

Institutional Foundations of Subordinate Financialisation

Banking Transformation in Latin America

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The candidate confirms that the work submitted is her own and that appropriate credit has been given where reference has been made to the work of others.

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Abstract

This thesis presents a theoretical and empirical study of the financial structure of Latin American economies in the context of financialised capitalism, using Chile as a case study. It argues that the financial structure in Latin American economies has been transformed in the past 40 years. Previous studies of this structural shift have emphasised the liberalisation of cross-border credit and investment flows, banking deregulation, and the adoption of private pension systems. This thesis develops an alternative triple-lens framework for analysing this shift, drawing on three paradigms in heterodox political economy. First, its approach is grounded in key elements of post-Keynesian economics: fundamental uncertainty, liquidity preference, and the endogeneity of money. Second, it builds on Minsky's (1975) view of monetary capitalist economies as built on fragile interconnection among the balance sheets of financial agents whose behaviour depends on the liability structures that finance their asset positions.

Third, this thesis understands the variegated financialisation of Latin American economies as unfolding from a subordinate position in the global system of financialised capitalism. Financialised capitalism has been characterised as the shift toward market-based finance, driven by US structural power in global finance. This power is reflected in the 'Americanisation' of national financial systems. This dissertation shows that these drivers are part of a broader process that has turned finance into a globalised market-based system centred on US dominance, as embodied in the strength of the US dollar. Using social network analysis and the results of 23 semi-structured interviews with Chilean financial market experts, this thesis empirically documents the transformation of Latin American financial structures, focusing in particular on the institutional structure of—and behaviour within—Chile's banks and financial markets. This analysis demonstrates that Latin American economies experience financialisation from a subordinate position at the micro, meso, and macro-levels.

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Abbreviations

ACEs	Advanced Capitalist Economies
AFP	Administradoras de Fondos de Pension
ALCO	Asset and Liability Management Committee
CDs	Certificates of Deposit
CME	Coordinated Market Economies
CPE	Comparative Political Economy
DSGE	Dynamic Stochastic General Equilibrium
ECEs	Emerging Capitalist Economies
ECLAC	Economic Commission for Latin America and the Caribbean
EU	European Union
FDI	Foreign Direct Investment
FED	Federal Reserve
FIH	Financial Instability Hypothesis
GDP	Gross Domestic Product
GFC	Global Financial Crisis
IMF	International Monetary Fund
LDCs	Less-Developed Countries
LME	Liberal Market Economies
M&As	Mergers and Acquisitions
NCM	New Consensus in Macroeconomics
NFCs	Non-Financial Corporations
OECD	Organisation for Economic Co-operation and Development
OTC	Over the Counter
PAYG	Pay-As-You-Go
QTM	Quantity Theory of Money
RBC	Real Business Cycle
SMEs	Small and Medium Firms
SNA	Social Network Analysis
TBTF	Too-Big-To-Fail
TPM	Tasa de Política Monetaria
UF	Unidad de Fomento
UK	United Kingdom
US	United States
VoC	Varieties of Capitalism
VoFC	Varieties of Financial Capitalism

Vinieron. Ellos tenían la Biblia y nosotros teníamos la tierra. Y nos dijeron: 'Cierren los ojos y recen'. Y cuando abrimos los ojos, ellos tenían la tierra y nosotros teníamos la Biblia.

Eduardo Galeano

They came. They had the Bible, and we had the land. And they told us: 'Close your eyes and pray'. And when we opened our eyes, they had the land, and we had the Bible.

Eduardo Galeano

Chapter 1

Introduction

Introduction

The increasing growth and transformation of finance in specific national contexts has been characterised as a feature of the new stage of mature capitalism, known as financialised capitalism. Some scholars agree that the growth and transformation of the financial structure—practices, instruments, markets, and institutions—in the past century have profoundly altered the nature of economic reproduction. However, they disagree profoundly about how this financial evolution has affected the growth and stability of the economy as a whole. These scholarly disagreements are rooted in different approaches to theories of financial intermediation and financialisation that underpin economists' views of how these systems work, how they might boost or undercut growth, and how they might fail. This disagreement is especially sharp when the links between finance, growth, and instability are considered for the case of Latin America. Since the primary motivation of this thesis is understanding the transformation of the financial structure in Latin American economies and its relation to economic growth and financial stability, it is critically important to understand the role of the financial structure in the economy to acknowledge whether an increasing financial structure may affect the nature of economic reproduction, as well as the growth and stability of the economy as a whole.

In this regard, a significant body of literature has aimed to conceptualise this growing phenomenon known as 'financialisation'. While the interest in this phenomenon has been more extensive for advanced capitalist economies (ACEs), a smaller but growing literature has also attempted to define a theory of financialisation for emerging capitalist economies (ECEs). A significant part of the existing literature on financialisation in ECEs has focused on documenting the diversity of the financialisation experiences across different sectors, including non-financial corporations (Demir, 2007; Powell, 2013; Levy-Orlik, 2013), financial institutions (Lee 2012; Rethel, 2010), and households (Karaçimen, 2014; Fernandez and Aalbers, 2016; Aalbers et al., 2020).

While financialisation provides a valuable analytical method for evaluating the financial transformations in ECEs in diverse institutional, spatial and social contexts, there is a need for better analytical and empirical clarity about what this phenomenon means (Christophers, 2015), particularly for ECEs. On the one hand, some academics in the Marxist and structuralist theory have sought to provide a theory of financialisation that reflects the role of external actors in driving this phenomenon forward in ECEs (Becker et al., 2010; Kaltenbrunner and Paineira, 2018). On the other hand, some academics have contended that financialisation in ECEs should not be viewed as externally driven but as

a product of local institutions and internal processes (Karwowski and Stockhammer, 2017).

Other scholars have attempted to conceptualise financialisation as a global phenomenon in which finance has structurally shifted towards financialised capitalism (Bonizzi et al., 2020; Bonizzi et al., 2022). Financialised capitalism has been portrayed as inherently global and uneven, with ECEs adopting a specific subordinate position that is both inherent to and determines their experience and empirical manifestations of this global process. This thesis understands the variegated financialisation of Latin American economies as unfolding from a subordinate position in this global system of financialised capitalism. Financialised capitalism has also been characterised as the shift toward market-based finance, driven by the United States (US) structural power in global finance. This power is reflected in the ‘Americanisation’ of national financial systems. Therefore, this thesis aims to uncover the underlying structures and mechanisms through which this ‘Americanisation’ has taken place in Latin America.

The choice of Argentina, Bolivia, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, and Uruguay was dictated by three considerations. First, these nations are defined as middle-income countries by the World Bank. Second, the Latin American debt crisis is a leading example of a systemic cross-border financial crisis. Third, and most importantly, although this thesis recognises the structural heterogeneities of these nations, as the Latin American structuralism has pointed out, these nations share long histories of applied neoliberal reforms pushed by US institutions and intellectual ideology¹. These reforms, imposed by the World Bank and International Monetary Fund (IMF) over the past 40 years, aimed at structurally transforming Latin American financial systems, and included the liberalisation of cross-border capital flows and investment, the deregulation of banking and financial markets, and the adoption of private pension systems. By examining the impact of these neoliberal reforms on the financial structures of these middle-income Latin American countries, this thesis aims to provide a comprehensive analysis of the effects of the global transformation of finance on these Latin American economies. As this thesis demonstrates, this transformation has entailed value extraction from Latin American economies to the United States, which ultimately constrains the agency of Latin American agents.

Despite undergoing substantial structural reforms in its economic and financial sectors, Brazil was excluded from this research for several reasons. First, Brazil is a significant economic player in Latin America, accounting for a significant portion of the region’s GDP. It is one of the world’s largest economies, with diverse industries, including agriculture, manufacturing, and services. Due to its sheer size and complexity, analysing

¹ Other nations, such as Brazil, also adopted structural reforms that transformed their economies and financial sectors.

Brazil's economic and financial landscape requires a separate in-depth study, as it exceeds the scope of this thesis. Second, Brazil's approach to these reforms slightly differs from other Latin American countries. While many of its neighbour countries implemented liberalisation policies that aimed to open up their economies to foreign investment and reduce state intervention, Brazil adopted a more gradualist and pragmatic approach. To a greater extent, bank consolidation through privatisation programmes was more advanced in Chile and Mexico than in Brazil, where some large banks are still under state ownership (de Carvalho et al., 2009). Moreover, compared to Argentina, Chile, and Mexico, Brazil's proportion of foreign-owned banks has been significantly lower and has declined since the early 2000s (de Carvalho et al., 2009). Furthermore, unlike other Latin American nations where foreign banks dominate the financial sector (Williams, F.C. and Williams, 2008), Brazil is characterised by the leadership of domestic and public banks (De Paula and Alves Jr, 2007).

Finally, in contrast to other Latin American economies, the causes of financial liberalisation in Brazil were mostly driven by the need for price stabilisation due to persistently high inflation during the 1970s and 1980s (de Carvalho et al., 2009). The steady increase in inflation after the oil shocks of the 1970s reduced private access to credit markets, leading banks to allocate their resources towards buying public debt issued by the federal government, which was struggling to control its fiscal deficits (de Carvalho et al., 2009). This shift in focus caused the gradual disappearance of market segments other than deposit-taking, public debt-buying, and their respective institutions. In response, the Central Bank of Brazil passed a resolution in 1988 to replace the previous segmented model with a German-type universal banking model—which differs from the 'American' or Anglo-Saxon model that predominates in other Latin American countries—and lift interest rate controls. Consequently, financial liberalisation in Brazil resulted from recognising the obsolescence of past regulations rather than being a well-defined strategy (De Paula, 2011), as in other Latin American nations.

On the other hand, the choice of Chile as a case study for the qualitative method, was motivated by several reasons. First, as mentioned in this thesis, several Latin American countries implemented radical² structural, institutional, and political reforms from the 1970s onwards. Chile, however, was one of the first countries to implement these policies in the region. In addition, Chile stands out as the clearest example of a drastic and radical conservative programme post-1973. According to Foxley (1983), Chile is the country

² Radicalism refers to two main aspects of the policies. First, it relates to the predisposition to apply tough 'shock treatment' policies when other more gradual approaches had failed. Second, radicalism also refers to the stronger component of structural and institutional change in the stabilisation policies of the 1970s and 1980s. The idea was that if all other formulas to stabilise the economy have failed, there must be something wrong with the essential functioning of the economic and political system (Foxley, 1983). Until this was corrected, long-term price stability and equilibrium in the balance of payments would not be possible.

‘where these neoconservative policies and reforms have been applied more radically and consistently. In this sense, it gets close to being a test of “the pure case” (Foxley, 1983, p.42). The structural policies implemented in Chile were strongly influenced by the ideas of free-market economists such as Milton Friedman and Friedrich Hayek, who argued for minimal state intervention in the economy and the promotion of free markets as key to increased economic growth and financial development. This ‘radical’ ideology was reflected in the political sphere by drafting a constitution in 1980—during a military dictatorship—which introduced drastic changes to the country’s approach to governance, human rights, civil liberties, and the economy. The 1980s constitution remains a controversial issue today.

Furthermore, the extent of privatisation was larger in Chile than in other Latin American countries. The Chilean government privatised many state-owned industries, such as mining, telecommunications, banking, and electricity, which was a significant departure from other countries in the region that did not privatise to the same extent. Additionally, the degree of trade liberalisation in Chile was also to greater compared to other Latin American countries. Chile implemented extensive trade liberalisation policies, including reducing tariffs and non-tariff barriers to trade. This increased foreign investment and made Chile one of the most open economies in Latin America (Ffrench-Davis, 2018). Moreover, Chile was the first country in the region to replace the shared-benefit pension system with an individually funded pension scheme, leading to the rapid development of its capital markets since the early 1980s (Held, 1994).

Finally, Chile was selected as a case study for the interviews section because Chapter 5 of this study—the examination of the institutional structure of Latin American economies—revealed that Chile is one of the countries where foreign financial institutions tend to concentrate the most. This reflects this country’s higher level of integration into the uneven global monetary and financial system and a high degree of interconnection with key international players. This closer integration underscores the need to understand the underlying mechanisms that have shaped the country’s institutional structure. For this reason, Chile was selected as the case study for constructing the qualitative method in Chapter 6—that is, the selection of participants and the elaboration of the questionnaire. In addition, the author’s former employment in the Chilean financial sector facilitated the selection of participants from diverse institutions with different socio-cultural backgrounds, including gender, age, and position in their respective firms. The author’s familiarity with the Chilean context also eased evidence collection to support the argument.

1.1 Thesis Objectives and Contributions

This thesis attempts to contribute on three different levels: the theoretical, the empirical and the methodological level.

On the theoretical level, this thesis attempts to provide an alternative triple-lens framework for analysing the transformation of the financial structure in Latin American economies, drawing on three paradigms in heterodox political economy. First, its approach is grounded in key elements of post-Keynesian economics: fundamental uncertainty, liquidity preference, and the endogeneity of money. Second, it builds on Minsky's (1975) view of monetary capitalist economies as built on fragile interconnection among the balance sheets of financial agents whose behaviour depends on the liability structures that finance their asset positions. Third, this thesis understands the variegated financialisation of Latin American economies as unfolding from a subordinate position in the global system of financialised capitalism.

Although Hyman Minsky's contribution to post-Keynesian economics—and, more recently, to the Critical Macro-Finance literature—is widely recognised, this thesis spells out his ideas as a separate contribution. This is due to the scarcity of studies that have applied Minsky's (1975) balance sheet approach to analyse bank behaviour, particularly in the (subordinated) context of ECEs. Therefore, Minsky's contribution is essential to this thesis as it supports the development of a liquidity preference theory to analyse the behaviour of ECEs banks that incorporates both sides of a bank's balance sheet along with their subordinate position in global finance. Something that has not been explored in previous research.

Thus, extending Minsky's (1975) view to developing a liquidity preference theory of bank behaviour under a balance sheet approach entails two theoretical contributions. The first is to post-Keynesian economics, particularly, to the liquidity preference theory of bank behaviour: by using a balance sheet approach to analyse bank behaviour, it can be suggested that banks' lending decisions are influenced not only by their assessment of borrower's and lender's risk as most post-Keynesian models of banking have suggested (Dow and Earl, 1982; Dow, 1986; Dymski, 1988; Chick, 1986; Wolfson, 1996; Dow, 1996a; de Carvalho, 1999; Chick and Dow, 2002) but also by the pressures of their current liability structure, whose obligations must be settled with money. This makes liquidity preference institutionally specific (Bonizzi and Kaltenbrunner, 2020) as it depends on the nature of agents' liabilities. This might have significant implications for financial stability and economic growth prospects, as focusing solely on the asset side of banks' balance sheets may not be adequate to alleviate financial vulnerabilities stemming from the liability structure of financial agents (Kaltenbrunner, 2015; Bonizzi and Kaltenbrunner, 2019; Bonizzi and Kaltenbrunner, 2020).

Secondly, this thesis also contributes to the understanding of subordinate financialisation in ECEs by presenting a novel and alternative theoretical framework to analyse ECEs banks' behaviour. This framework accounts for the particular structural pressures faced by Latin American banks' liability structures due to their increasing reliance on market-based credit as a platform to increase credit flow and their subordinate position in global finance. These pressures ultimately constrain the agency of financial institutions in the region vis-à-vis ACEs. Therefore, to better understand the effects of ECEs' subordinate financialisation on economic growth and financial stability, it is essential to comprehend the factors that constrain the liability structures of Latin American banks. In the current era of market-based finance, the liquidity preference of ECEs banks is susceptible to both macroeconomic and bank-specific factors, which are shaped by their subordinate position in global finance and depend on global and domestic investors' perceptions of banks' liquidity and credit risk. Consequently, grasping the significance and implications of banks' liability structures is crucial in accounting for the variegated experiences of subordinate financialisation across different spatial contexts.

On the empirical level, this thesis makes four empirical contributions to the literature on subordinate financialisation. First, this thesis identifies the key drivers of the transformation of the financial structure in Latin American economies as the liberalisation of cross-border capital and investment flows, the deregulation of banking, and the adoption of private pension systems, and shows how each of these drivers has shaped the financial structure of Latin American economies. This reflects how the financialisation process in Latin America has been driven by hierarchical institutional and structural factors shaped by US structural power in global finance, which has determined the experiences of financialisation in these economies and further deepened domestic financialisation. In the context of this thesis, financialisation refers to a multifaceted phenomenon that encompasses the institutional transformation of Latin American financial systems, the adoption of market-based credit by Chilean banks, and the rise of private pension funds that have enhanced the role of Latin American institutional investors. Analysing the drivers that contributed to this shift in the context of financialised capitalism reflects three distinct levels of subordination in global finance at the micro, meso, and macro-levels.

