewellyn, D. (2006) Institutional Structure of Financial Regulation and Supervision: The Basic Issues, paper presented at the World Bank Seminar: Aligning Supervisory Structures with Country Needs, 6–7 June, World Bank, Washington, DC

Llewellyn, D. T. 2010. ‘The Global Banking Crisis and the Post Crisis Banking and Regulatory Scenario’, Research Papers in Corporate Finance, University of Amsterdam, June.

Logan, A (2000), ‘The early 1990s small banks’ crisis: leading indicators’, *Bank of England Financial Stability Review*, Issue 9, December

Lopez, H., 2003. Macroeconomics and inequality. World Bank Working Paper, Washington D.C.

Lou, J. (2000) ‘China's Bank Non-Performing Loan Problem: Seriousness and Causes’ 34 Int'l L

Louzis, D.P., Vouldis, A.T., Metaxas, V.L. (2010) ‘Macroeconomic and bank-specific determinants of non-performing loans in Greece: a comparative study of mortgage, business and consumer loan portfolios’ Bank of Greece, Working Paper

Lucas, R. E., and N. Stokey, (2011) ‘Liquidity Crises. Understanding sources and limiting consequences: A Theoretical Framework’ Economic Policy Paper Fed Minneapolis

M

Macleod, R. and Patrick, H. (2013) Scottish independence: the Bank of England (and Wales, Northern Ireland and Scotland). Law and Financial Markets Review. Vol 7. Iss 2.

Mann, T. (2010) 'Australian Law Dictionary'

Mansor H. Ibrahim, Mohamed Eskandar Shah (2012) ‘Bank lending, macroeconomic conditions and financial uncertainty: Evidence from Malaysia.’ Review of Development Finance 2

Mansor H. Ibrahim, Siong Hook Law (2014) ‘House prices and bank credits in Malaysia: An aggregate and disaggregate analysis.’ Habitat International 42

Maria Balgova, Michel Nies and Alexander Plekhanov (2016) ‘The economic impact of reducing nonperforming loans’ European Bank for Reconstruction and Development

Marinč, M., Mrak, M., Rant, V. (2014) ‘Dimensions of Bank Capital Regulation: A Cross-Country Analysis.’ Panoeconomicus

Mark Pengelly, (2010) ‘Uncertain Ratios’ Risk 23.3

Martynova, N., (2015) ‘Effect of bank capital requirements on economic growth: a survey, De Nederlandsche Bank’ DNB Working Paper No. 467

Mayer, C. (2011) ‘Housing Bubbles: A Survey.’ Annual Review of Economics

McCann, F, (2014) ‘Modelling default transitions in the UK mortgage market’ Central Bank of Ireland Research Technical Paper 18/RT/14

McGrane, V. (2012) ‘Regulators Steadfast over Rules’ Wall Street Journal

McElroy, A. L. (2013) ‘An Examination of Basel III and the new U.S. Banking Regulations’ Wake Forest Journal of Business and Intellectual Property Law

Mertler, C. A. (2016). Introduction to educational research. Thousand Oaks, CA: SAGE.

Merton, R. C. and Z. Bodie (1995), "A Conceptual Framework for Analyzing the Financial Environment”, In: the Global Financial System: A Functional Perspective, Eds: D. B. Crane, et al., Boston, MA: Harvard Business School Press

Merton, R. C. and Z. Bodie (2004), “The Design of Financial Systems: Towards a Synthesis of Function and Structure”, National Bureau of Economic Research Working Paper Number 10620.

Metzing, P. C. (2016) ‘Macro-prudential financial regulation of banks after the crisis of 2008’ Newcastle University Business School

A Mian and A Sufi, (2014) ‘House Of Debt’ University of Chicago Press.

Michael Koetter, Tigran Poghosyan (2010) ‘Real estate prices and bank stability’ Journal of Banking & Finance 34

Mike Buckle&John Thompson (2004) 'The UK Financial System: Theory and Practice' Manchester University Press.

Mike Cagney, *How Marketplace Lenders Will Save Financial Services*, AM. BANKER (Aug. 19, 2015)

Miles, D., J. Yang, and G. Marcheggiano. (2011) 'Optimal Bank Capital.' CEPR Discussion paper 8333, April.

Minsky, H.P.(1986) 'Stabilizing an Unstable Economy.' New Haven, CT: Yale University

---------- and C. Campbell. (1987) 'How to Get Off the Back of a Tiger, or, Do Initial Conditions Constrain Deposit Insurance Reform?' In Merging Commercial and Investment Banking

Modigliani, Franco, and Merton H. Miller (1958) 'The cost of capital, corporation finance and the theory of investment' The American Economic Review

Moosa, Imad. A. 2015. Good Regulation, Bad Regulation: The Anatomy of Financial Regulation. Palgrave Macmillan

Mora, N., (2008) 'The effect of bank credit on asset prices: evidence from the Japanese real estate boom during the 1980s.' 40 J. Money, Credit, Bank.