At the micro-level, this thesis demonstrates that efforts to 'modernise' Latin American financial markets and instruments to participate and maintain access to global finance have led Latin American financial institutions to import key financialised practices and behaviours that have evolved in ACEs, mainly from the United States. In particular, this thesis highlights three crucial features of the Chilean banking sector and its financial structure. The first feature involves the extent to which market-based credit is being used by Chilean banks to rectify mismatches between retail loans and deposits and increase credit flows. In other words, bank loans exceed customer deposits on banks' balance

sheets. A second characteristic involves the extent to which bank lending decisions are driven by the cost of these innovative funding sources and the cost of hedging interest rate, inflation and currency risks. That is, Chilean banks' lending decisions are not reserve-constrained but rather are affected by the price of their funding sources and expected returns. The final feature concerns the extent to which banks' behaviour is geared toward greater involvement in trading and market-making activities to arrange loans and debt instruments for raising market-based funding and creating markets for these instruments. The particular adoption of these practices by domestic banks entails that access to these markets is determined by macroeconomic and bank-specific factors, which translates into investors' perceptions of banks' liquidity and credit risk. These factors are expressed in terms of the costs' banks pay for accessing these funding sources, which means that domestic banks are subordinated to foreign-owned as their reputation determines their access to these funds.

By shedding light on the behaviour and practices of Chilean banks, particularly, the increased reliance on market-based credit of Chilean banks, this thesis' findings contribute to a more nuanced understanding of market-based finance in ECEs. These findings also underscore the need for a more comprehensive approach for understanding this concept in ECEs. Specifically, the distinct form of market-based finance identified here includes Chilean banks use of market-based credit or wholesale funding, which reflects the market-based nature of Chilean banks' liability structures; Chilean banks greater involvement in trading and market-making activities; and the rise of private pension funds that enhanced the role of Latin American institutional investors. Furthermore, the increasing involvement of banks in trading and market-making activities along with the rise of domestic and international institutional investors have played a crucial role in shaping banks' liability structures. In this way, by using a Minskyan balance sheet approach, it is possible to recognise that the market-based nature of global finance subjects banking institutions in Chile to liquidity pressures deriving from the market-based nature of their liabilities and their subordinate position in global finance.

At the meso-level, this thesis indicates that the deregulation of banking led initially to an increase in the entry of leading foreign US banks into Latin American financial markets, followed by the entry of US-owned non-bank financial institutions, which determines a particular institutional structure of Latin American financial markets as highly foreign-owned and market-based. This highly-foreign-owned institutional structure is also clearly evident in the asset management industry in Latin America, as most of the key Latin American *Administradoras de Fondos de Pension* (AFPs) are owned by leading US financial firms. In addition, this thesis illustrates how removing market barriers between commercial banking, investment banking, and insurance led to a particular institutional structure: it allowed commercial banks to venture into non-banking-related businesses and use some of these channels to conduct their core banking businesses. It also led to

organisational shifts: domestic and foreign-owned commercial banks operate mainly as financial conglomerates. This structure facilitates commercial banks to participate in a wide range of businesses and access financial markets by operating in conjunction with non-banking subsidiaries. This particular institutional structure generates hierarchies within domestic markets: domestic-owned financial institutions are structurally subordinated to foreign-owned financial institutions, especially US-owned, as domestic-owned institutions are less able to access and participate in global finance (money and capital markets). Even further, domestic-owned banks are less able to access domestic capital markets, given the different ‘restrictions’ in the form of prices these banks have vis-à-vis foreign-owned banks.

At the macro-level, this research reveals two empirical phenomena: first, the adoption of private pension systems through the creation of AFPs in Latin America led to the rise of private domestic pension funds, which has enhanced the role of domestic institutional investors. This reflects that pension funds in Latin America have become increasingly integrated into global financial flows. Second, this thesis demonstrates how this particular financial structure supports hierarchies at the macro-level in the global financial architecture: operationalising globalised financial practices in nations with uniformly inferior positions in the currency hierarchy entails that capital inflows into Latin America are mainly short-term, seeking financial returns rather than assuming productive risk. This results in persistent volatility, external fragility and subordination to the currencies of ACEs (Bonizzi et al., 2020). The adoption of the market-based credit approach requires access to wholesale funds and cross-border capital flows, which locks in the asymmetric structure of global financial power, as these global capital flows depend on surges of confidence and fear among domestic and global investors—rather than domestic cycle fluctuations (Cerpa Vielma and Dymski, 2022). These could result in significant wild swings in financial-market sentiment and money flows across global borders, exposing these economies to the possibility that the core institutions of global finance will again, as in 2008, generate a catastrophic crisis. Therefore, Latin American banks’ liability structures are subordinated to the power of cross-border creditors and flows, and these pressures would depend on the nature of the obligations of these institutions.

Finally, by using Minsky’s (1975) balance sheet approach to analyse bank behaviour in a hierarchical context, this thesis’ empirical findings also make a valuable contribution to the emerging literature on critical macro-finance. The analytical focus of financial processes in this literature lies in hierarchical interlocking balance sheets of the different financial agents and the varying ‘moneyness’³ of these actors’ liabilities (Pozsar, 2014; Mehrling, 2017; Gabor, 2018; Tooze, 2018; Bonizzi and Kaltenbrunner, 2020; Dutta et

³ In the critical macro-finance literature, the term ‘moneyness’ pertains to the degree of ease and security with which assets can be converted into the state’s money. This concept is akin to what post-Keynesians refer to as liquidity premium.

al., 2020; Gabor, 2020; Murau, 2020). Analysing Chilean banks' behaviour from a balance sheet perspective reflects the hierarchical, global, and interlocked character of Chilean financial agents' balance sheets. In addition, by analysing the drivers of this structural shift in the context of financialised capitalism reflects how the US's structural power in global finance has driven a particular form of 'Americanisation' of national financial systems, which is translated here as a particular manifestation of financialisation in ECEs.

On the methodological level, these underlying mechanisms and empirical manifestations of the transformation of the financial structure in Latin American economies in the context of financialised capitalism are explored using mixed methods. This thesis introduces an innovative quantitative technique, namely social network analysis, and combines it with 23 semi-structured interviews with Chilean financial market experts, and descriptive statistics. Social network analysis is a relatively novel and developing method, and its applications remain limited, particularly at an institutional level. Thus, this thesis contributes by showcasing the applicability of social network analysis in examining the institutional financial structure in Latin America. Moreover, an additional contribution of this thesis lies in the construction and utilisation of a novel and unique database on cross-border ownership ties and changes of 1,258 financial firms in Latin American economies for the 2018-2021 period.

In economics, the use of mixed-methods, particularly qualitative methods, is still quite limited (Lawson, 1997). However, qualitative methods play a crucial role in uncovering the underlying processes and structures that condition human agency beyond specific context and temporality (Lawson, 1997; Lawson, 2003; Downward and Mearman, 2007). In economic research, mixed-methods 'triangulation'—that is, combining more than one set of insights in research—is still limited and can offer a valuable means to overcome the limitations of singular methods and unite aspects of different traditions of economic thought (Downward and Mearman, 2007), under particular assumptions. By combining qualitative and quantitative methods, researchers can capitalise on the strengths of each approach, thus gaining a more holistic and nuanced understanding of the research topic. It allows for increasing the 'validation' of insights (Webb et al., 1966; Danermark et al., 2019). Notably, the quantitative findings obtained in this research were employed to inform and develop the qualitative method (Greene et al., 1989). The use of method triangulation is consistent with the critical realist ontological and epistemological framework adopted in this thesis, as it enables the exploration of underlying mechanisms and structures, providing rich and detailed insights into a multi-layered and structured reality.

1.2 Methodological Considerations

Ontology

This thesis develops an alternative framework for analysing the transformation of the financial structure of Latin American economies, which draws on three paradigms in heterodox political economy. First, it takes elements from post-Keynesian economics, especially its emphasis on fundamental uncertainty, liquidity preference, and the endogeneity of money. Second, this thesis draws on Minsky's (1975) view of monetary capitalist economies as the fragile interconnection of financial agents' balance sheets whose behaviour depends on the nature of their liability structures that finance those assets. The focus of this thesis is set on the banking system. Finally, the notion of subordinate financialisation is used in this thesis as a guidance concept, which reflects the uneven and spatial nature of financialisation processes in ECEs. These elements form the basis of the triple-lens framework developed in this thesis, under which the transformation of the financial structure of Latin American economies is analysed.

In this regard, methodological considerations are crucial here to adhere to the methodological foundations of post-Keynesian and heterodox economics to propose an alternative framework for analysing the transformation of the financial structure in Latin American economies and to develop the appropriate research strategy and choice of research method. Heterodox and post-Keynesian economics are considered to adhere to an 'open system' ontology, in which reality has, to some extent, no boundaries or laws that regulate it and where the constituent variables and structural relationships are unknown (Dow, 1996b; Dow, 1998; Kaltenbrunner, 2011; Dow, 2013). Three approaches in post-Keynesian economics are associated with the ontological stance of an open-system (Kaltenbrunner, 2011): the Babylonian method developed by Sheila Dow (1990a; 1996b); critical realism pioneered by Tony Lawson (1989; 1994; 1997; 2003); and the 'generalising method' proposed by Paul Davidson (1994). In recent years, some heterodox traditions and post-Keynesian scholars have leaned towards adopting critical realism as an ontological and epistemological position, as it provides a coherent philosophical basis for explaining the widely accepted tenets of post-Keynesian economics⁴ (Rotheim, 1999; Lawson, 1999). Therefore, this thesis follows a critical realist as a social ontological and epistemological position to analyse the transformation of the financial structure of Latin American economies as its central tenets convey with the way the world is seen in this thesis.

Critical realists see reality as 'structured (it includes, but is irreducible to, actualities such as events and states of affairs and our experiences of them), open (event regularities are

⁴ Indeed, post-Keynesian economics has been broadly characterised as 'realist' (Arestis, 1992; Lavoie, 1992). However, as Dow (1999) has pointed out, their methodological statements indicate an affinity with critical realism.

not ubiquitous—due especially to the multiple and perpetually shifting mix of, causes of events), and differentiated (closures, sustaining event regularities, do occur under some, but only under some very specific conditions, in certain realms)’ (Lawson, 1999, p.4). In terms of structure, critical realism suggests that there are three levels of reality in the real world: the empirical, which is experienced directly (what can be observed); the actual, which corresponds to the events and happenings that can be observed or not (an attempt to measure the empirical); and the real, which corresponds to the structure and mechanisms that generate these events (Bhaskar, 1978; Lawson, 1997). It is at the level of the real that multiple causal mechanisms operate. In this vein, critical realism as an epistemological position asserts that it is the purpose of social science to uncover these underlying causal mechanisms, to elaborate in-depth explanations, and to analyse relations and structures that underlie social phenomena (Arestis, 1996; Lawson, 1997; Setterfield, 2003). Consequently, critical realist theorising involves moving from the empirical surface phenomena to the underlying real and irreducible structures, mechanisms and tendencies that can cause empirical surface phenomena.

In addition, critical realism is rooted in social practices and structures (Lawson, 1999), which means that social structure is dependent upon human agency (Lawson, 1994). That is, it is through the human agency that social structures come about and endure. However, as social structure depends upon human agency, it cannot be treated as fixed. That is, it is open to unpredictable influences and institutional change. In this way, by emphasising the transformability and transmutability of deeper structures, critical realism advances a specific view of human agency based on the intentionality of (economic) agents and their transformative capacity of the system (Lawson, 1994; Kaltenbrunner, 2011). Existing (social) structures govern the actuation of agents, but it is precisely these actions which shape existing structures (Lawson, 1994; Dunn, 2004). Because of the ever-present transformative potential of the human agency on which social structures depend, the latter will at most be only relatively enduring, being inescapably space-time bounded or geo-historically grounded. Social science, then, is necessarily historical and geographical in nature (Lawson, 1994).

Further, the underlying processes in social structures are also viewed as organically linked, hence conditions for closure do not apply⁵ (Dow, 1996b; Kaltenbrunner, 2011). These interdependencies prevent components from being broken down into their smallest constituents so that a single set of axioms may be identified. They also preclude the world

⁵ In closed systems, there is a natural order which can be reflected by the laws of nature. These ‘laws’ or regularities can be characterised as intrinsic and extrinsic. The intrinsic condition of closure implies that a cause always generates the same effect, which suggests that the structures of analysed phenomena are constant, unchanging and for each intrinsic state there is only one conceivable conclusion. The extrinsic condition of closure implies that an effect always has the same cause, which suggests that the phenomena under study are isolated from other potential effects (Arestis, 1996; Downward and Mearman, 2002; Kaltenbrunner, 2011).

from being reduced to dual concepts or categories with fixed meanings (Dow, 1996b). This means that by emphasising the organic complexity of human agency and social reality, critical realism prevents the identification of causal laws. Rather, the emphasis is on studying the various causal forces at work in the system, and their evolution, in order to build up knowledge that is as reliable as possible, with a view to action (Dow, 1999). However, no system is perfectly open. It needs to be acknowledged that there is room for a variety of types and degrees of openness within open systems (Dow, 2013). The boundaries are determined by social structure (human agency), which, as mentioned, is dynamic by definition and does not always propound definite closures (Lawson, 2003; 2015). These limits allow for some regularities that are partial and multifaceted, but neither predictable nor universal (Mearman, 2004). It is therefore more appropriate to think in terms of tendencies and demi-regularities than in terms of empirical generalisations (Lawson, 2003). Thus, the open system ontology of critical realism provides a basis for researchers to expect both co-determination of events, but also irregularities (Downward et al., 2002).

The approach taken in this dissertation is highly consistent with critical realism. The different arguments used to support this thesis' analytical framework, which are taken from post-Keynesian and heterodox economics, clearly demonstrate this link. First, this thesis criticises in Chapter 2 theoretical analyses of capitalists economies, which are predicated on ergodic axioms and the immutable nature of economic nature. Critical realism views the nature of social structures as evolving and dynamic in a system, which is understood to be both organic and open (Dow, 1998). This organicism can be seen in this thesis by the adoption of post-Keynesian economics paradigms and Minsky's (1975) view, where capitalist economies are defined as fundamentally monetary and may be represented as the fragile interconnection of financial agents' balance sheets. This interconnection prevents the selection of one set of axioms as universally causal, which predominates in more traditional approaches to economics, and, thus, to segment the analysis in different processes within the system. These processes, in turn, are viewed here as intertwined, complex and evolutionary, therefore, this thesis accepts that the social structure cannot be formalised in a unified model to adhere to the deductivist or closed-system modelling that prevails in mainstream economics (Dow, 1998; Lawson, 1999).

In addition, post-Keynesians reject the premise that knowledge of atomistic behaviour is adequate to determine macroeconomic outcomes. In an organic rather than atomist view of the economic system, human agency is socially dependent (Kaltenbrunner, 2011). In addition, human agency reproduces and modifies social structures, preventing a complete closure and the development of a deterministic explanation of economic phenomena (Dow, 2001). Critical realism proposes a particular understanding of human agency based on the intentionality of economic agents and their capability to modify the system, while stressing the transformability and transmutability of deeper structures (Kaltenbrunner,

2011). Existing social structures dictate the actions of agents, but it is exactly these actions that shape existing structures (Lawson, 1994).

A second way in which critical realism permeates the development of this dissertation is the importance given to rooting economic analysis in historical time and space. Post-Keynesians (and this dissertation) characterise monetary capitalist economies as non-ergodic, in which the social structure is determined historically. Moreover, it is a dynamic system, as it constantly changes through space and time. The view of the economy taken in this thesis is one where historically-rooted institutions determine economic outcomes and are in turn shaped by its dynamics. In addition, this thesis adopts an understanding of the current stage of mature capitalism as financialised capitalism, which locates the variegated appearances of financialisation in Latin American economies within a global and uneven context. This means that for Latin American economies, the encounter with financialisation is from a subordinate position, and this position shapes their variegated experiences of financialisation. Acknowledging these two factors (space and time) reflects critical realists' conception of a society as structured and intransitive, which is necessarily historical and geographical in nature (Lawson, 1994). It also reflects critical realists' emphasis on deeper structures and mechanisms (Lee, 2002). Finally, a key methodological claim in critical realism is about the level of analysis. It emphasises the deeper structures and mechanisms underlying a phenomenon. Post Keynesians make it their analytical effort to reveal these underlying mechanisms and processes, recognising the time, spatial, and mutable action of economic agents, aiming to explain, as opposed to predict (Rotheim, 1999). Consequently, this research can be considered a critical realist one.