Morgan D, Strahan PE (2004) Foreign bank entry and business volatility: Evidence from U.S. states and other countries. In: L.A. Ahumada and J.R. Fuentes, Editors, Banking Market Structure and Monetary

Policy, Central Bank of Chile, Santiago, 241–269

Morris, S and H S Shin (2010) 'Illiquidity component of credit risk'

Morrison & Foerster LLP, 'Regulatory capital—purpose, quantity and quality' (lexis nexis)

Moussa, M. A. B., (2015) 'The Determinants of Bank Liquidity: Case of Tunisia' International Journal of Economics and Financial Issues

Myers, S. (1977) 'The Determinants of Corporate Borrowing' Journal of Financial Economics 5

Myers, S. C., and N. Majluf (1984), "Corporate Financing and Investment Decisions when Firms Have Information that Investors Do Not Have", Journal of Financial Economics, 13: 187- 221.

N

Nicolo, G. D. (2016) 'Liquidity Regulation: Rationales, Benefits and Costs' NatioNal iNstitute ecoNomic Review

Nicolo, G. D., Gamba, A. and Lucchetta, M. (2014) 'Microprudential regulation in a dynamic model of banking' Review of Financial Studies

Nicolò, Gianni, Giovanni Favara, and Lev Ratnovski, (2012) 'Externalities and Macroprudential Policy' IMF Staff Discussion Notes

Nier, E., and U. Baumann. 2006. “Market Discipline, Disclosure and Moral Hazard in Banking.” Journal of Financial Intermediation 15 (3)

Nikolaou, K. (2009) ‘Liquidity (Risk) Concepts—Definitions and Interactions.’ ECB Working Paper Series

Norton, J.J., (1989) ‘Capital Adequacy Standards: A Legitimate Regulatory Concern for Prudential Supervision of Banking Activities?’ 49 Ohio St. L.J.

Noss, J and Toffano, P. ‘Estimating the impact of Changes in Aggregate Bank Capital requirement during upswing’ Bank of England Working Paper No 494 March 2014.

O

Obstfeld, M. (1994), "Risk-Taking, Global Diversification, and Growth”, American Economic Review, 84: 1310-1329.

Oikarinen, E. (2009) ‘Interaction between house prices and household borrowing: the Finnish case.’ Journal of Banking and Finance

OJK Press Conference, (2017) ‘implementation of Basel III in line with national interest’ SP 106/DHMS/OJK/XII/2017

Ong, L, and M Cihak (2010) ‘Of runes and sagas: Perspectives on liquidity stress testing using an Iceland example’, IMF Working Paper,WP/10/156

Oona Hathaway, ‘Path Dependence in the Law: The Course and Pattern of Legal Change in a Common Law System’ (2001) 86 Iowa L Rev 601, 659.

Òscar Jordà and others.(2014) ‘The Great Mortgaging: Housing Finance, Crises, and Business Cycles’ NBER Working Paper

Oshinsky, R. and Olin, V. (2006) 'Troubled banks: why don’t they all fail?', *FDIC Banking Review,* 18(1), pp. 23-44.

Otašević, D. (2013) ‘Macroeconomic determinants of the quality of banks’ loan portfolio in Serbia.’ Working paper, NBS

P

Padoa-Schioppa, T. (2002a) ‘Securities and Banking: Bridges and Walls’ Lecture at the London School of Economics, London

Panourgias, L.E. (2006) ‘Banking Regulation and World Trade Law’ GATS, EU and Prudential Institution Building, Oxford: Hart Publishing

Paradiso, A., Casadio, P., Rao, B.B., (2012) ‘US inflation and consumption: a long-term perspective with a level shift’ Econ. Model

Parliamentary Commission on Banking Standards (PCBS) (2013) ‘Changing banking for good’

Pasiouras, F., Gaganis, C. Zopounidis, C. 2006. The impact of bank regulations, supervision, market structure, and bank characteristics on individual bank ratings: A cross-country analysis. Rev Quant Finan Acc (2006) 27, p.409

Pedro Franco, Understanding Bitcoin: Cryptography, Engineering, and Economics 4, 110-11 (2015)

Peek, Joe, and Eric Rosengren (2000) 'Collateral Damage: Effects of the Japanese Bank Crisis on Real Activity in the United States' American Economic Review 90(1)

Perotti, E.,& Suarez, J. (2011) 'A Pigovian Approach to Liquidity Regulation' the 12th Jacques Polak Annual Research Conference Hosted by the International Monetary Fund

Perry, C. (2000) 'Case research in marketing', The Marketing Review, 1(3)

Phil Suttle (2011) 'The cumulative impact on the global economy of changes in the financial regulator framework' Inst. Of Int'l Fin. available at http://www.iif.com/emr/resources+1359.php.

Picciotto, S. and Haines, J. (1999) 'Regulating global financial markets' Vol. 26, Iss. 3, Journal of Law and Society

Pimlott, D. (2011) 'King at odds with ECB on eurozone crisis', *The Financial Times*

PLC Financial Service, (2014) 'CRD III, Thomson Reuters Practical Law' (accessed on 18 August 2019) https://uk.practicallaw.thomsonreuters.com/5-503-2593?transitionType=Default&contextData=%28sc.Default%29

Podpiera, J., Weill, L. (2008) 'Bad Luck or Bad Management? Emerging Banking Market Experience' Journal of Financial Stability

Posner, R. (1981) 'The Present Situation in Legal Scholarship', The Yale Law Journal, 90(5)

Posner, R. (2002) 'Legal Scholarship Today', Harvard Law Review, 115(5)

Powell, R. and Allen, D. (2011) 'Credit Risk and Real Capital: An Examination of Swiss Banking Sector Default Risk Using CVaR', *Journal of Modern Accounting and Auditing*, 7(6), pp. 541-554.

Prado, M. and Trebilcock, M. 2009. 'Path Dependence, Development, and the Dynamics of Institutional Reform' 59 UTLJ 341

Pramono, Bambang & Hafidz, Januar & Adamanti, Justina && Muhajir, Maulana Haris, and Alim, Muhammad Sahirul. 'The Impact of Countercyclical Capital Buffer Policy on Credit Growth in Indonesia', (December 2015) Working paper/4/2015 Bank Indonesia

PWC (2017) 'Indonesia Banking Survey 2017'

Q

Quansah, Josiah G. D.G, (2014) 'Capital Adequacy under Basel 3: its implication for large Commercial Banks in Ghana and Kenya' The University of Leeds

R

Raddatz, C. (2010) 'When the Rivers Run Dry: Liquidity and the Use of Wholesale Funds in the Transmission of the U.S. Subprime Crisis' World Bank Policy Research Working Paper Series No 5203

Rainer B¨ ohme et al., *Bitcoin: Economics, Technology, and Governance*, 29 J. Econ. Persp. 213, 220–21 (2015)

Rajan, R., Dhal, S.C. (2003) 'Non-performing loans and terms of credit of public sector banks in India: An empirical assessment' Reserve Bank of India Occasional Papers

Rajan, R. G. and L. Zingales (1998), "Financial Dependence and Growth", American Economic Review, 88

Ranciere, R., Tornell, A. and Westermann, F. (2008) 'Systemic crises & growth', *Quarterly Journal of Economics*, 123(1)

Randall Peerenboom, China's Long March toward Rule of Law (CUP 2002)

Rebonato, R (2007), The Plight of the Fortune Tellers: Why we need to manage financial risk differently, Princeton (NJ): Princeton University Press.

Reinhart, C., and K. Rogoff. (2011) 'From financial crash to debt crisis' American Economic Review

Ritaine, E. C. 2008, 'Legal Engineering in Comparative Law' in E Cashin Ritaine, L Frank and S Lalani (eds), L'inge¤ nierie juridique ete le droit compare¤ (ISDC 2008) 9

Robson, C. (2002) Real World Research, Second ed., Oxford: Blackwell.

Ronald W. Anderson and Karin Joeveer, (Apr. 21, 2014) 'The economics of collateral'

Rose, Andrew K, (2012) 'International Financial Integration and Crisis Intensity' ADBI Working Paper Series

S

Samuel G. Hanson, Anil K Kashyap, and Jeremy C. Stein, (2011) 'A Macroprudential Approach to Financial Regulation' 25 Journal of Economic Perspectives

Sarah Pei Woo, (2011) 'Regulatory Bankruptcy: How Bank Regulation Causes Fire Sales' 99 Geo. L.J. 1615

Saurina, Jesus, (2009) 'Loan Loss Provisions in Spain. A Working Macroprudential Tool' Revista de Estabilidad Financiera, 17

Scott, W. R. (2001). Institutions and organizations (2nd ed.). Thousand Oaks, CA: Sage

Schnabel, I. and Shin, H. (2004) 'Liquidity and contagion: The crisis of 1763.' Journal of the European Economic Association 2

Schoenmaker, D. (2013) 'An integrated Financial Framework for the Banking Union: Don't Forget Macro Prudential Supervision' European Commission. Economic Papers 495

Schoenmaker, D. (2015) 'Regulatory capital: Why is it different?' Accounting and Business Research

Schoenmaker, Dirk, and Peter J. Wierts, (2011) ‘Macroprudential Policy: The Need for a Coherent Policy Framework’ DSF Policy Paper 13 (Amsterdam, The Netherlands: Duisenberg School of Finance)

Schooner, H.M. & Taylor, M.W. (2010) ‘Global Bank Regulation Principles and Policies’

Scott, H. S. (2016) ‘Connectedness and Contagion : Protectiong the Financial System from Panics’ Cambridge, MA : The MIT Press

Sergio, M. (1996) ‘Non-performing bank loans: Cyclical patterns and Sectoral risk’ Review of Economic Conditions in Italy, Rome

Sharma, P 2004, ‘Liquidity Risk’, A Speech:

Shaw, R. (2001) ‘The Bank is Dead, Long Live the Bank, in E. Gardener and P.C. Versluijs (eds) Bank Strategies and Challenges in the New Europe’ Basingstoke (UK): Palgrave Macmillan

Shin, H. (2009) 'Reflections on Northern Rock: The Bank Run that Heralded the Global Financial Crisis', *Journal of Economic Perspectives,* 23(1), pp. 101-119.