Epistemology and Research Strategy

On the epistemological level, critical realists maintain that knowledge is obtained by developing a concept or idea of the underlying mechanisms and structures, which are subsequently examined using a variety of research methods (Lawson 1994). However, it is recognised within critical realism that there is no particular method for acquiring true knowledge, even though it is acknowledged that the underlying structures of reality have an objective existence (Dow, 1996b). This entails that there is no certainty that the truth will be ever identified (Dow, 1999; Downward and Mearman, 2002). Knowledge is fallible and mutable (Dow, 1999). This also implies that the aim of science has to be explanation rather than prediction (Dow, 2001).

In this sense, the epistemological emphasis of critical realism lies in uncovering the underlying real mechanisms and structures that may cause empirical surface events. Critical realists contend that it is possible to gain understanding about the mechanisms and deeper structures by means of beliefs and hypotheses about these underlying factors,

which are subsequently examined against empirical evidence in an iterative and cumulative process (Lawson, 1994; Lawson, 1997). There is little advice on how to achieve this in reality (Downward and Mearman, 2005), although some guidance can be provided by realist abstraction and the presence of demi-regularities (Lawson, 1997), which suggests the need for retrodution as a research strategy (Downward and Mearman, 2005; Downward and Mearman, 2007).

In this way, several scholars contend that a critical realism ontology and retrodution as its research strategy, require the use of mixed-method triangulation due to the open, structured and organic nature of reality and fallibility of knowledge (Dow, 2001; Downward and Mearman, 2007; Downward and Mearman, 2008; Kaltenbrunner, 2011; Kaltenbrunner, 2018). Retrodution consists in the transition from one notion of a phenomenon of interest to a conception of structure, mechanism or condition that is responsible for the observed phenomenon (Lawson, 1994), and requires the ‘triangulation’ of research methods (Downward and Mearman, 2007). In simple terms, triangulation consists of combining together more than one set of insights in an investigation (Downward and Mearman, 2007), as it increases the ‘validity’ of insights (Webb et al., 1966).

There are, however, some limitations on how mixed-methods may be used to ‘validate’ insights⁶. First of all, not all results can be triangulated, which leaves those particularly vulnerable to criticisms. Nevertheless, the author’s perception and understanding of the economic system as open, complex, and structured has motivated the methodology chosen for this thesis. In addition, the primary motivation for the use of mixed-methods, and particularly, qualitative methods, lies in the distinct nature of financialisation processes. As the literature on (variegated) financialisation in ECEs has pointed out, this phenomenon is not a linear process and assumes different forms in ECEs vis-à-vis advanced economies, as well as country-specific forms. The adoption of semi-structured interviews permits to uncover of how this process works in a Latin American economy such as Chile. A second related criticism derives from here: this thesis understands that generalisations cannot always be made. However, this does not mean that generalisations are not possible, as this thesis has stated that the Latin American countries analysed here, do share long histories of applied neoliberal reforms pushed by US institutions and intellectual ideology, which entails that this qualitative study could be replicated in these economies. The point here is that further institutional and structural characteristics should be taken into consideration.

⁶ The specific limitations to the methods used are covered in each methodological section in each chapter.

1.3 Research Questions, Hypotheses and Research Methods

This thesis has been driven by the following hypotheses and research questions:

RQ1: What determines the financial structure of Latin American economies in the era of financialised capitalism?

H1.1: Beginning in the 1970s, many Latin American nations adopted structural financial reforms, as part of a development approach encouraged by the IMF and the World Bank.

H1.2: As a result, the financial structure of Latin American economies has been driven by the liberalisation of cross-border capital and investment flows, the deregulation of banking, and the adoption of private pension systems.

Based on these overarching research questions and hypotheses, and following the retroductive strategy suggested by critical realist ontology, two main sub-questions were proposed and several sub-hypotheses were formulated in an iterative and cumulative way:

RQ2: How and to what extent are these drivers reflected in the financial structure of these economies?

H2.1: The entry of foreign financial institutions defines the institutional structure of Latin American financial systems, which can be characterised as largely foreign-owned and market-based.

H2.2: The liberalisation of capital flows increased cross-border financial flows into the Latin American economies.

H2.3: The adoption of private pension systems led to the rise of private pension funds, which in turn, enhanced the role of domestic institutional investors (and their asset demand).

H2.4: These drivers along with this particular institutional structure have shaped the financial behaviours and practices of Chilean banking firms across time.

RQ3: How and to what extent is this financial structure reflecting Latin American subordinate position in the global architecture of finance?

H3.1: Latin American economies experience financialisation from a subordinate position at the micro, meso, and macro-levels.

Consistent with the critical realist ontological and epistemological framework adopted in this thesis, these research questions were explored using between mixed-methods triangulation, which combined social network analysis with insights from 23 semi-structured interviews with Chilean financial experts. Social network analysis was used to explore the institutional structure of Latin American economies, so that quantitative

findings could contribute to develop the qualitative method (Greene et al., 1989). This meant that social network analysis revealed, on the one hand, the key financial institutions that determined the particular institutional structure in these economies. And, on the other, the countries in which this institutional structure is more prominent. This structure revealed that banking institutions, asset managers and insurance companies are key institutions in Latin American financial systems. It also revealed that Chile was one of the countries where foreign financial institutions tend to concentrate, which means that it is more likely that this country reflects this particular institutional structure, given its high degree of interconnection with key foreign agents. This can translate into a closer integration to the uneven global monetary and financial system. Therefore, for constructing the qualitative method (that is, the selection of participants and the elaboration of the questionnaire), participants from Chilean banking institutions, asset management and insurance companies were selected. This, with the intention of uncovering the underlying mechanisms that have shaped this institutional structure in this country.

1.4 Thesis Structure

This thesis has been divided into seven chapters.

Chapter 2 provides a critical review of existing theoretical approaches on the role of money, banking, and finance in determining economic dynamics. Most of those theories are predicated on a 'real' understanding of the economy that disregards the role of money, banking, and finance in shaping economic outcomes. Money is viewed as a medium of exchange and its existence does not affect the structure of the economic system. Similarly, banks are regarded as merely financial intermediaries, ignoring their crucial role in the credit creation process. As a result, the transformation of the financial structure would not invalidate the conclusions of a barter economy. This chapter suggests that for a better understanding of the role of money, banking, and finance in shaping economic dynamics, it is necessary to adopt a framework in which these structures matter. For this, this chapter rejects the view of monetary phenomena as market equilibria (or disequilibria) and the 'rational expectations' paradigm and argues that it is necessary to acknowledge the role of Keynesian uncertainty in shaping banks' expectations, as the future cannot be reduced into probabilistic risk, and this in turn shapes economic dynamics and financial stability in an economy. In addition, it suggests that factors affecting banks' expectations vary depending on one's position in an uneven hierarchy of nation-states. This is particularly true for ECEs, given their different institutional and structural characteristics. This makes banks' expectations context and geographically specific.

Chapter 3 provides an alternative framework for analysing the transformation of the financial structure in Latin American economies. In line with post-Keynesian monetary theory, this chapter argues that banks' expectations are reflected in their liquidity preference, which can be seen in their capacity to discriminate between assets' liquidity and, as a result, they can ration credit. However, this chapter suggests that the post-Keynesian liquidity preference theory of bank behaviour would benefit from explicitly defining banks' liquidity preference not only in terms of a bank's decision between assets with varying degrees of liquidity under conditions of uncertainty but also by considering the nature of banks' liability structures that finance those assets. This makes liquidity preference institutionally specific. In the context of financialised capitalism, Latin American banks' liquidity preference might be also subject to these economies' subordinate position in global finance. Therefore, this chapter also contends that for analysing the transformation of the financial structure in Latin American economies, it is necessary to scrutinise the particular structural constraints that the liability structures of Latin American banks face in the context of their subordinate position, which further shapes and determines the variegated manifestations of financialisation in these economies.

Chapter 4 provides descriptive empirical evidence on the transformation of the financial structure of Latin American economies in the past 40 years for Argentina, Bolivia, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru and Uruguay. This chapter demonstrates empirically that the liberalisation of cross-border capital and investment flows, the deregulation of banking and the adoption of private pension systems have further integrated Latin American financial markets and have shaped the financial structure of Latin American economies. The liberalisation of cross-border financial flows and opening of Latin American financial markets led to an increase in the size of cross-border capital flows into these economies, particularly after the 2000s. This chapter demonstrates that fluctuations in cross-border capital flows coincide with economic and financial crises in the world but whose origin has been in advanced economies rather than domestic crises. These dynamics coincide with what Borio (2012) and Drehmann et al. (2012) dubbed the 'financial cycle'. In addition to growing in scale, capital flows to ECEs have experienced considerable qualitative shifts in recent years (Kaltenbrunner and Paineira, 2018). Traditional Latin American investors have been complimented on the investor side by a diverse variety of additional actors, including institutional investors (pension, mutual, and insurance funds) and new types of mutual fund investors such as exchange-traded funds and macro hedge funds (Kaltenbrunner and Paineira, 2018). Given the extent of these flows, a minor reallocation of their portfolio holdings might significantly affect capital flows to ECEs.

This chapter also demonstrates that the deregulation of the banking industry led to an increase in the entry of foreign banks, particularly leading US too-big-to-fail (TBTF)

megabanks, through the establishment of cross-border subsidiaries or M&As, and the broader adoption of their lending and funding practices. This led to increased competition in these economies' financial markets. This particular institutional setting allows US TBTF megabanks and financial institutions to spread market-based practices and supply market-based funds to Latin American economies. In addition, this chapter demonstrates that efforts to 'modernise' Latin American financial markets and instruments have involved the importation into these economies of key financial practices that have evolved in advanced economies, particularly from the United States. Finally, the adoption of private pension systems led to the rise of private domestic pension funds, which has enhanced the role of domestic institutional investors. The main consequence of the enhanced role of domestic institutional investors is that Latin American pension funds have been further integrated into global cash flows, which makes them sensitive to changes in global perceptions and shifts in liquidity preference (ECLAC, 2019).

Chapter 5 examines ownership data of 1,258 financial firms established in Argentina, Bolivia, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, and Uruguay using social network analysis (SNA). The main aim of this chapter is to use a quantitative research method to empirically assess how the liberalisation of cross-border investment in the financial sector, the deregulation of banking, and the adoption of private pension systems have shaped the institutional structure of Latin American financial markets. In particular, it finds that the liberalisation of cross-border investment in the financial sector, led to an institutional structure in Latin American financial sector that is highly foreign-owned. This structure is not only evident in the banking sector, but in the asset management industry as well (due to the adoption of privatised pension systems) as most of the key Latin American AFPs are owned by leading US financial firms. In addition, this chapter finds that the liberalisation of cross-border investment in the financial sector also led to an institutional structure that is highly market-based.

However, even though it appears that banking institutions have decreased their dominant position in Latin American financial markets with the appearance of market-based actors, this is not the case. As demonstrated, these market-based institutions are mostly bank-owned. This is the case for foreign and domestic-owned financial firms. This has been possible due to a particular organisational structure of domestic and foreign-owned financial firms: banking firms are increasingly being organised as financial conglomerates. This reflects that the 'Americanisation' of national financial systems has involved an institutional 'Americanisation' of these systems. That is, analysing these drivers in the context of financialised capitalism reflects a particular structure at the meso-level in Latin American financial markets. This institutional structure allows US financial firms to increase their profits by extending the scale and scope of globalised financial markets into Latin American economies and to sell dollar debt (Konings, 2007; Cerpa Vielma et al., 2019).

Chapter 6 presents the results from the 23 semi-structured interviews conducted with financial market participants using the case of Chile. This chapter first contextualises the transformations to the financial structure of the Chilean economy by providing a historical overview of the deregulation policies applied to the financial sector in Chile since the 1970s. The results of the 23 semi-structured interviews conducted with Chilean financial market experts is segmented into three main areas. The first section presents the main motivations of banking firms to engage with wholesale funding. This analysis is followed by the mechanisms and structures underlying banks' lending decisions, i.e., decomposition of the determinants of banks' funding costs and their link to banks' lending decisions. The assessment concludes with the examination of participants' operations in wholesale markets, emphasising the practices and instruments used.

This chapter shows three crucial features of the Chilean banking sector and its financial structure. The first feature involves the extent to which market-based credit is being used by Chilean banks to rectify mismatches between retail loans and deposits and increase credit flows. In other words, bank loans exceed customer deposits on banks' balance sheets. A second characteristic involves the extent to which bank lending decisions are driven by the cost of these innovative funding sources and the cost of hedging interest rate, inflation and currency risks. That is, Chilean banks' lending decisions are not reserve-constrained but rather are affected by the price of their funding sources and expected returns. The final feature concerns the extent to which banks' behaviour is geared toward greater involvement in trading and market-making activities to arrange loans and debt instruments for raising market-based funding and creating markets for these instruments.

Chapter 7 concludes, summarising the research conducted, followed by an analysis of the implications of this transformation on economic growth and financial stability. It finishes with some suggestions for future research.

Chapter 2

Theoretical Approaches to Money, Banking, and Finance

Introduction

This chapter provides a critical review of existing theoretical approaches on the role of money, banking, and finance in determining economic dynamics. Most of the theories reviewed here are predicated on a ‘real’ understanding of the economy. Thus, capitalist economies are seen as intrinsically non-monetary. This entails that money is viewed simply as a medium of exchange, and its existence does not affect the structure of the economic system. Banks are regarded as merely financial intermediaries, ignoring their crucial role in the credit creation process. As a result, the transformation of the financial structure would not invalidate the conclusions of a barter economy.

At the same time, most of these theories use equilibrium frameworks to represent how the allocation of resources maximises utility for each economic unit, thereby adhering to the ‘rationality’ principle. In other words, when individual utility is maximised, information is complete, and prices are flexible, efficient market outcomes are inherently produced. As outcomes are fundamentally efficient, financial structures are irrelevant and have no effect on economic outputs or financial stability. This also implies that financial risks are ‘known’ and/or controlled. A paradigm based on an equilibrium framework indicates that an ‘equilibrium interest rate’ (or a ‘natural’ interest rate) will bring the volume of savings and investment into equality. In other words, the optimal allocation of credit is determined by the ‘free market’ forces, assuming that unleashing and deepening market forces will enhance overall welfare. Likewise, this perspective implies that causality runs from savings to investment (so that savings can be ‘mobilised’) and from deposits to loans, implying a specific understanding of banking.

More ‘Keynesian’ and evolving views on the role of banking firms, money and finance, explore ways in which market systems are allowed to ‘malfunction’, by explicitly incorporating market ‘imperfections’ into their models and theories, such as transaction or informational costs. Still, the ‘rational expectations’ paradigm underlies most of these attempts, in which agents’ decisions and outcomes are reduced to a range of possibilities that are certain, ‘known’ and calculable. As a result, the rational expectations paradigm offers an inadequate guidance on agents’ behaviour in real economies, as it disregards a more unpredictable and tumultuous environment. In other words, although these theories aim to provide a perspective in which banks and financial structures ‘matter’, they fail to account for the inherent instability and uncertainty of future events.

This chapter is comprised of seven sections. Section 2.1 explores some technical definitions and foundational concepts underpinning the analysis undertaken throughout this thesis. The remainder of this chapter proceeds as follows: Section 2.2 opens the

discussion by examining mainstream literature on financial development and economic growth, which dates back to the early 1960s¹. Plenty of the theories reviewed here see the rise of financial intermediaries as a characteristic of financial development, which underpins ‘economic development’². These theories tend to frame bank behaviour as a financial-market behavioural problem or as a portfolio choice model. The main issue to be solved within these models is the optimal allocation of funds.