Shleifer, A. and Vishny, R. W. (1992) ‘Liquidation Values and Debt Capacity: A Market Equilibrium Approach’ Journal of Finance

Siems, M. (2008) 'Legal Originality', Oxford Journal of Legal Studies, 28(1)

Simkins, B. and Steven A. Ramirez, S.A. (2008) ‘Enterprise-Wide Risk Management and Corporate Governance’ 39 LOY. U. CHI. L.J. 577.

Sinkey, J. J. F. (2002) *Commercial Bank Financial Management,* Englewood Cliffs, N.J.: Prentice-Hall.

Sirri, E. R. and P. Tufano (1995),"The Economics of Pooling”, In: The Global Financial System: A Functional Approach, Eds: D. B. Crane, et al., Boston, MA: Harvard Business School Press: 81-128.

Smith, A. (1776), An Inquiry into the Nature and Causes of the Wealth of Nations, London: W. Stahan & T. Cadell.

Stamegna, C, (2019) ‘Amending capital requirements: The CRD V package’ European Parliamentary Research Service

Stephanie Stolz, (2002) ’The relationship between bank capital, risk-taking, and capital regulation: A review of the literature’ (Manuscript, Kiel Institute for World Economics 2002)

Stephen Morris and Hyun Song Shin (2008) ‘Financial Regulation in a System Context’ Brookings Papers on Econ. Activity

Stern, T. (2014) ‘Regulating Liquidity Risks within ‘Institutional Protection Schemes’ Beijing Law Review, 2014

Steven L. Schwarcz, (2008) ‘Systemic Risk’ 97 GEO. L.J. 193

Stiglitz, J. and A. Weiss (1983), "Incentive Effects of Terminations: Applications to Credit and Labor Markets”, American Economic Review, 73(5): 912-927.

Stijn Claessens. (2014) ‘An Overview of Macroprudential Policy Tools’ IMF Working Paper

Stijn Claessens, (2014) ‘Capital and Liquidity Requirements: A Review of the Issues and Literature’ Vol 31 Issue 3 Yale Journal on Regulation

Stijn Claessens and Ghosh, S. R. (2012) ‘Macro-Prudential Policies: Lessons for and from Emerging Markets’ in Proceedings of the 2012 EWC/KDI Conference on Financial Regulations on International Capital Flows and Exchange Rates

Stijn Claessens and Laura Kodres, (2014) ‘The Regulatory Responses to the Global Financial Crisis’ WP/14/46 International Monetary Fund

Strahan, P. (2008) ‘Liquidity Production in the 21st’ Century.NBER Working Paper

Subramanian, A.; Wang, J. (2015) ‘Catastrophe risk transfer.’ http://ssrn.com/abstract=2321415

Sundararajan, V., Enoch, C., San José, A., Hilbers, P., Krueger, R., Moretti, M. and Slack, G. (2002) *Financial Soundness Indicators: Analytical Aspects and Country Practices* Washington, D.C: International Monetary Fund.

Sunstein, C.R. (1990) ‘After the rights revolution: reconceiving the regulatory state’

Surjaningsih, N, Chawwa, T, Indriani, R (2015) ‘The Impact of an increase in capital adequacy regulation on the interest rate spread of banks using accounting-based analysis’ working paper Bank Indonesia

Svante Mandella and Mats Wilhelmsson (2015) ‘Financial infrastructure and house prices’ Applied Economics

Schwab, K. 2019. The Global Competitive Report. World Economic Forum.

Schwab, K. and Zahidi, S., 2020, The Global Competitiveness Report: How Countries are performing on the Road to Recovery. World Economic Forum.

T

Tarbert, H.P. (2000) ‘Are International Capital Adequacy Rules Adequate? The Basle Accord and Beyond’ University of Pennsylvania Law Review 148

Tarullo, D. (2009) ‘Regulatory restructuring’ Testimony before the Committee on Banking,

Housing, and Urban Affairs, U.S. Senate, Washington, D.C.

Taylor, M. (1995). " Twin Peaks": A Regulatory Structure for the New Century. Centre for the study of financial innovation.