Section 2.3, in turn, summarises the theories of New Classical Economics, which in accordance with the rational expectations paradigm and micro-foundations, attempt to solve the debate between the rising complexity of an expanding financial sector and market efficiency. Particular attention is paid to theories that employ this framework to contrast the effects of establishing ‘controls’ on financial market prices and processes, on the one hand, and on financial liberalisation, on the other, to analyse how these differences will affect the relationship between financial development and growth in Latin American economies. Section 2.4 reviews New Keynesian economists’ perspectives who, in an effort to ‘solve’ the tension created by the extreme assumptions of New Classical paradigms about information, propose the idea that agents are rational but do not possess the same information in markets. That is, market systems are allowed to ‘malfunction’, by incorporating information asymmetries. Following, Section 2.5 describes the predominant contemporary view in economics, New Consensus in Macroeconomics, which combines elements from both New Keynesians and New Classical economics: the rational expectations paradigm along with the ‘natural’ or long-run equilibrium framework. Section 2.6 reviews an evolving view on institutions that is rooted in the debate on the comparative importance of bank-based and market-based financial systems. Section 2.7 concludes.

2.1 Technical Definitions

In financial systems, there are a variety of financial institutions and economic agents; however, three types of economic units can be easily distinguished, namely, surplus and deficit units and financial intermediaries. Surplus units can be defined as economic units whose income exceeds their expenditure, whereas deficit units are those whose spending is larger than their income. Alternatively, surplus units can be defined as units that are willing to lend funds to deficit units, whereas deficit units require funds from surplus units to finance their consumption and investment.

¹ The term ‘mainstream’ herein refers to the literature that uses analytical methods that prioritise the role of optimisation by rational agents in economic outcomes.

² The term ‘economic development’ is largely used in mainstream economics. Usually, it refers to ‘economic growth’.

Figure 2-1: Direct Credit Flow



Source: Author's elaboration

There are two ways for deficit units to acquire such funds. One way is to acquire funds directly from surplus units (direct credit flows), as depicted in Figure 2-1. This is typically the case when corporate equity stocks, commodities, currencies, government bonds or other instruments are traded publicly or outside traditional channels (as in the over-the-counter (OTC) markets). This direct transaction is recorded on the balance sheet of both units, however, on distinct sides. For a surplus unit, this transfer of funds is recorded on the asset's side of its balance sheet. That is, it represents a financial asset. A financial asset is an intangible ownership right that has value in a transaction (Fabozzi, 2015). These rights are usually reflected in nominal contracts or claims that entitle the holder (the surplus unit in this case) to some future benefit. In other words, financial assets reflect the nominal claims on someone else in the economy. Therefore, an individual's wealth may be adequately measured by the market value of their net nominal assets. *Accumulation*, then, takes the form of maximising the value of nominal assets.

Because financial assets are claims on someone else in the economy, they are also financial liabilities. Consequently, these nominal claims appear as a financial asset on the holder's balance sheet, whereas in the issuer's (the deficit unit in this case), they appear as a financial liability. Typically, these obligations take the form of financial instruments (Law and Smullen, 2008). *Financial instruments* offer purchasing power to the instrument's issuer in return for the promise (contract) of nominal deferred payment to that instrument's holder³. The deferred payment may include a contingent claim based on a residual amount (as when companies issue equity) or a time-dated claim (as with a bond or a note). The former are referred to as equity or residual claims, while the latter is known as debt instruments⁴ (Fabozzi, 2015). As a result, an asset holder is entitled to either

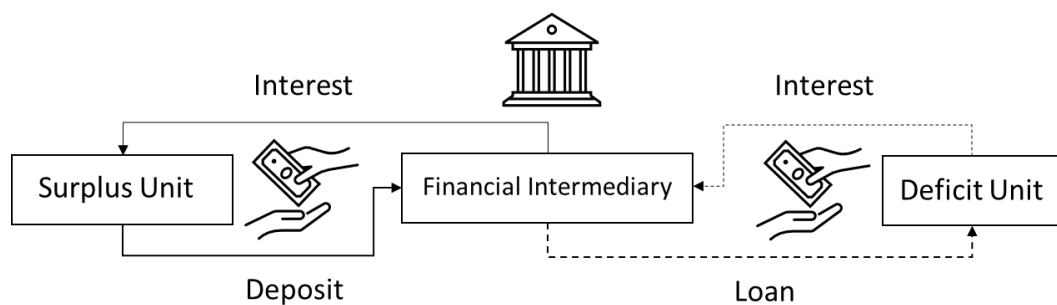
³ Financial instruments can serve, as well, to facilitate the acquisition of consumption of intermediate goods, for acquiring foreign exchange and/or for hedging against risk, such as derivatives. The value of a derivative derives from some underlying asset, commodity, interest rate or index (Fabozzi, 2015).

⁴ Some other financial instruments fall into both categories, such as preferred stock or convertible bonds (Fabozzi, 2015).

residual income payments generated from the productive use of the asset or the capital gains (or losses) resulting from any change in the market value of the nominal asset.

Direct credit flows expose surplus units to two risks: credit and liquidity risk. *Credit risk* occurs when a borrower fails to repay the principal lent or timely interest payments (Law and Smullen, 2008). Lending agreements include loans and bonds. Used in this way, credit risk refers to *default risk*. In a broader sense, credit risk also means the failure of a counterparty to a transaction to fulfil its obligation. This form of credit risk is referred to as *counterparty risk*. The second type of risk is *liquidity risk*, which refers to the possibility that the lender may lose access to the funds it has lent before the borrower agrees to pay them back (Heffernan, 2005). Direct credit flows are often only available to large companies, not to households and smaller businesses. This is where the concept of *indirect credit flows* comes in.

Figure 2-2: Financial Intermediation



Source: Author's elaboration

A *financial intermediary* brings together those on the supply and demand sides of financial markets. This entails that financial intermediaries occupy a middle ground between surplus and deficit units, as reflected in Figure 2-2. A *bank* is a particular type of financial intermediary, which can be defined as a financial institution that accepts deposits redeemable instantaneously (demand deposits) or after a certain length of time (savings and time deposits), and that extends (creates) credit by simultaneously creating new bank liabilities (in the form of deposits). Their liabilities are typically redeemable on demand and, therefore, serve as means of payment. The main differences between banks and other types of financial intermediaries lie in two fundamental features: the nature of their liabilities and their ability to create credit independently of their reserve position (that is, banks do not need funds *ex-ante* to create credit as other financial intermediaries do, because when they extend credit, they are simultaneously creating deposits).

Figure 2-3: A Traditional Bank's Balance Sheet

Bank	
Assets	Liabilities
Loans	Demand Deposits
Investments	
Cash Reserves	Net Worth

Source: Author's elaboration

Figure 2-3 shows a traditional bank's balance sheet, which reflects the bank's ability to generate deposits when lending. This does not mean that a bank will not borrow funds if required. That is, a bank, after lending, could borrow funds either for clearing purposes or to meet its obligations.

An essential function of a bank is providing finance or creating new monetary purchasing power through loans for agents who are both borrowers and depositors (Jakab and Kumhof, 2015). This is typically made through *credit intermediation*, which refers to the transformation of credit, maturity and liquidity. *Credit transformation* is the process of transforming credit-risky assets into non-risky assets. That is, the enhancement of credit quality is performed through the use of priority claims. For instance, senior deposits have a higher credit quality than the underlying loan portfolio due to the inclusion of junior equity (Adrian and Ashcraft, 2012). *Maturity transformation* refers to using short-term deposits to finance long-term loans, ensuring liability-holders access their funds before loans based on those funds have matured. *Liquidity transformation* refers to using liquid assets to finance illiquid ones (Pozsar et al., 2010). Credit intermediation through maturity, credit and liquidity transformation can considerably lower the cost of credit compared to direct lending. *Financial intermediation*, thus, occurs when these transformations—credit, maturity and liquidity—take place.

In addition, banks attempt to earn a positive spread between the assets they invest in (loans and securities) and the cost of their funds (deposits and other sources). The positive difference, referred to as spread income, enables banks to cover operational costs while earning returns on their capital (Fabozzi, 2015). When a person gets a mortgage, for example, they obtain the financial obligation to pay the bank a certain amount of money over time—a liability—and the bank receives the right to collect those payments—an equal-sized asset (McLeay et al., 2014). Usually, the amount the borrower must return over time will be greater than the initially lent amount. This is because, as Figure 2-2 illustrates, borrowers will often be required to pay interest on their liabilities to compensate the lender for keeping a financial asset that will be repaid at a later period (that is, for the liquidity risk the bank assumed).

Indirect credit flows can likewise result in default and liquidity risk, although these risks may be distributed differently. With direct credit, the surplus unit absorbs both risks. However, with indirect credit, liquidity risk is transferred onto banks as it transforms maturity. This means that the bank bears the risk that a borrower defaults to the degree that it guarantees an interest rate for its liability holders. As a result, the prudent behaviour that characterises direct-credit lenders may decrease significantly under indirect-credit relations. Depending on the bank's funding sources, as Chapter 6 shows, banks face alternative market-risks. One of those is the *price or interest rate risk*. This risk can be defined as the probability that an asset's value declines due to unexpected fluctuations in interest rates. In terms of a bank's assets, this risk reflects the potential losses for a bank that can be triggered because of unexpected interest rate movements.

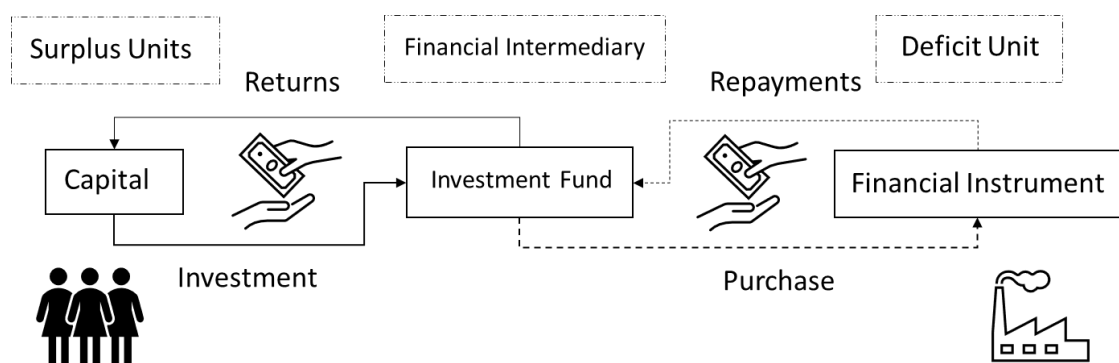
Similarly to liquidity risk, the level of interest rate risk changes directly with the degree of maturity transformation. In terms of a bank's liabilities, this risk reflects the probability that their funding sources become more expensive as a result of unexpected fluctuations in interest rates. That is, the cash outflows they must pay to their lenders. There are other risks indirectly associated with intermediation, such as the *risk of inflation*, which occurs when the price of goods and services increases. This results in a decrease in purchasing power, which harms the ability of banks to attract deposits, specifically versus non-financial assets, as means of storing wealth. The more it rises, the less appealing financial assets become to wealth-owners. Similarly, this risk could also increase a bank's commitments on the liabilities side. Moreover, if loan extensions are denominated in a foreign currency, there is the risk that the currency in which a cash flow is paid will depreciate relative to the domestic currency. If a bank's liability is also denominated in a foreign currency, this risk reflects the probability that the cash outflows become more expensive. This is referred to as *foreign exchange risk*. There are, however, financial instruments that might hedge against this risk, which are covered in Chapter 6.

These three kinds of fundamental risks—default, liquidity and interest rate—all lead to *insolvency risk*, which is the likelihood that the bank may lose its capital. Loan defaults directly impact earnings on assets; liquidity risk compels the bank to substitute lower-cost deposits with higher-cost funds, and a growing cost of flexible-rate funds raises the overall cost of funds. As a result, operating a solvent bank involves overseeing these three risks. Banks can reduce liquidity risk by holding their assets liquid—that is, by investing in short-term assets. Furthermore, they can decrease the risk of default by assessing creditworthiness and monitoring the behaviour of borrowers. This implies that banks impact general economic activity, either by providing finance to small firms and households that have been left out of direct credit markets or by excluding risky borrowers from credit markets altogether.

At the same time, banks' ability to act as an intermediary is contingent on maintaining the public's trust. Governments can assist banks in mitigating the risks intrinsic in

intermediation (borrowing short and lending long) by providing them access to liquidity and credit alternatives in the form of discount window access and deposit insurance, correspondingly (Pozsar et al., 2010). When the public sector offers these guarantees, credit intermediation is considered to be officially enhanced. For instance, credit and liquidity options provided by the central bank improve credit intermediation conducted by depository institutions (banks) (Pozsar et al., 2010), which suggests the need for a central bank to monitor banks and provide assurances that the system is sound⁵. Other instruments became available after the 2008 financial crisis to avoid liquidity and capital shortages in the interbank market.

Figure 2-4: Financial Fund Intermediation



Source: Author's elaboration

A financial intermediary that works in conjunction with banks is a *financial 'fund'*. A financial fund can buy financial instruments emitted by financial and non-financial firms seeking finance and fund these assets by selling shares to shareholders or borrowing, short or long-term. Financial funds can pool financial instruments together to form portfolios that can then be offered to investors. As illustrated in Figure 2-4, financial funds provide small and medium-sized savers with the opportunity to participate in financial markets. Along with default, interest rate and liquidity risks, surplus units (investors) face three kinds of financial risks when participating in this type of intermediation: investment, funding and systemic financial risk.

Investment risk is the probability that an investor or an investment strategy would achieve a performance outcome less than what the investor anticipated (Fabozzi, 2015). The risk involved with acquiring funds is referred to as *funding risk*. The term financial leverage refers to the use of borrowed funds. This sort of risk entails the possibility that the borrower cannot receive a return on the borrowed amount that is larger than the cost of

⁵ Some economists view banking from the perspective of efficient capital markets and therefore, there is no need for control. These theories will be revised from the following section.

borrowing. As a result, *leverage risk* can be defined as the negative financial impact that can occur from the use of leverage (Fabozzi, 2015). At the same time, there are additional risks linked with the timing of capital raising, such as timing risk. In finance, *timing risk* refers to the possibility that the cost of acquiring funds may be higher than anticipated at a future period when the funds are required. Lastly, *systemic risk* refers to the probability that an entire system may collapse or fail. Systemic risk is referred to as *systemic financial risk* when it is applied to the financial sector. The interconnectedness of financial institutions worldwide can potentially create significant disruptions to the global financial system through contagion (Fabozzi, 2015).

Thus, financial markets bring agents together, allowing money to flow where it is most needed, lowering the transaction costs. A money market brings together those seeking and those willing to offer to borrow money for periods of one year or less. A capital market brings together those seeking and those willing to offer to borrow money for periods of more than one year. Financial markets involve, thus, different types of markets, which can be classified according to the type of financial claim (such as debt and equity/stock markets), the maturity of the claims (as money and capital markets), whether the financial claims are newly issued (primary and secondary markets) or by its organisational structure (such as auction, over-the-counter and intermediate markets) (Fabozzi, 2015).

What counts as ‘*money*’ in financial markets is a contract redeemable at face value by its holder—that is ‘liquid’⁶. A liquid asset can be converted instantaneously at par into ‘fiat money’, a government-issued currency. Consequently, much of the ‘money’ traded in financial markets does not involve the exchange of currency (high-powered money) for a promise to repay at a term-determined date with interest⁷; instead, it involves the exchange of a contract for a promise, with the contract that is ‘purchased’ being treated as if it is (nearly) as good as currency. *Bank’s time deposits*, for example, are traded as highly liquid assets since the central bank or the government, through a combination of regulations, guarantees that they are considered safe by the public (McLeay et al., 2014). The vast majority of money in the modern economy takes the form of financial assets. Consequently, in modern financial markets, derivatives, futures contracts, and repurchase agreements, among other financial instruments, are ‘treated’ as money (currency) and permitted to ‘back’ asset portfolios. However, as an investment fund, a money-market fund cannot ‘print money’ as a bank can (that is, create its own liabilities by making loans); it can finance its assets by purchasing liabilities or attracting shareholders.

In sum, an economy’s *financial structure* consists of the existing claims and instruments held by the various agents across the economy and the present and future commitments

⁶ Chapter 3 defines more clearly what ‘money’ and liquidity means for this thesis.