Thakor, A. V., (2014) ‘Bank Capital and Financial Stability: An Economic Tradeoff or a Faustian Bargain’ 6 ann. rev. fin. Econ

The Dept of the Treasury (2012) ‘The financial crisis response’

The join Forum, (2001) ‘Risk Management Practices and Regulatory Capital : Cross Sectoral comparison’ BIS

The IFSA, ‘Indonesia Banking Statistics’ (2017) vol 15 No.07 Otoritas Jasa Keuangan

The Sound Principles are available at www.bis.org/publ/bcbs144.htm

Thomson, T.S. 2003. Letter to Basel Committee on Banking Supervision

Todd Baker, *Marketplace Lenders Are a Systemic Risk,* AM. BANKER (Aug. 17, 2015)

Tovar, C. E., Garcia-Escribano, M., & Martin, M. V. (2012) ‘Credit Growth and the Effectiveness of Reserve Requirements and Other Macroprudential Instruments in Latin America’ IMF Working Paper 12/142

Trefis Team, (2014) ‘Fed Stress Test For Banks: Rationale, Results & Implications’ Forbes

Tucker, P. (2011) 'Macro and Microprudential supervision', *Speech given by Paul Tucker, Deputy Governor Financial Stability, member of the Monetary Policy Committee and member of the interim Financial Policy Committee*.

Turner, A. (2010) ‘Something old and something new: Novel and familiar drivers of the latest crisis.’ Speech, European Association of Banking and Financial History

Turner, A. (2009) ‘The Turner Review: A Regulatory Response to the Global Banking Crisis’ Financial Services Authority, London

Twining, W. (1976) Academic Law and Legal Development, translated by Lagos: University of Lagos Faculty of Law.

U

Utari, G. A. D., Arimurti, T., & Kurniati, I. N. (2012) ‘Pertumbuhan Kredit Optimal (The Optimal Credit Growth).’ Buletin Ekonomi Moneter dan Perbankan. Vol. 15(2): 3–36

UK leverage ratio: implementing the structure to systemic ring fenced bodies and reflecting the buffer of the systemic risk.

V

Vaillant, I (2012) ‘Banks’ Remuneration Rules (CRD III): Are they implemented and do they work in practice?’ Workshop Implementation of Banks’ Remuneration Rules (CRD III), Brussel, European Banking Authority.

Van den End, J., Tabbae, M., 2012. When liquidity risk becomes a systemic issue: empirical evidence of bank behavior. *Journal of Financial Stability* 8 (2), 107-120.

Vives, X. (2005) ‘Complementarities and games: New developments’ Journal of Economic Literature 43(2)

Vodova, P. (2013) ‘Determinants of commercial bank liquidity in Hungary’

Volcker, Paul A. and Frenkel, Jacob A, (2010) 'Enhancing Financial Stability Resilience, Macroprudential Policy, Tools, and Systems for the Future' Working Group on Macroprudential Policy, The Group of Thirty Report

W

Walker, G. (2001) 'The New Capital Accord' Financial Regulation International

Walter, S. (2010) 'Basel II and Revisions to the Capital Requirement Directive'

Walker, G. and Purves, R. (2014) 'The PRA and FCA and the Handbooks of Rules and Guidance' Financial Service Law (3rd Edition)

Wayan dan Ni Luh. (2014) 'Pengaruh Rasio Kecukupan Modal Dan Rasio Penyaluran Kredit Terhadap Profitabilitas Dengan Moderasi Rasio Kredit Bermasalah' E-Jurnal Akuntansi Universitas Udayana

Williamson, S. D. and R. Wright (1994), "Barter and Monetary Exchange under Private Information", American Economic Review, 84: 104-123.

Wood, D. 2008, 'A Model Model?', OpRisk & Compliance, March, 35-7.

World Bank (2014) 'Global Findex Database'

World Bank, 2017, GDP percapita growth (annual %)

World Bank (2000) 'Entering the 21st Century. World Development Report 1999/2000' Oxford: Oxford University Press

Worner, I. (2000) 'Europaische Bankenregulierung im Spannungsverhaltnis zwischen Regulierungswettbewerb und Harmonisierungsbemuhungen' Baden-Baden: Nomos

Wright, R.E. (2002), The Wealth of Nations Rediscovered: Integration and Expansion in American Financial Markets, 1780-1850, Cambridge, UK: Cambridge University Press.

Wymeersch, E., 2006. The structure of financial supervision in Europe: About single, twin peaks and multiple financial supervisors. European Business Organization Law Review, 8

Y

Yellen, J.L. (2011) 'Pursuing Financial Stability at the Federal Reserve' Chicago IL: Federal Reserve Bank of Chicago

Book

Armour, J., Awrey, D., Davies, P., Enriques, L., Maye, J. N. C., Payme, J. (2016) 'principle of financial regulation: Liquidity regulation' Oxford University Press

Cook, James. (2020) 'UK tech investment surges to record £10.1bn in 2019' The Telegraph

Cranston, R. Avgouleas, E., Zwieten, K., Hare, C., and Van Sante, Theodor (2017) 'Principle of Banking Law' Oxford. 3rd edition

Dragomir, Larisa, (2010) ‘European Prudential Banking Regulation and Supervision: the legal dimension’ Routledge

Freixas, X., and J. C. Rochet, (2008) ‘Microeconomics of Banking’ (The MIT Press Cambridge, MA) 2nd edn.

Goodhart, C. (2009) ‘The Regulatory Response to the Financial Crisis, chapter 7: Liquidity Risk Management’ Edward Elgar Publishing

Hal S. Scott (2008) ‘Int’l Finance – Transaction, Policy and Regulation’ Foundation Press, 15th ed. 334-35’

Jeff Madura (2010) ‘Financial Markets and Institutions’ 492 (9th ed. 2010)

Mike Buckle&John Thompson, (2004) ‘The UK Financial System: Theory and Practice’ Manchester University Press

Richard Scott Carnell, Jonathan R. Macey and Geoffrey P. Miller, (2009) ‘The Law of Banking and Financial Institution’ (4th ed. 2009)

Walker, G. and Purves, R. (2014) ‘The PRA and FCA and the Handbooks of Rules and Guidance, Financial Service Law (3rd Edition)

Report

AFME and SIFMA, Q2 (2019) ‘Securitisation Data Report: European Structured Finance’

Bank Indonesia, (2019) ‘survey of residential property price’

https://www.bi.go.id/id/publikasi/survei/harga-properti-primer/Documents/Triwulan%20III%20-%202019.pdf

Bank of England, ‘Bank capital and liquidity’ (2013) ‘Q3 Quarterly Bulletin’

EBA (2013a) ‘Report on Appropriate Uniform Definitions of Extremely High Quality Liquid Assets (Extremely HQLA) and High Quality Liquid Assets (HQLA) and on Operational Requirements for Liquid Assets under Article 509(3) and (5). London’

European banking coordination „Vienna“ initiative (2012) ‘Report of Working Group on NPLs in Central, Eastern and Southeastern Europe’

Group of Thirty (15 January 2009) ‘Financial Reform: A Framework for Financial Stability’ available at www.group30.org/pubs/reformreport.pdf.

High-Level Expert Group on Reforming the Structure of the EU Banking Sector (2012) chaired by Erkki Liikanen, Final Report, Brussels (2 Oct 2012) (the ‘Liikanen Report’)

Indonesia Financial Service Authority (Otoritas Jasa Keuangan “OJK”), (2017) ‘Report of Indonesia Banking Profile’ Quarter 2

PWC (2017) ‘Indonesia Banking Survey’ <www.pwc.com/id>

The IFSA, (2017) ‘Indonesia Banking Statistics’ vol 15 No.07 Otoritas Jasa Keuangan

IFSA, 2016. ‘Report of Indonesia Banking Profile (RIBP)’ Quarterly III

Indonesia Financial Service Authority (Otoritas Jasa Keuangan “OJK”), (2017) ‘Report of Indonesia Banking Profile’ Quarter 2

Research Team of Century Case, ‘Skema Indikasi Korupsi Kasus Bank Century (Berdasarkan Hasil Audit BPK)’ Public Accountability Review

Newspaper

Adityowati, P., Sawitri, A., A., (2017) ‘Triwulan Pertama 2017, Tingkat Kredit Macet KPR Meningkat’
https://bisnis.tempo.co/amp/878389/triwulan-pertama-2017-tingkat-kredit-macet-kpr-meningkat

Ali, F. (2015) ‘Mandiri, BNI, dan BRI Teken Kesepakatan Pinjaman 3 Miliar Dollar AS dari China’Kompas.com
https://ekonomi.kompas.com/read/2015/09/17/062618626/Mandiri.BNI.dan.BRI.Teken.Kesepakatan.Pinjaman.3.Miliar.Dollar.AS.dari.China

A.P. Saptohutomo, ‘Saksi paparkan tiga kebobrokan pengelolaan Bank Century’

Arieza, U. (2020) ‘Duit ‘Nyangkut’ di Bukopin dan Aksi Penyelamatan Kookmin Bank. CNN Indonesia
https://www.cnnindonesia.com/ekonomi/20200701081544-78-519340/duit-nyangkut-di-bukopin-dan-aksi-penyelamatan-kookmin-bank

Arvirianty, Anastasia. (June 2018) ‘Aturan Uang Muka Longgar, BI pede harga rumah tak melambung. CNBC Indonesia’ https://www.cnbcindonesia.com/market/20180702160145-17-21453/aturan-uang-muka-longgar-bi-pede-harga-rumah-tak-melambung

Asmara, Chandra G, (June 2018) ‘BI Klaim Relaksasi Aturan LTV tak akan Ciptakan Bubble’ CNBC Indonesia
https://www.cnbcindonesia.com/market/20180629164717-17-21123/bi-klaim-relaksasi-aturan-ltv-tak-akan-ciptakan-bubble