⁷ Sometimes it can be bought at a discount and then paid back at its face value.

those agents have made, along with the economic agents and institutions participating in financial markets. Market participants involve households, non-financial firms, governments, financial intermediaries, depository institutions (such as banks), institutional investors (insurance companies, pension funds, pooled investment vehicles), brokers and dealers and foreign investors, among others. As financial systems become more complex, so does the financial structure, as well as the tools and methods employed, all of which can have significant implications in economic outcomes.

2.2 The ‘New View’ of Banking

The ‘new view’ of banking dates from the early 1960s with John Gurley and Edward Shaw’s (1955) work on the role of financial intermediation in economic growth⁸. Their theory brought a significant step backwards in the understanding of money and banks established at that time by Keynes (1930) and other Keynesian followers (Jakab and Kumhof, 2015), as they depicted banks simply as another form of intermediary in the market for loanable funds, and bank liabilities as another form of debt—and not money (as a liquid asset). That is, for Gurley and Shaw banks do not create money endogenously (in the act of lending, ex-ante), but they collect deposits that are lent out ex-post.

In a subsequent paper (1956), Gurley and Shaw focused on the differences in the organisation of the financial systems between developed and developing economies. In the former, a well-organised and widespread financial intermediation system is often in place to enable the movement of loanable funds between savers and investors. In the latter, commercial banks are frequently the primary mechanism of intermediation. They argue that, in this setting, the money supply is highly correlated with the total amount of financial intermediation⁹. However, as the financial structure deepens over time, the

⁸ The ‘old view’ of banking was referred by Tobin (1963) to theories that differentiated commercial banks from other financial intermediaries.

⁹ The neoclassical monetary theory considers the money supply (M_s) as an exogenous quantity (Fisher, 1911), which determines the absolute price level in the quantity theory of money and does not influence real variables (Friedman, 1969). The QTM equation is defined by Friedman (1969) as:

$$Mv = PY$$

$$\frac{M_d}{p} = \frac{Y}{v}$$

$$M_s = M_d *$$

$$M_d = M_s$$

where the specific level of Output Y can be taken as fixed in the short run since it is given from production in the real economy. Changes in the money supply (M_s) can affect the Price Level P – the level of inflation. The demand for money in real terms $\frac{M_d}{p}$ is equal to the ratio between income Y and the velocity of circulation of money (v), which is assumed to be a

Quantity theory of Money (QTM) becomes a less satisfactory indicator of the money stock, as ‘more developed’ financial structures count with non-bank financial intermediaries that provide alternate ways of intermediation. Therefore, banks are depicted as comparable to any other financial intermediary, and banks’ liabilities as any other liability; therefore, it makes no sense to draw a distinction between which of these liabilities constitute ‘money’ and which do not (Tobin, 1963).

Efficient Capital Markets and General Equilibrium Theories

Shortly after Gurley and Shaw (1955), Modigliani and Miller (1958) revolutionised the neoclassical view on finance by formalising a theory that accounted for the irrelevance of the financial structure in economic decisions, laying the groundwork for the modern theory of finance. In particular, they demonstrated that productive decisions are independent of the financial sphere in perfect capital markets. Their empirical study shows that companies are indifferent about whether debt or equity is used to fund their investment. In other words, how finance is structured is irrelevant to increase firms’ productive investment as market efficiency will lead necessarily to properly priced financial assets. Therefore, financial intermediaries are irrelevant as they cannot enhance welfare.

One of the core assumptions of this model is that capital markets are perfect markets. That is, markets are competitive (a large number of securities are needed), complete (trade is costless) and frictionless (no asymmetries of information). In short, there are no market failures in this environment. The classic Arrow-Debreu resource allocation model assumes that as long as markets are competitive, complete and frictionless, resource allocation is Pareto efficient. Consequently, this view implies that there is no relation between the ‘real’ and financial sectors of the economy, as the financial sphere has no role in determining the real economic variables¹⁰. Whilst Gurley and Shaw’s (1960) subsequent paper envisioned an economic environment distinct from the Arrow-Debreu model that underlies the Modigliani-Miller theorem, they lacked a formal counterpart¹¹.

technical constant ($v = P \frac{Y}{M}$). With Y and v as constants, any variation in the stock of money causes a direct proportional variation in the price level. The money supply (M_s) is, thus, exogenous, and is assumed to be controlled by the Central Bank.

¹⁰ In the QTM, the dichotomy between the real and monetary sector derives from the fact that changes in the money supply affect solely the general price level. Changes in that quantity may have short-term effects, such as fluctuations in nominal prices (inflation), which assumes a non-neutrality of money in the short-run (Friedman, 1969). However, the underlying assumption in this view is that money is neutral in the long run. From there derive the expression ‘money is neutral’ or ‘money is a veil’ (Friedman, 1989). Money is viewed as a mere technical means of exchange, and the general conclusions of the neoclassical model are comparable to those of a simple barter economy.

¹¹ The authors, however, stated on page 5 of their 1960 book, their intention of performing a general equilibrium model.

Many scholars were drawn to the Modigliani-Miller (1958) theorem as it offered a formal basis for abstracting from the complexities of the financial sphere. For instance, this model was extended by other academics in the field of finance by developing portfolio choice models using a general equilibrium framework (Harry, 1952; Patinkin, 1956; Tobin, 1958). The core result in equilibrium models of portfolio choice rests on two assumptions: (1) that capital markets are competitive, complete and frictionless so that all assets can be redistributed and optimal wealth portfolios can be obtained at any point in the decision-making process; and (2) that the stochastic characteristics of assets' return are effectively specified—that is, this stochastic environment involves random draws from a well-behaved and well-understood probability distribution of risk.

James Tobin's (1963) 'new view' of banking incorporated some of these portfolio choice ideas and Gurley and Shaw's approach to banking. In particular, his main argument is that financial intermediaries act as principal institutions by absorbing credit and liquidity risks of bank depositors that require payment on demand and bank loans that become due on specified dates. This is due to (1) their expertise in assessing borrowers' creditworthiness, (2) their ability to reduce default and liquidity risk by using the law of large numbers¹², and (3) the government guarantees that assure them solvency and liquidity. However, a side theme of Tobin's argument is the importance of interest rate ceilings and reserve requirements in differentiating commercial banks and other financial intermediaries. For him, banks were subject to considerably stricter regulations; thus, these institutions could be differentiated. However, these differences had little to do with the monetary nature of banks' liabilities.

The treatment of the nature of bank liabilities as any other financial intermediary's liabilities aroused criticisms among mainstream economists. Harry Johnson (1968), for example, disagreed with the view that banking liabilities were comparable to other financial institutions' liabilities due to the unique characteristics of its product—money—which serves as means of payment. He contends that a competitive banking system would be constantly tempted to increase the nominal supply and thereby initiate price inflation, ultimately affecting the stability of the general equilibrium. Similarly, Black (1970), warned about the need to recognise the differentiated risks associated with bank deposits and portfolio liabilities. He contends that bank liabilities should not be considered risk-equivalent to those of other financial intermediaries, as bank deposits are less riskier than portfolio liabilities.

¹² The law of large numbers states that as the number of units with a particular risk increases, the average risk of loss falls as long as this risk is independently distributed.

2.3 New Classical Economics

The methodological revolution of New Classical macroeconomics in the 1970s pushed the notion of rational expectations and micro-foundational models forward as an attempt to solve the debate between the rising complexities of an expanding financial sector and market efficiency. Two significant events in the global economy prompted the establishment of New Classical macroeconomics as the dominant school in macroeconomics in the 1970s: the breakdown of the Bretton Woods system in 1971 and the 1973 oil crisis. These events triggered a period of stagflation, particularly in advanced economies, which led to a generalised critique of Keynesian approaches in addressing stagflation, severely undermining the Keynesian perspective that had prevailed throughout the Bretton Woods era¹³.

The methodological revolution of New Classical macroeconomics stressed the importance of using micro-foundations to construct macroeconomic frameworks, particularly by assuming a representative agent or rational expectations. The New Classical paradigm showed that if rational expectations hold, information is complete, and prices flexible, then market outcomes are necessarily efficient. The efforts of New Classical economics in providing microeconomic foundations to construct macroeconomic frameworks contributed to shifting attention away from financial factors towards models built upon individual optimisation. This section delves into three critical elements of the New Classical economics legacy: market efficiency, the real business cycle, and financial liberalisation.

Rational Expectations and Efficient Markets

The ‘efficient market’ hypothesis that underlies New Classical micro-foundational models was developed by Eugene Fama. In (1965), his PhD thesis made the first reference when explaining that (flexible) price movement of securities may be approximate in the short-run by a random walk. Here, he defined an efficient market as ‘a market where, given the available information, actual prices at every point in time represent very good estimates of intrinsic values’ (p.90). This notion was further explored in his (1970) article, in which he reintroduced the concept of efficient markets to current economic theory¹⁴. In 1980, Fama (1980) examined banks’ behaviour in this context by showing that under efficient capital market assumptions, banks are essentially portfolio managers with no influence over financial prices or allocations. That is, banks and other financial

¹³ The original Phillips curve ruled out simultaneous high inflation and high unemployment, prompting the ‘Lucas critique’ to reflect a paradigm shift in macroeconomic theory in favour of establishing micro-foundations.

¹⁴ Fama (1970) defines an efficient market as one in which prices ‘fully reflect’ the available information (Samuelson, 1965; Fama, 1970). That is, markets are efficient if prices adjust rapidly to new information.

institutions are simply veils over real economic dynamics. This setting closely follows the Modigliani-Miller (1958) theorem as it shows how, under certain assumptions, the financial structure becomes irrelevant¹⁵.

Rational Expectations and the Business Cycle

The notion that banking institutions are irrelevant to economic outcomes was analysed further by Brock and Mirman (1972) in the context of economic fluctuations. Their stochastic competitive equilibrium growth model attempted to show how a stable long-run equilibrium for optimal capital accumulation can be achieved in the face of ‘uncertainty’¹⁶. The underlying assumption of this and other models developed at the time is that any significant interaction between the real and financial sectors requires solely the existence of a market for a medium of exchange (that is, for financial intermediation). Therefore, the financial structure has no effect on how capital is accumulated, as any forces destabilising a ‘long-run’ equilibrium had nothing to do with the performance of borrowing and lending but with ‘real’ factors.

Brock and Mirman’s (1972) framework would later serve as the foundation for the real business cycle (RBC) theory (Kydland and Prescott, 1982), as it provided an alternative for modelling financial and monetary concerns in the context of intertemporal exchange. Thus, the rational expectations or representative agent formulation used in the RBC theory successfully abstracts from any conceivable ‘challenges’ in the exchange process. Monetary policy and banking behaviour are viewed merely as responses to real market dynamics rather than financial dynamics. That is, any shock to an economy originates mainly in the productive sphere. Finance can only affect nominal variables but not ‘real’ ones. As a result, subsequent New Classical macroeconomic models viewed changes in the functioning of an economy as exogenous in the real economic environment and fluctuations as the efficient market reaction to those changes.

Rational Expectations and Financial Liberalisation

New Classical economists’ efforts to establish themselves as the dominant school of macroeconomics led to a structural economic revolution wherein various economies in the North, South, and East underwent profound transformations toward a neoliberal form of capitalism (Grabel, 2000). As Polanyi (1944) has dubbed it, this ‘great transformation’

¹⁵ Fama (1980), however, distinguishes between a strong and a weak form of the Modigliani-Miller theorem. These forms are contingent upon the degree to which financial intermediaries have access to capital markets. For example, an unregulated market demonstrates the theorem’s clearest application. However, reserve requirements are seen as a direct tax on deposit returns. In this case, if banking is competitive, deposits earn the same rate of return as comparable non-deposit portfolios, less the reserve requirement tax.

¹⁶ Uncertainty is treated here as the expectations of random events; that is, risk.

resulted from political struggle and ideological conflict rather than a natural, historical process. In this vein, the appointment of Paul Volcker as Chairman of the Federal Reserve in 1979, as well as the elections of Margaret Thatcher as Prime Minister of the United Kingdom (UK) in 1979, and Ronald Reagan as President of the US in 1980, marked the beginning of what can be termed the ‘Neoliberal era’ (Harvey, 2007). In particular, Volcker’s aggressive monetary-policy interventions destabilised the US banking system and global financial markets, and these two elected leaders supported efforts to deregulate finance and privatise public companies, among other actions¹⁷. In this sense, the 1970s denoted the beginning of a wave of financial deregulation in the developed world that has steadily increased over the decades thereafter¹⁸.

The 1970s also saw the beginning of a radical series of transformations in emerging economies, as Chapter 4 shows, as many Latin American nations adopted structural financial reforms that sought to open their markets to foreign ownership and competition, as well as deregulate their banking systems and financial markets in an effort to increase competition and bank efficiency. These policies along with that decade’s booming commodity prices, attracted many large US banks to commodity-rich Latin America, which extended increasing cross-border loans to these regions’ banks. This lending boom exposed these lenders and borrowers to Volcker’s Federal Reserve’s aggressive interest-rate increases, as well as the following recession and commodity-price crash of 1981-82. This immediately resulted in Mexico and other Latin American nations defaulting in 1982, marking the first significant debt crisis of the Neoliberal era. Altogether, Mexico, Argentina, Colombia, Costa Rica and Brazil, among others, adopted such reforms as disciplinary measures in the late 1980s and early 1990s (Katz, 2001)¹⁹.

New Classical macroeconomics provided the theoretical justification for this radical transformation to stand. In particular, the work of McKinnon (1973) and Shaw (1973) is specifically important as the theoretical basis of this shift in Latin American economies. Their research identifies the negative role of certain financial market policies in what they termed ‘less-developed countries’ (LDCs), using Brazil, Chile, Ghana, Korea, India, Pakistan and Turkey as case studies. Their analysis suggests that these regions’ underdevelopment was attributable to a significant degree of ‘financial repression’ in their markets, which prevented these nations from developing (or ‘deepening’) their financial sectors to boost economic development²⁰. At the core of the McKinnon-Shaw

¹⁷ Note that these events marked the ascendancy of a movement that had started years before.

¹⁸In the US, for example, this pro-market momentum culminated in 1999 with the approval of the Financial Services Modernization Act, which abolished the 1933 Glass-Steagall Act’s separation of commercial and investment banking.

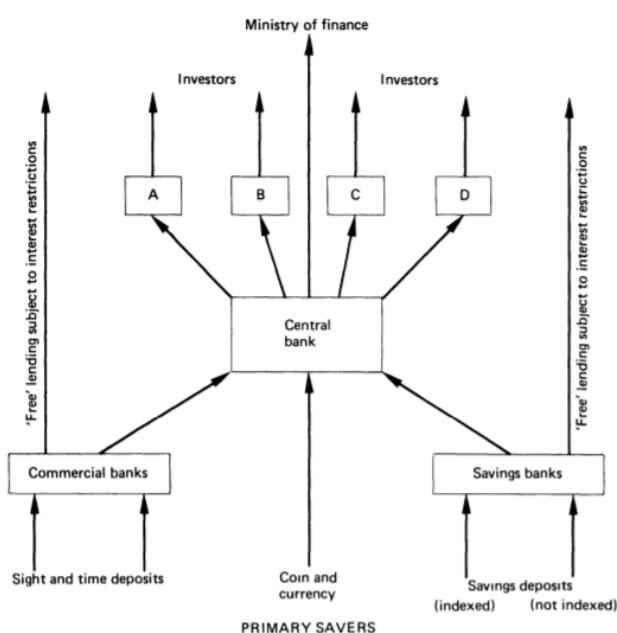
¹⁹ Chapter 4 focuses on the Latin American reforms themselves.

²⁰ The term ‘economic development’ is widely used within mainstream economics to refer to the rise of a monetised market economy, as this was the focus in much of the earlier literature. It has also been used to refer to industrialisation processes. In particular, McKinnon (1973)

hypothesis stands the idea of financial liberalisation and opening policies in favour of economic development.

Financial repression can be understood as a set of government regulations imposed on the financial system that prevent financial intermediaries from capturing higher savings rates by forcing them to maintain artificially low deposit/return rates²¹. In particular, the focus of McKinnon (1973) and Shaw's work (1973) was set on LDCs banking systems²², arguing that LDCs banking systems were heavily regulated ('repressed') and state-owned at that time. In a subsequent empirical paper (1981), McKinnon sought to demonstrate the detrimental effect of financial repression policies on LDCs' financial markets by conducting an in-depth analysis of Colombia's banking system, namely the intermediation process. Using empirical data, he observed a positive correlation between nominal inflation and real lending interest rates, as well as a negative relation between inflation and real deposit rates. According to McKinnon, this was due to how LDCs intermediation was structured, as seen in Figure 2-5.