B1, 2010, Nasib nasabah Antaboga diperdebatkan, Beritasatu

BBC Indonesia, .2018. ‘Kilas balik kasus Bank Century’ .bbc.com

CNBC (2020) ‘7 Cabang Luar Negeri Bank Mandiri Raih Laba 1,3T’
https://www.cnbcindonesia.com/market/20200212173302-17-137417/7-cabang-luar-negeri-bank-mandiri-raih-laba-rp-13-t

Detikfinance, 2009, Nasabah Beberkan Bukti Keterkaitan Bank Century dan Antaboga, Detik.com

DetikFinance (2015) ‘Program DP KPR Subsidi Cuma 1% Hanya Berlaku di BTN’ https://finance.detik.com/properti/d-2847832/program-dp-kpr-subsidi-cuma-1-hanya-berlaku-di-btn

Detik finance (2014) ‘Kredit Macet BTN Tinggi gara gara banyak Nasabah KPR Bergaji Pas – Pasan’ https://finance.detik.com/moneter/d-2573601/kredit-macet-btn-tinggi-gara-gara-banyak-nasabah-kpr-bergaji-pas-pasan

Fauzia, Mutia, (June 2018) ‘BI longgarkan LTV, Pembeli Rumah Pertama Bisa Bebas Uang Muka’ Ekonomi Kompas. https://ekonomi.kompas.com/read/2018/06/29/180025226/bi-longgarkan-ltv-pembeli-rumah-pertama-bisa-bebas-uang-muka

Fauzie, Y., Y., (2017) ‘Perbankan klaim aliran utang infrastructur minim macet’ https://www.cnnindonesia.com/ekonomi/20171013152057-78-248199/perbankan-klaim-aliran-utang-infrastruktur-minim-macet

Fauzia, M., Jatmiko, B. P., (2018) ‘OJK: Industri Pembiayaan dalam Kondisi Sehat’, Kompas.com https://ekonomi.kompas.com/read/2018/05/21/193000826/ojk--industri-pembiayaan-dalam-kondisi-sehat#page1.

Gaol, Helen Lumban, February 2010, “Menguak skandal bank Century”, BBC Indonesia. BBC.com

Hastuti, R.K. 2019. Ini alasan BRI akuisisi Danareksa Sekuritas dan Modal Ventura. CNBC Indonesia

Hukum Online, (2014) ‘Mantan Dirut Beberkan Persoalan di Bank Century’ HukumOnline. https://www.hukumonline.com/berita/baca/lt535e40cddfa2c/mantan-dirut-beberkan-persoalan-di-bank-century

Kinanti, K., P., (2017) ‘Bank Harus Waspada Salurkan Kredit ke Proyek Infrastruktur Pemerintah’ http://m.bisnis.com/amp/read/20171005/90/696173/bank-harus-waspada-salurkan-kredit-ke-proyek-infrastruktur-pemerintah

Laoli, N. (2020) ‘Agar dipercaya pasar, kedudukan Bank Indonesia (BI) harus independen’ Kontan.co.id

Lestarini, A., H., (2017) ‘Kredit Macet Bank Papua Mengalir ke Tol Cipali’ http://www.metrotvnews.com/amp/Wb7YdEnK-kredit-macet-bank-papua-mengalir-ke-tol-cipali

Liputan6, October 2018, ‘Kegagalan Bank Century Karena Pemilik’

Lumanauw, Novy, (2014) ‘Sri Mulyani: Bank Century Bukan Bermasalah LikuiditasTetapi Bangkrut’ Berita Satu.

http://www.beritasatu.com/hukum/181583-sri-mulyani-bank-century-bukan-bermasalah-likuiditas-tetapi-bangkrut.html

Pangastuti, T. Feb 10, 2021. BI Sudah Quantitative Easing Rp 740,7 Triliun. Investor.id

PresidenRI.go.id (2017) ‘Rumah Subsidi Untuk Masyarakat Berpenghasilan Rendah’

http://presidenri.go.id/program-prioritas-2/rumah-subsidi-untuk-masyarakat-berpenghasilan-rendah.html

Prireza, A., Cahyani, D. R., (2018) ‘BPK Ungkap Kredit Macet Tirta Amarta di Bank Mandiri Rp 1,8 T.’ Tempo.co

https://bisnis.tempo.co/read/1090954/bpk-ungkap-kredit-macet-tirta-amarta-di-bank-mandiri-rp-18-t

Puspita, S., (2018) ‘100 Hari Anies-Sandi dan Realisasi Program Rumah DP 0 Persen’

https://megapolitan.kompas.com/read/2018/01/24/07300111/100-hari-anies-sandi-dan-realisasi-program-rumah-dp-0-persen

N. Lumanauw, (2018) ‘Sri Mulyani: Bank Century Bukan Bermasalah Likuiditas Tetapi Bangkrut’ Beritasatu.com

Rahmah, G., (2019) ‘Bank Pemerintah Siapkan Investasi Product Digital’ Tempo.

https://koran.tempo.co/read/ekonomi-dan-bisnis/439906/bank-pemerintah-siapkan-investasi-produk-digital

Ramadhiani, A., (2017) ‘Ini Syarat Dapat Rumah DP 1 Persen’

https://properti.kompas.com/read/2017/05/05/165803221/ini.syarat.dapat.rumah.dp.1.persen.