Figure 2-5 - Financial Intermediation in a Typical Semi-Industrial LDC



and Shaw (1973) use the term 'economic development' interchangeably with economic growth.

²¹ They identified interest rate ceilings, credit ceilings, or restrictions on directions of credit allocation, liquidity ratio requirements, high reserve requirements for financial intermediaries, capital controls, restrictions on market entry into the financial sector, and government ownership or dominance of financial institutions, as key financial repression policies.

²² The main reason to focus solely on banking systems, according to McKinnon (1973, 1981) and Shaw (1973), is that this sector was the only 'organised' financial market in LDCs.

Source: McKinnon (1981).

Note: A, B, C, D are specialised credit agencies (banks) that get cheap finance from the central bank. According to McKinnon (1981), A represents an export promotion fund; B is an agricultural bank; C is a central mortgage bank; and D is an industrial development bank.

His main argument stresses that when inflation is high and reserve requirements are in place (financial repression), the spread between deposit and loan rates is extensive, which might indicate a correspondingly higher seigniorage extraction in the banking system. He contends that LDCs governments use these high reserve requirements' flow to compensate for current-account budget deficits. These resources are channelled into the Central Bank, which flows directly into the finance ministry, as Figure 2-5 shows²³. Reserve requirements act as an implicit tax on banks by restricting a specific portion of their portfolios from productive investments and loans. By imposing these requirements on commercial and savings banks, the government can force these institutions to buy low-interest government bonds in a non-inflationary manner, forcing the commercial banks to substantially reduce deposit rates of interest, raising lending rates and, thus, contracting the flow of loanable funds.

When high reserve requirements are paired with interest ceilings and protective government directives for specific borrowers, savers who are typically unaware of the policy become the primary taxpayers as they face reduced interest rates on their savings. The resulting inflation decreases perceived real interest rates for potential depositors, and private financial savings decline, reducing the flow of loanable funds and, thus, investment and employment. Even though the nominal interest rate may be flexibly changed to account for inflation, the amount of contraction is highly dependent on inflation. Consequently, his work demonstrated that the banking system in LDCs is highly susceptible to the authorities' inflation rate choice. As a result, this literature emphasised firmly, during the 1970s and 1980s, the urgent need to 'liberate' LDCs' financial markets to improve the mobilisation and allocation of domestic resources through their financial sectors so that these markets could develop. Financial development and financial liberalisation are seen as inextricably related. By pushing asset returns towards equality, the capital market of a 'developed' economy successfully monitors the efficiency with which the existing capital stock is deployed, thereby significantly improving the average return.

At the heart of the McKinnon-Shaw thesis stands the rational expectations paradigm. Equilibrium also plays a fundamental role in this analysis: when individual utility is

²³ He contends that in LDCs, the Central Bank is often under the control of the minister of finance.

maximised, information is complete, prices are flexible, and market outcomes are inherently efficient. As information is complete, the implications of financial development on the stability of an economy in the face of uncertainty are ‘known’ and/or controlled. At the same time, at the core of this theory is the notion of the equilibrium rate of interest—‘the natural rate of interest²⁴’—for bringing the volume of savings and investment into equality. In other words, the optimal allocation of credit is determined by the ‘free market’ forces, assuming that unleashing and deepening market forces will enhance overall welfare. Likewise, this perspective implies that causality runs from savings to investment (so that savings can be ‘mobilised’) and from deposits to loans, implying a specific understanding of banking. In this way, unregulated markets would replace government controls and restrictions on the flow of funds, even across borders, creating an integrated liberalised global economy. These paradigm shifts transformed the financial structure of Latin American economies and expanded, at the same time, Latin America’s access to global markets, as Chapter 4 shows.

However, empirical evidence within mainstream economics seems to increasingly put the empirical validity of the McKinnon-Shaw hypothesis into doubt. Diaz-Alejandro (1985) examined the effect of financial liberalisation on economic growth in Chile, Argentina and Uruguay throughout the 1970s. He shows that financial reforms exacerbated financial crises while having no meaningful increase in savings and investment. The article examines how financial liberalisation proceeded in economies that lacked an institutional framework for prudential regulation and arms-length finance. As a result, financial liberalisation followed a deterioration in domestic intermediation.

Similarly, De Gregorio and Guidotti (1995) showed that financial liberalisation in economies with a poor regulatory environment negatively affected economic growth. In this respect, McKinnon (1993), in an attempt to amend the original hypothesis, emphasised the importance of policy ‘sequencing’. That is, a fiscal balance and price stability should be achieved before financial liberalisation takes place in domestic capital markets. Once done so, international capital mobility should follow. However, an upward shift in financial crises after the 1980s on a global scale seems to support the notion that financial liberalisation might be related to increased financial instability and macro-financial crises (Valencia and Laeven, 2008; 2013; 2018; 2020)

Williamson, J. and Mahar (1998) show that financial liberalisation contributed to an increased risk of financial instability in domestic economies. Similarly, Detragiache and Demirgüç-Kunt (1998) econometric model revealed that banking crises were mainly caused by a weak macroeconomy and high real interest rates, combined with inadequate

²⁴ The natural rate of interest is ‘the rate of interest which would be determined by supply and demand if no use were made of money and all lending effected in the form of real capital goods’ (Wicksell, 1936, p.102); hence it would be seen as the rate of interest which would exist in a non-monetary, non-financial world in equilibrium (Sawyer, 2014, p.8).

law enforcement. This argument was reinforced further in their (1998) paper, which shows that even after controlling for adverse macroeconomic conditions, the balance of payments crises and poor government policies, financial liberalisation remains responsible for banking instability, highlighting the importance of the institutional infrastructure. Further, these authors' (2005) research found that financial liberalisation may trigger banking crises in countries with weak law enforcement and regulation. Moreover, Kaminsky, Graciela L and Reinhart (1999) detected a positive correlation between financial liberalisation and banking and currency crises. In the same vein, for Allen and Gale (1999), financial liberalisation has led to asset price bubbles, which are caused by an interaction of the risk-shifting problem in intermediaries and uncertainty concerning the expansion of credit.

This is consistent with the results of the empirical studies of Valencia and Laeven (2008); (2013; 2018; 2020). Their empirical analyses systematically document the occurrence of systemic financial crises from 1970 onward²⁵. A total of 203 systemic banking, currency, and sovereign-debt crises are counted in Eastern and Western Europe, South and East Asia, and Latin America between 1970 and 2017. Their analysis reveals that such crises often occur in response to the liberalisation of the financial sector, such as in Chile and the Nordic nations in the 1990s. This is comparable with the extensive empirical evidence presented by Reinhart and Rogoff (2009), which also shows a dramatic upward shift in financial crises after 1980.

2.4 New Keynesian Economics

In an attempt to explain the sheer accumulation of financial crisis episodes, some scholars linked these episodes to underlying agents' motives, especially in situations of incomplete information, by developing agent-based micro-foundational explanations of borrower crisis dynamics. The 1980s Latin American sovereign debt crisis was explained as a principal-agent problem: a moral-hazard problem occurs when the agent is incentivised to default (Eaton and Gersovitz, 1981). This unfavourable result is realised when the penalty for non-payment is less than the cost of default (Eaton et al., 1986).

However, in light of the considerable empirical evidence, some of these scholars started questioning the realism and empirical value of the associated paradigms of efficient capital markets. The main criticisms centred on these paradigms' extreme assumptions about information, as market inefficiencies may result when one party has an informational advantage over another. In this vein, the New Keynesian approach to macroeconomics emerged as a response to the criticisms raised against New Classical

²⁵ The term 'systemic' refers to breakdowns in financial relations that adversely affect outcomes in the industrial and financial structure. These can take the form of currency, banking, and/or sovereign debt crises (Laeven and Valencia, 2013).

macroeconomists. New Keynesians agree that agents are rational but question the notion that agents participating in markets possess the same information (Gordon, 1990). In addition, they reject the Walrasian paradigm of perfect markets. New Keynesian economics, in contrast to New Classical macroeconomics, treats unemployment, credit rationing and business cycles as ‘real economic problems’ (Greenwald and Stiglitz, 1986). As a result, certain ‘real-world’ circumstances might lead to scenarios in which agents may ‘rationally’ engage in a wide variety of behaviours and consequently, financial structures ‘matter’ (Stiglitz, 1988).

Bank Credit Rationing Models

New Keynesian models of credit and banking emerged to analyse the effects of informational asymmetries in credit market allocations. In particular, these models show how credit-market equilibria are affected by depositors’ asymmetrical information about their demand for liquidity or by borrowers’ informational advantage about their own creditworthiness. That is, the source of the problem is identified as asymmetric information as to default risk, which produces a sub-optimal equilibrium outcome of credit rationing. These models proposed a novel form of framing bank behaviour, conforming to the mainstream approach but allowing for market imperfections. In this case, the rationality axioms remain intact, except in the one area of default risk on the part of individual borrowers. In addition, the empirical testing is done by simulations rather than by using ‘real’ data.

In a very influential paper, Stiglitz and Weiss (1981) exploit informational asymmetries to motivate a form of credit rationing where the markets deny funds to borrowers with characteristics identical to those receiving loans. The key unobserved factor is the riskiness of borrowers’ projects. It is also assumed that borrowers issue standard risky debt, which pays lenders a fixed interest rate if the project yield is sufficiently high and pays the net yield otherwise. Thus, lenders earn a lower expected return on loans to bad-quality borrowers (those with riskier projects) for a given loan rate. This occurs because an unobserved mean preserving spread in a borrower’s project return distribution reduces the expected payment to lenders under default. A rise in the interest rate lowers the average borrower quality, as those with relatively safe projects are the first to drop out. Thus, further increases in the interest rate may lower lenders’ expected return after a point, making the loan supply curve bend backwards. Stiglitz and Weiss show that when some borrowers are arbitrarily denied credit, the loan supply curve may bend backwards and that credit rationing can result.

Many papers elaborate on the credit rationing idea initiated by Stiglitz and Weiss (Mankiw, 1986; Bernanke and Gertler, 1986; De Meza and Webb, 1987; Williamson, S., 1987; Bernanke and Gertler, 1990), not only in credit markets but also in equity markets

(Myers, 1984; Greenwald et al., 1984). The results often depend significantly on the particular informational asymmetries between borrowers and lenders. Nevertheless, two central conclusions usually emerge. First, if net savers are susceptible to stochastic consumption shocks, banks can promote investment by acting as an intermediary between net savers and net borrowers. Second, when net savers know less than net borrowers about the latter's creditworthiness, 'efficient' lender (utility-maximising) behaviour will result in 'sticky' lending rates and persistent quantity-constrained equilibria in credit markets (Dymski, 1992). If there are economies of scale assessing creditworthiness or monitoring borrower performance, banks also play a unique role here (Fazzari and Athey, 1987). These models suggest some insights about the importance of the financial structure on economic outcomes: financial intermediation enhances credit-market equilibria, and new intermediaries may emerge, as well as novel ways of measuring creditworthiness.

Nevertheless, New Keynesians postulate that economic agents are rational, implying that they can assign numerical probabilities to all conceivable future economic situations (risk) and may convert uncertainty into a certainty-equivalence using probability theory. Random draws characterise this environment from a well-behaved and well-understood probability distribution. The main issue with these models with asymmetric information is that they are unable to reproduce outcomes that develop in the face of Keynesian uncertainty (Dymski, 1992). In Keynesian uncertainty, there are no parameters governing the world. This indicates that probabilistic risk and uncertainty are not synonymous (Davidson, 1991); there is no reliable method for flattening uncertainty into certainty-equivalence. When agents are confronted with uncertainty (rather than risk), expectations about future outcomes may collapse in turbulent times. This means that an agent's decisions may rely almost entirely on unrestrained animal spirits rather than on 'subjective' and objective probabilities (Davidson, 1991). That is, agents will place less trust in the past as a guide to the future.

This might also drive banks to change their degree of 'risk aversion' and become more apprehensive of irreversible commitments that heighten the threat of illiquidity (Dymski, 1992). In the context of Keynesian uncertainty, banks are firms whose function is to assess and absorb default and liquidity risks in financial markets. As these agents' expectations rely on uncertainty, the structure of intermediation can affect aggregate economic activity if agents' expectations change, as their willingness to create credit by increasing their own exposure to default and liquidity risks will change in the face of uncertainty. In this way, the main flaw of these asymmetric information models is their effort to reduce uncertainty in the calculation of probabilities. There is no way to have absolute knowledge of the future (Crotty, 1994).

2.5 New Consensus in Macroeconomics

In the early 1990s, there was a convergence of views in mainstream macroeconomics. This convergence gave rise to the so-called New Consensus in Macroeconomics (NCM) (also known as the ‘new neoclassical synthesis’), which has become the dominant perspective in economics (Arestis, 2009; Tovar, 2009; Woodford, 2009). Both New Keynesian economics and the New Classical school, particularly the RBC theory, are incorporated within NCM (Goodfriend and King, 1997; Goodfriend, 2004; Dixon, 2007). The main features include the rational expectations paradigm and the ‘natural’ or long-run equilibrium framework, which emphasises neutrality in the long-run.

NCM academics are particularly interested in analysing (short-term) economic dynamics using mathematical models and equations that combine micro and macro-foundations. They assign a critical role to real shocks in explaining short-run fluctuations (in the business cycle). Traditionally, dynamic stochastic general equilibrium (DSGE) models reflect these dynamics: the RBC part of the model explains the fluctuation of the potential output embodied by DSGE models, whereas the transitory short-term deviations from this trend are explained by the slow adjustment of prices and wages of New Keynesian economics (Mazzocchi, 2013).

Pre-2008 crisis DSGE Models

Early NCM models sought to model economic fluctuations using three reduced-form (or aggregate) equations: an aggregate demand equation, an inflation equation and an interest rate rule²⁶ (Fontana and Passarella, 2018). These macroeconomic equations are strictly micro-founded, meaning that each connection between aggregate magnitudes is determined by the constrained inter-temporal optimisation of an individual utility function. This function underlines the behaviour of an entirely rational representative agent with perfect prudence who maximises its utility over an indefinite horizon (Fontana and Passarella, 2018). The ‘rational expectations hypothesis’ and the concept of a ‘natural’ or ‘long-run equilibrium’ are central to the benchmark NCM model.

The rational expectations hypothesis stipulates that an agent’s decision to consume (and therefore, aggregate demand) is based on an intertemporal utility optimisation decision subject to a budget constraint (Blanchard and Fischer, 1989). This indicates that the marginal rate of substitution between present and future consumption, disregarding uncertainty and adjusting for the subjective rate of time discount, is equal to the real gross interest rate (Arestis, 2009). The intertemporal utility optimisation is based on the ‘transversality condition’, which assumes that all debts are ultimately paid, meaning that

²⁶ As the algebraic terms are not the focus of this thesis, this section abstracts of the formal representation of the benchmark model.

all economic agents are creditworthy. This implies that all debts in the economy will be accepted in exchange. Therefore, there is no need for a particular monetary asset.

Similarly, as all fixed-interest financial assets are identical, a single rate of interest is applicable to any period. As borrowing and saving preferences fluctuate over time, the single interest rate may also fluctuate. Under these conditions, no economic agent or firm is liquidity restricted. Thus, there is no need for commercial banks (Goodhart, 2007). As this model is founded on the ‘transversality condition’, its proponents have transformed it into a fundamental non-monetary model. Therefore, it should not come as a surprise that private banking institutions and monetary variables are not fundamental (nor modelled) to the NCM framework. Furthermore, this notion of perfect capital markets presupposes the absence of credit rationing since all resources would be ‘efficiently’ distributed, meaning that banking institutions do not affect economic outcomes. As demonstrated by the Modigliani-Miller theorem (1959), this assumption supports the irrelevance of financial institutions. The irrelevance of financial institutions and the use of a single interest rate also indicate that this model essentially disregards the perceived lender and borrower risks.

The other two equations reflect the assumption of a ‘natural’ or long-run equilibrium. This model suggests that the central bank can affect the short-term real interest rate and that money is a residual variable (Meyer, 2001). Long-term price flexibility renders the central bank powerless to affect the real interest rate. Therefore, in these models, monetary policy influences real variables and inflation only in the short-run but has no long-term effect (Fontana and Passarella, 2018).