Rini, A. S., (2015) ‘Ini Penyebab NPL UMKM Naik’ Bisnis.com

http://finansial.bisnis.com/read/20150606/90/440816/ini-penyebab-npl-umkm-naik

Rini, A., S., (2015) ‘KPR Bermasalah di Bank Pembangunan Daerah Meningkat. Ini Penyebabnya’ http://m.bisnis.com/amp/read/20150210/107/401192/kpr-bermasalah-di-bank-pembangunan-daerah-tinggi.-ini-penyebabnya

Riswan, K., K., (2021) ‘RUU sektor keuangan, Ekonom : Bank Indonesia harus independen’. Antaranews.com

Saragih, H.P. (2019) ‘Terungkap! Ini penyebab masalah kronis di Bank Muamalat’ CNBC Indonesia

https://www.cnbcindonesia.com/market/20191115093424-17-115443/terungkap-ini-penyebab-masalah-kronis-di-bank-muamalat

Sari, Elisa Valenta, (2014) ‘J Trust resmi akuisisi Bank Mutiara 4,41 trillion rupiah’ CNN Indonesia

https://www.cnnindonesia.com/ekonomi/20141120143229-92-12767/j-trust-resmi-akuisisi-bank-mutiara-rp-441-triliun

Simorangkir, E., (2018) 'BI Sebut DP Rp 0 Bisa Dijalankan Dengan Syarat Ini' https://finance.detik.com/properti/d-3820125/bi-sebut-dp-rp-0-bisa-dijalankan-dengan-syarat-ini

Sitanggang, L. M. S., Rosalina, D. (2017) 'Bank BUMN gerilya mencari utang valas' https://keuangan.kontan.co.id/news/bank-bumn-gerilya-mencari-utang-valas

Sitanggang, L. M. S, (2018) 'Mandiri dan BRI sebut kinerja kantor cabang luar negeri positif pada tahun lalu' Kontan https://keuangan.kontan.co.id/news/mandiri-dan-bri-sebut-kinerja-kantor-cabang-luar-negeri-positif-pada-tahun-lalu

Sitanggang, L.M.S. (2019) 'Dari NPF naik hingga laba turun, begini kinerja Bank Muamalat di kuartal III 2019'. Kontan.co.id https://keuangan.kontan.co.id/news/dari-npf-naik-hingga-laba-turun-begini-kinerja-bank-muamalat-di-kuartal-iii-2019?page=all

Sugiarto, Agus, (2009) 'Dibalik Penutupan Bank, Daily Investor Indonesia' https://www.bi.go.id/id/publikasi/lain/artikel/Pages/Di_Balik_Penutupan_Bank_Agus_Sugiarto_230409.aspx

Supriyatna, I. (2016) 'Pembiayaan Proyek Pemerintah Menyumbang NPL Terbesar ke Bank Jatim' https://ekonomi.kompas.com/read/2016/10/13/161231926/pembiayaan.proyek.pemerintah.menyumbang.npl.terbesar.ke.bank.jatim.

Tempo.co (2018) 'Perbanas: Relaksasi bisa tekan kredit macet.' https://bisnis.tempo.co/amp/1054492/perbanas-relaksasi-bisa-tekan-kredit-macet

Tempo (2014) 'Saksi: BI Temukan Tujuh Pelanggaran Bank Century'. Tempo.co https://nasional.tempo.co/read/572379/saksi-bi-temukan-tujuh-pelanggaran-bank-century/full&view=ok

Thertina, M. (2013) 'Cicilan KPR Macet, Kredit Bermasalah BTN Naik.' Tempo.co https://bisnis.tempo.co/amp/464155/cicilan-kpr-macet-kredit-bermasalah-btn-naik

Tribunnews, April 2014, "Bank Century Punya Tiga Masalah Utama" .Tribunnews.com

Wikanto, Adi, (2016) 'Pakto 88 dan booming perbanking Indonesia' Kontan: liputan khusus perbankan, https://lipsus.kontan.co.id/v2/perbankan/read/318/Pakto-88-dan-booming-perbankan-Indonesia

WSN (2009) ‘Kronologi di Balik Penyelamatan Century Versi Boediono’ Kompas.com https://amp.kompas.com/bola/read/2009/12/22/16201519/Kronologis.Dibalik.Penyelamatan.Century.versi.Boediono.3

Binham, Caroline and Arnold, Martin. (2017) ‘BoE tells banks to hold extra £6bn buffer for risks beyond Brexit’ Financial Times