Post-2008 DSGE Models

The conceptual flaws of the two theoretical foundations of the NCM model, namely, the rational expectations hypothesis and the notion of a natural (or long-run) equilibrium, were particularly evident during the 2008 global financial crisis. This prompted two significant responses within this economic discipline. On the one hand, several academics contended that the declared consensus surrounding the benchmark NCM model does not represent the essential characteristics of the functioning of financially sophisticated capitalist economies, including the likelihood of financial and banking crises (Farmer and Foley, 2009; Krugman, 2009; Lucas, 2009). In particular, the major weakness is the excessive reliance of these models on the rational expectations paradigm and the Modigliani-Miller theorem, as these models assume that information is perfect and that money and finance are irrelevant in shaping economic outputs.

On the other hand, other scholars have acknowledged the inadequacies of the original macroeconomic assessments and have attempted to amend the original benchmark NCM model by explicitly including financial markets and financial frictions. The amendment

versions of the benchmark model recognise that firms require external finance for their investment projects and that information asymmetries exist between lenders (banks and financial intermediaries) and borrowers. In this regard, some NCM scholars have analysed the implications of volatile risk premia, suggesting that changes in these premia are the most significant shocks driving the business cycle (Fontana and Passarella, 2018). In other words, any initial shock in the economy is likely to be exacerbated by changes in firms' balance sheets and, more generally, by circumstances in the banking and financial sectors (Fontana and Passarella, 2018). Once these frictions are accounted for, it is suggested that the NCM model could correctly forecast the economy's behaviour. This perspective closely parallels the work of Bernanke and Gertler (1989) and Bernanke et al. (1999).

Christiano et al. (2014) seek to improve this model by assuming that firms combine internal funds with external funds, mainly bank loans, to obtain physical capital and that the interest rate on loans includes a 'premium', which reflects the costs of default of firms (Fontana and Passarella, 2018). In this way, Christiano et al. (2014) demonstrate that when risk premia rise, so do the premiums charged by banks, reducing the supply of loans. They claim that rises in risk premia might explain some critical aspects of the 2008 financial crisis and the subsequent economic recession. That is, changes in risk premia relative to the risk-free interest rate should be viewed as the business cycle's primary cause (or amplifier).

Similarly, Borio et al. (2001) and Borio (2006) examined the implications of fluctuations in the level of financial risks over time. They demonstrated that when incentives and potential miscalculations by financial market participants are permitted, it is possible to underestimate risks during booms and overestimate in recessions. This has negative implications on bank reserves and capital ratios, but in turn, it reinforces the pro-cyclical nature of bank profits, pushing banks to boost lending during expansions and restrict it during contractions. Current methods of modelling financial markets and financial frictions include inserting collateral constraints, currency risk premia in open economies, and a Minsky-Fisher type of processes (Brunnermeier et al., 2012). Other models have explicitly introduced a heterogeneous, monopolistic competitive banking sector (Hafstead and Smith, 2012). In conclusion, recent efforts to enhance or revise the benchmark NCM model have attempted to model financial markets and financial frictions.

However, the principal flaw of these models is that they assume that financial instability results from exogenous market frictions; that is, imperfections, asymmetries or rigidities in the banking and financial sectors. These models do not account for the possibility that financial instability is an endogenous feature of the normal functioning of modern capitalist economies. In other words, post-2008 NCM models continue to assume, like in the old benchmark NCM model, that free market forces would drive the economy towards

a unique optimal equilibrium in the long-run (Fontana and Passarella, 2018), and that agents are still rational agents making decisions (ignoring the importance of uncertainty). Surprisingly, both paradigms—rational expectations and ‘natural equilibrium’—of the old benchmark models pre-2008 global financial crisis (GFC) were heavily criticised by NCM scholars themselves.

2.6 Bank-Based vs Market-Based Financial Systems

The study of national financial systems has been a subject of considerable attention in contemporary scholarship, with a primary focus on the organisation of domestic financial structures. Traditionally, this examination has been centred on the distinction between bank-based and market-based financial systems, which has been drawn by a range of scholars, including mainstream economists and researchers in the field of comparative political economy (CPE). Scholars in the latter field have often used this dichotomy within the varieties of capitalism (VoC) literature to scrutinise differences in economic systems across various countries. Nevertheless, recent contributions from a subbranch of CPE scholars have suggested the existence of a third business model for comparative analysis of national banking systems, namely, ‘market-based banking’. This alternative framework challenges the classical dichotomy and offers an analytical tool to account for the changing activities of banks and the development of national financial systems.

In its simplest and most general form, a bank-based economy can be described as one in which indirect credit flows mainly through the banking sector. Banks are primarily responsible for matching the supply and demand for funds through intermediation, whereby savings take the form of bank deposits, and investment takes the form of loans. Conversely, in a market-based economy, intermediation occurs mainly through financial markets, commonly in stock/equity markets through the issue of equity. The crucial point of this classification is that these systems are viewed in terms of the type of institution and financial instruments used for intermediation—that is, how they connect those on the supply and demand sides of financial markets—rather than assigning any particular role to these financial structures in shaping economic outcomes.

This section has been divided into three subsections. Subsections 2.6.1 and 2.6.2 critically review mainstream and VoC approaches to bank-based and market-based financial systems, emphasising their limitations in capturing the complex reality of financial systems. Specifically, the critique centres on the conventional dichotomy between bank-based and market-based systems, which assumes a clear-cut distinction between these systems and overlooks the increasingly crucial role of banks in market-based systems and in shaping economic outcomes. Following, subsection 2.6.3 provides a critical assessment of the market-based banking approach. While market-based banking recognises banks’

greater use of financial markets and securities to raise funds and manage risks, this view still adheres to the ‘loanable funds’ approach to savings and investment (as in mainstream economics). This approach also fails to acknowledge the crucial role of banks in credit creation. Moreover, it retains the misleading notion that banks stand in contrast to markets rather than viewing banks as continuously involved in market transactions.

2.6.1 The Mainstream View of Bank-based vs Market-based Systems

In the mainstream view, both structures—bank-based and market-based systems—are viewed as linking and equating savings with investment via the interest rate. The causality of this relation runs from savings to investment. Additionally, banks and financial markets are portrayed as interchangeable financial intermediaries. Therefore, each system is compared in terms of its effectiveness in matching savings and investment. As a result, the degree to which a country can be classified as bank-based or market-based is not particularly relevant to the mainstream literature (Mason et al., 1995; Levine, 1997). The differences, however, derive from their efficiency in resource allocation. These are expressed by Levine (2000, pp.399-400) as follows:

The bank-based view highlights the positive role of banks in (i) acquiring information about firms and managers and thereby improving capital allocation and corporate governance... (ii) managing cross-sectional, inter-temporal, and liquidity risk and thereby enhancing investment efficiency and economic growth... (iii) mobilizing capital to exploit economies of scale... In contrast, the market-based view highlights the growth enhancing role of well-functioning markets in (i) fostering greater incentives to research firms since it is easier to profit from this information by trading in big, liquid markets ..., (ii) enhancing corporate governance by easing takeovers and making it easier to tie managerial compensation to firm performance ..., and (iii) facilitating risk management.

Demirgüç-Kunt and Levine (2004, p.81) define bank-based systems as systems where banks have a ‘leading role in mobilizing savings, allocating capital, overseeing the investment decisions of corporate managers, and providing risk management vehicles’. Whereas in market-based systems, ‘the securities markets share centre stage with banks in terms of getting society’s savings to firms, exerting corporate control, and easing risk management’ (Demirgüç-Kunt and Levine, 2004, p.81). As a result, the main contrast between the two systems appears to be the financial intermediary that primarily allocates capital in an economy.

Traditionally, the mainstream perspective has favoured bank-based systems over market-based systems. Rather than noticing the growth-enhancing role of banks, the case for a

bank-based system derives from a critique of the role of markets in providing financial functions (Levine, 2005). In this context, proponents of bank-based systems believe that market-based systems will not do a good job of acquiring information about firms and overseeing managers (Stiglitz, 1985; Boot et al., 1993; Shleifer and Vishny, 1997; Allen and Gale, 2001). At the same time, it is believed that banks do not suffer the same fundamental shortcomings as markets (Barberis et al., 1998). These elements hurt efficient resource allocation in market-based systems.

However, proponents in favour of market-based systems have stressed the problems that might arise in bank-based systems. As Levine (2000, p.400) summarises:

[P]owerful banks can stymie innovation by extracting informational rents and protecting established firms with close bank–firm ties from competition ... Furthermore, powerful banks with few regulatory restrictions on their activities may collude with firm managers against other creditors and impede efficient corporate governance ... In contrast, competitive capital markets play a positive role in aggregating diffuse information signals and effectively transmitting this information to investors, with beneficial implications for firm financing and economic performance... Thus, proponents of the market-based view stress that markets will reduce the inherent inefficiencies associated with banks and enhance economic growth.

For some mainstream economists, there is a causal and positive relation between financial development and economic growth. Therefore, for the proponents of market-based systems, the evolving relevance of securities markets is a crucial component of economic growth. Demirgüç-Kunt et al. (2013, p.476) state: ‘as economies develop, the services provided by securities markets become more important for economic activity, while those provided by banks become less important’. Similarly, Allen and Gale (2001, p.5) state that ‘the current trend is toward market-based systems’. Further, it is argued that in countries with poor regulatory environments, bank-based systems will better promote economic growth by exploiting ‘scale economies in information processing, ameliorate moral hazard through effective monitoring, from long-run relationships with firms to ease asymmetric information distortions’ (Levine, 2000, p.399). However, as the legal system improves, an economy will benefit more from a market-based system (Boyd and Smith, 1998; Rajan and Zingales, 1998). What is implied, thus, is that the development of stock markets in the financial system indicates a more market-based economy and, therefore, more financial development and economic growth (Sawyer, 2014a).

However, this view maintains that neither bank-based nor market-based financial systems are remarkably more efficient in fostering growth (Mason et al., 1995; Levine, 1997). Therefore, differentiating between bank-based and market-based systems seems pointless

for comprehending the process of economic growth (Levine, 2000). This reflects the irrelevance of the financial structure in shaping economic outcomes (as in the Modigliani-Miller approach). In this way, differentiating between these two organisational systems can be misleading. How finance is structured in different nation-states is irrelevant to this process, as market efficiency will necessarily lead to an efficient allocation of resources. As outcomes are fundamentally efficient, financial structures are irrelevant and do not affect economic outputs or financial stability. A paradigm based on an equilibrium framework indicates that an 'equilibrium interest rate' (or a 'natural' interest rate) will bring the volume of savings and investment into equality. In other words, the 'free market' forces determine the optimal allocation of credit, assuming that unleashing and deepening market forces will enhance overall welfare. Likewise, this perspective implies that causality runs from savings to investment (so that savings can be 'mobilised') and from deposits to loans, suggesting a specific understanding of banking. This entails that money is viewed simply as a medium of exchange, and its existence does not affect the structure of the economic system. By understanding capitalist economies as intrinsically non-monetary, this view also ignores banks' crucial role in the credit creation process.

In addition, viewing both bank-based and market-based structures within the context of a general equilibrium framework reflects the atemporality of mainstream perspectives on domestic financial processes. This means that by focusing on a relatively static system rather than a dynamic one, this view fails to account for the evolving nature of financial systems, banks' changing practices, and the novel financial activities that contributed to the global financial crisis in 2008. Furthermore, by overlooking the diverse and complex ways in which these structures manifest themselves in domestic economies, it also highlights the aspatiality of mainstream views on financial processes, as this literature disregards how these structures might shape and determine domestic economic outcomes and financial stability.

2.6.2 The Political Economy of Bank-based vs. Market-based Financial Systems

Differences in national financial systems have also been the object of study for CPE scholars. The seminal work of Zysman (1983) has been established as the reference point in the VoC literature for the study of national financial systems. He initially identified three main varieties of financial capitalism (VoFC), each with distinct political relationships among banks, industry, and finance and different implications for the process of industrial change. The three types include: (i) a capital-market-based system in which resources are allocated through prices determined in competitive markets, (ii) a credit-based system in which the government sets key prices, and (iii) a credit-based system dominated by financial institutions. However, in developed countries, the

government-led variant was substantially reduced, leaving researchers with the traditional dichotomy (Culpepper, 2005; Clift, 2007). Zysman's (1983) main argument asserts that a country's financial market structure determines the nature of the relationship between firms and government in the economy.

To differentiate among these systems, the focus is set on the process by which savings are transformed into investments. That is, through which structural arrangements—financial institutions and instruments—funds flow. Following the mainstream view, banks in traditional bank-based systems—or credit-based systems—act as intermediaries between surplus (households) and deficit (firms) units, which accept deposits, holding a prudential fraction of these in the form of reserves, and that make loans by lending the remainder. In his view, Zysman recognises that 'a bank creates money and a non-bank financial institution does not' (Zysman, 1983, p.55). However, the significance of this money-creating property of banks is not further explored. Banks' funding in this system, thus, derives from household deposits. Banks bear most of the risk in the unlikely event of a run by savers withdrawing their accounts. For this reason, banks charge higher interest rates for the loans they make than they pay on deposits (the cost of those loans). The profit/loss generated by banks' lending choices increases/decreases capital, expanding/reducing thus the capacity to lend (Hardie and Howarth, 2013).

However, contrary to mainstream economists, Zysman (1983) distinguishes between banks and financial intermediaries. One distinctive feature of banks is their 'financial power' to influence market pricing and protect non-financial corporations (NFCs) from market forces. The bulwark role of banks is dependent on a second feature: they are suppliers of 'patient capital' to customers²⁷. A third distinctive feature of banks in traditional bank-based systems is their close relational, rather than arm's-length, interaction with NFCs, which is strengthened by banks owning shares in such companies and bankers serving on their boards of directors (Hardie and Howarth, 2013). As a result, banks are more likely to be patient in their lending choices, either by providing longer-term initial loans or by dealing sympathetically with struggling companies. For these reasons, Zysman (p.60) notes that 'what makes the financial system different is the relative importance of two types of financial markets; capital markets and loan markets'.

Therefore, the key economic actors in credit-based financial systems are banking institutions that intermediate between households and firms. This system is considered a fundamental component of the VoC found in Japan and several West European economies, such as Germany, and is often known as coordinated market economies (CMEs) (Hall and Soskice 2001). In contrast, stock and equity markets are crucial agents in capital market-based financial systems, which has been identified as liberal market economies (LME) (Hall and Soskice 2001) and is exemplified by countries like the UK

²⁷ Patient capital can be understood as long-term capital.

and the US. This means that for CMEs, banks are a far more important source of funds than stock markets and for LMEs, stock market-based finance.

A CME is described by Hall and Soskice (2001, p.8) as follows:

In coordinated market economies, firms depend more heavily on non-market relationships to coordinate their endeavors with other actors and to construct their core competencies. These non-market modes of coordination generally entail more extensive relational or incomplete contracting, network monitoring based on the exchange of private information inside networks, and more reliance on collaborative, as opposed to competitive, relationships to build the competencies of the firm. In contrast to liberal market economies (LMEs), where the equilibrium outcomes of firm behavior are usually given by demand and supply conditions in competitive markets, the equilibria on which firms coordinate in coordinated market economies (CMEs) are more often the result of strategic interaction among firms and other actors.

Whereas in an LME, firms organise their operations primarily through hierarchies and competitive market arrangements. Hall and Soskice (2001, p.8) describe market arrangements in LMEs as follows:

Market relationships are characterized by the arm's-length exchange of goods or services in a context of competition and formal contracting. In response to the price signals generated by such markets, the actors adjust their willingness to supply and demand goods or services, often on the basis of the marginal calculations stressed by neoclassical economics. In many respects, market institutions provide a highly effective means for coordinating the endeavours of economic actors.

Similarly, some other authors have linked these forms of economic coordination—LME and CME—to specific countries, identifying two distinctive models of economic coordination: the German and the neo-American model. The German model (also known as the Rhine model) is described by Albert (2009) as bank-dominated, with strategic cooperation between banks and firms, where financial and industrial capital is integrated. This view has often been related to 'corporatist' systems, such as Japan and Germany, wherein banks, especially the larger ones, are explicitly members of industrial groups.

In contrast, the neo-American model is described as stock-market-dominated and short-term oriented. It has been linked to the United States and the United Kingdom, wherein banks have historically been institutionally independent of non-financial corporations and

related to market-based financial systems. Albert (2009, pp.35-36) summarises both models as the following: the ‘neo-American model is based on individual success and short-term financial gain; [whereas] the Rhine model, of German pedigree but with strong Japanese connections, emphasizes collective success, consensus and long-term concerns’. In the same vein, other authors have defined both systems in terms of the type of ‘money’ used in each system. Vitols (2001, p.1), for example, suggests that bank deposits and direct loans constitute the majority of the financial assets and liabilities in bank-based systems. By contrast, securities that can be traded on financial markets are the most prevalent type of financial assets in market-based systems.

This literature has also expressed favouritism for bank-based systems by analysing the differences between both systems in terms of their efficiency in resource allocation. By doing so, the VoC literature sees both forms of economic coordination (LME and CME) and institutional arrangements (bank-based/market-based) within a neoclassical framework. However, unlike mainstream economics, a difference worth noting within this literature is that it links different institutional arrangements (banks or markets) with different forms of relations between economic actors and broader forms of economic coordination.

In addition, this approach to bank-based and market-based financial systems implicitly incorporates a spatial dimension. This perspective generally favours bank-based systems over market-based systems, as mentioned. Nevertheless, this literature acknowledges the dominance of one system over the other by stressing the political role that the neo-American model has had since the 1980s in the direction of economic policies (such as financial liberalisation policies) and management techniques in certain national political economies, especially Latin American economies. Albert (2009, p.280) expresses this view as follows:

[o]f the two models of capitalism, it is the Rhine variant [bank-based] which is plainly more efficient than the neo-American, whether considered from the economic point of view or from the social angle. Yet there can be no doubt that the neo-American model maintains both a psychological and political edge over its rival and has done so since the beginning of the 1980s. It enjoys this position of ‘moral superiority’ on Rhine territory itself – in Germany, Sweden, and even Japan – and throughout much of the southern hemisphere, notably in Latin America (where, to be fair, American-inspired ideas have shaped the economic policies and management techniques successfully applied by the up-and-coming economies of Chile and Mexico).

By relating specific modes of institutional arrangements (banks or markets) to a geographical region, this view implicitly incorporates a spatial dimension to their

economic analyses, as most post-Keynesians do. Still, this view adheres to mainstream economic precepts, ignoring the monetary nature of capitalist economies, the crucial role of banks in credit creation, and, thus, the evolving complex reality of financial systems. In addition, the bank-based/market-based dichotomy risks downplaying the role of market-based actors in bank-based systems. This would exclude, for example, pension funds and insurance companies from playing any role in other institutional contexts, particularly in bank-based systems. Indeed, pension and insurance funds play no substantial role in the Latin American VoC literature (Schneider, 2009).

In an attempt to solve the oversimplifying approach to financial markets and the atemporality and aspatiality of the bank-based/market-based dichotomy, some CPE scholars proposed a different perspective as an alternative to the traditional dichotomy. Market-based banking is presented as a third business model that refers to a type of financial system in which banks rely more heavily on capital market activities, such as trading securities, underwriting debt and equity, and the increasing use of financial markets. In contrast to traditional bank-based systems, where banks typically hold a large portion of their assets in the form of loans and deposits, market-based banks tend to have a higher proportion of their assets in the form of marketable securities. The following section elaborates on this model further.

2.6.3 Market-Based Banking

Hardie and Howarth (2013) proposed ‘market-based banking’ as a third business model to supplement the conventional dichotomy of bank-based and market-based systems. This model was introduced as an analytical tool to account for the changing nature of banking activities and increased credit provision in advanced economies. According to the authors, market-based banking emphasises banks’ use of financial markets and securities to raise funds and manage risks. Implicitly, market-based banking refers to the degree of market-based assets and liabilities in banks’ balance sheets, as opposed to traditional bank loans and deposits. The authors contend that market-based banking played a significant role in the 2008 financial crisis in advanced economies due to the rapid expansion of credit facilitated by this model. The central concept underpinning this argument is banks’ financial power in the lending process.

The authors identify three distinct levels of the shift towards market-based banking. The first level observed in individual banks in Belgium, Canada, France, and Germany involves using non-market-based liabilities (such as deposits) to finance market-based assets (such as securities). This reflects a situation in which deposits exceed customer loans in banks’ balance sheets. However, it does not indicate the absence of market pressure on lending, as losses on market-based assets can deplete banks’ capital, and loans

can increasingly be traded, either directly or through securitisation, and, therefore, become market-based assets.

A second type of market-based banking, mostly found in Spain and Italy, as well as in ‘parallel’ or shadow banks in the US, involves the use of wholesale funds to finance bank lending as an alternative to deposits. This reflects a situation in which loans exceed deposits. That is, where market-based liabilities (such as wholesale funds) finance non-market-based assets (such as loans). The stability of this funding source depends on the strength of wholesale markets, as banks face the risk of finding skittish wholesale lenders (even further than depositors). This type of market-based banking is critical to understanding the nature of modern banking and the consequences of the 2008 financial crisis, particularly in cases where the purchase of market-based assets, such as subprime securitisations, is insignificant (like in Spain, for example) (Hardie and Howarth, 2013). Lastly, the third development in the move to market-based banking, observed mainly in the Netherlands and the UK, involves a situation in which market-based liabilities finance market-based assets. This type of market-based banking also played a significant role in the 2008 global financial crisis.

This balance sheet approach to banks can be a useful analytical tool for understanding the dynamics of national financial systems and the impact of banks’ behaviour in shaping and determining domestic economic outcomes and financial stability. However, this view still adopts a ‘real’ understanding of the economy rather than a ‘monetary’ one, which implies that the impact of these dynamics on economic growth and financial stability for nation-states is not particularly relevant and cannot provide guidance on financial or macroeconomic policy. As such, classifying national financial systems as bank-based, market-based, or market-based banking systems is misleading, as it overlooks the significance of the financial structure on economic outcomes, the crucial role of banks in credit creation, the monetary nature of capitalist economies, and thus, the inherent stability and uncertainty of the economy as a whole. Hence, this balance sheet approach could be benefited by adopting an alternative framework that accounts for monetary, temporal, and spatial phenomena. This means it is necessary to acknowledge the fundamental monetary nature of capitalist economies. This framework is presented in the following chapter.

2.7 Conclusion

This chapter critically reviews existing theoretical approaches to the role of money, banking, and finance in shaping economic dynamics. As mentioned in the introduction of this chapter, one of the most significant shortcomings of this literature is its reliance on a real economic analysis instead of a monetary one. This means it disregards the role of

money, banks, and monetary concerns in shaping economic outcomes. This literature has repeatedly strived to incorporate monetary variables along their theories and models unsuccessfully. New Keynesians, for example, attempted to abandon the Walrasian assumption of ‘perfect markets’ that has dominated New Classical economic theories and models by introducing ‘market imperfections’ such as information asymmetries into their theories and models (Dymski, 1991). Still, the ‘rational expectations’ paradigm underlies most of these attempts, in which agents’ decisions and outcomes are reduced to a range of possibilities that are certain, ‘known’ and calculable. As a result, the rational expectations paradigm offers inadequate guidance on agents’ behaviour in real economies, as it disregards a more unpredictable and tumultuous environment. In other words, although these theories aim to provide a perspective in which banks and financial structures ‘matter’, they fail to account for the inherent instability and uncertainty of future events.

In addition, New Keynesian and NCM models insist on modelling monetary and financial ‘frictions’ exogenously. Money, banking, financial instability, and all monetary and financial concerns are not considered intrinsic to the operation of modern capitalist economies. This implies that once these imperfections, asymmetries or rigidities in the banking and financial sectors are ‘corrected’ or incorporated in models, economies will function within a general equilibrium framework. That is, in the long run, the free market forces would drive the economy towards an optimal equilibrium.

Similarly, the basis for the institutional classifications of domestic economies as bank-based, market-based, and market-based banking systems is centred solely on the efficient distribution of funds. Therefore, these structures are viewed within a general equilibrium framework. As a result, understanding the role that the institutional structure of finance may play in shaping economic outcomes and the financial system’s instability and fragility is largely ignored.

Another significant weakness of mainstream literature is that it continues to assume that the agents are rational. The 2008 financial crisis showed that in conditions of extreme uncertainty, economic agents would make decisions based on animal spirits rather than the past. Therefore, attempting to predict future outcomes based on past events, assuming that expectations are rational, is irrational. Uncertainty in mainstream economics implies that decision-makers perceive the past as statistically reliable and can guide future decisions. That is, mainstream economists equate uncertainty with probabilistic risk (Davidson, 1991). This is the core of the rational expectations hypothesis, where knowledge of future events of a decision made today entails a convergence of subjective (personal) and objective probabilities. The importance of time in economic decisions was highlighted by Davidson (1978; 1991) and Shackle (1974). This means that unforeseeable events can occur between the decision and the payoff. There is no information regarding future prospects today; therefore, the future cannot be predicted, less calculable. This is

what Keynes (1936) meant with the concept of ‘uncertainty’; that some future outcomes could not have probability ratios assigned to them.

Therefore, when economic agents make decisions in the face of irreducible uncertainty (as opposed to probabilistic risk), they encounter ‘real-time’. This entails that banks’ evaluations of risks and expected returns they wish to hold are subject to fundamental uncertainty about the future (Wolfson, 1996). These evaluations change according to the degree of uncertainty felt by them. As this unpredictability is more volatile under Keynesian uncertainty, agents may modify their attitude towards risk and can, therefore, adjust their degree of risk aversion. This means that banks’ willingness to expose themselves to default and liquidity risks can be reduced, and hence, their willingness to extend credits might be lower (Dymski, 1992). As a result, adopting a framework that recognises the fundamentals of temporality to account for fundamental uncertainty is necessary. That is, economic agents confront ‘real time’ when they have to make decisions in the face of irreducible uncertainty.

Furthermore, some mainstream economics efforts to incorporate ‘space’ into their analyses are focused on the differences between developed and developing (or ‘less developed’) economies. This distinction is based on the efficiency with which their financial structure (financial institutions) allocate resources and funds. Mainstream economists see this ‘difference’ as a failure of developing economies to develop their financial systems (or, as McKinnon and Shaw put it, they lack ‘financial development’). ‘Underdevelopment’ is, thus, explained through this lens: as the institutions of developing nations cannot channel resources efficiently, their economic growth is limited.

Similarly, another (implicit) effort to include space in mainstream analyses has involved classifying nation-states according to the bank-based/market-based dichotomy. However, this theory also concentrates on the efficiency with which these structures channel funds as opposed to how these structures may shape and determine economic outcomes (and financial stability). Consequently, this literature also fails to account for the variegated manifestations of these two institutional structures inside domestic economies, which reflects the aspatiality of mainstream views on domestic processes.

This problem is not just at the domestic level but also at the global level, as this view fails to recognise the problem of power. Indeed, explanations for financial crises in these economies always conform with the ‘rational agent’ paradigm, such as the Latin American debt crisis in 1982. In this case, the borrower country ‘compares’ the gains from repaying versus defaulting and rationally decides to default when the defaulting penalty is too low (Eaton and Gersovitz, 1981; Eaton et al., 1986). Krugman (1999) used the same reasoning to argue that the root cause of the East Asian crisis of 1997 was a widespread moral hazard in Asia’s state-controlled banking systems. This paradigm has also been used to explain the Eurozone and subprime crises (Dymski, 2014).

Therefore, to account for monetary, temporal, and spatial phenomena, it is required to adopt an alternative framework so that the analysis of the transformation of the financial structure in Latin American economies is rooted in these variables. This means that it is necessary to acknowledge the fundamental monetary nature of capitalist economies, the crucial role of banks in the credit creation process, and the role of Keynesian uncertainty in shaping banks' expectations. However, as mentioned in the last section of this chapter, adopting a balance sheet framework to analyse banks' behaviour can be a powerful analytical tool for understanding the dynamics of national financial systems and the impact of banks' behaviour in shaping and determining domestic economic outcomes and financial stability. This framework is presented in the following chapter.

Chapter 3

An Alternative Theoretical Framework for the Analysis of the Financial Structure in Latin American Economies

Introduction

This chapter provides an alternative triple-lens framework for analysing the transformation of the financial structure in Latin American economies. The key drivers of this structural shift are identified in Chapter 4 as the liberalisation of cross-border financial flows and investment, the deregulation of banking, and the adoption of private pension systems¹. As discussed in Chapter 2, existing theoretical analyses of capitalist economies are predicated on a ‘real’ understanding of the economy that disregards the role of money, banking, and finance in shaping economic outcomes. According to this view, money is merely a medium of exchange, and its existence does not affect the structure of the economic system. Banks are regarded as financial intermediaries, ignoring their role in the credit creation process. As a result, the transformation of the financial structure would not invalidate the barter analysis’s conclusions that dominate mainstream economics.

An alternative framework begins with the premise that capitalist economies are fundamentally monetary and that their functioning depends (not exclusively) on the banking system’s creation of new monetary units that allow production and consumption. In this respect, the post-Keynesian school of economics has long emphasised the importance of a monetary analysis of the economy and endeavoured to comprehend the crucial role of money in the dynamics of a capitalist economy. Two theories provide significant insights in this regard, which include the theory of endogenous money, as the demand for credit money, and the theory of liquidity preference, as a theory of asset demand.

These concepts permitted some Keynesian macroeconomists to develop a theory of liquidity preference of bank behaviour, which is explicitly concerned with how the banking system’s structure (or the financial structure, more broadly) affects the demand and the volume of credit, and, therefore, overall economic activity in the face of uncertainty (Dymski, 1992; Dow, 2006). This theory of bank behaviour, however, exclusively considers the asset side of a bank’s balance sheet, where banks’ preference for liquidity in conditions of uncertainty is reflected in their capacity to discriminate between assets’ liquidity and, as a result, they can ration credit (Dow and Earl, 1982; Dow, 1982; Dow, 1993). That is, as long as banks are willing to create credit by raising

¹ These drivers are fully introduced in Chapter 4.

their own exposure to default and liquidity risks, the total amount of credit flows (and hence economic activity) will expand (Dymski, 1992).

In the context of financialised capitalism, global finance has structurally developed around market-based finance. Market-based finance involves new ways of credit creation and a shift in practices for producing liquidity. Different views on market-based finance also emphasise the transformation of agents' liability structures and practices, which have become increasingly complex (Gabor, 2020). This thesis contends that this transformation occurs not only within the constellation of financial institutions outside traditional commercial banks but also within banks themselves. Thus, it is suggested that banks in Latin American economies not only engage in trading and market-making activities but are also becoming increasingly market-based. Therefore, this chapter suggests that the post-Keynesian liquidity preference theory of bank behaviour would benefit from explicitly defining banks' liquidity preference not only in terms of a bank's decision between assets with varying degrees of liquidity under conditions of uncertainty but also by considering the nature of banks' liability structures that finance those assets. Particularly important for this thesis is the work of Hyman Minsky (1975), who conceptualises a monetary capitalist economy as the fragile interconnection of financial agents' balance sheets, in which the behaviour of such units depends on the nature of their liability structures that finance those assets.

Extending Minsky's (1975) view to developing a liquidity preference theory of bank behaviour under a balance sheet approach entails two theoretical contributions. The first is to post-Keynesian monetary theory, particularly, to the liquidity preference theory of bank behaviour: by using a balance sheet approach to analyse bank behaviour, it can be suggested that banks' lending decisions are influenced not only by their assessment of borrower's and lender's risk but also by the pressures of their current liability structure, whose obligations (financial claims and asset positions) must be settled with money. This makes liquidity preference institutionally specific (Bonizzi and Kaltenbrunner, 2020), as it depends on the nature of agents' liabilities. This might have significant implications for financial stability and economic growth prospects, as focusing on the asset side of banks' balance sheets may not be adequate to alleviate financial vulnerabilities stemming from the liability structure of financial agents (Kaltenbrunner, 2015; Bonizzi and Kaltenbrunner, 2019; Bonizzi and Kaltenbrunner, 2020). Therefore, to gain a better understanding of financial fragility in emerging and capitalist economies (ECEs), it is essential to comprehend the shifting perceptions of the future price of assets and the shifting liability structures of banks that fund these assets in the context of financialised capitalism.

Second, using Minsky's balance sheet approach also contributes to the understanding of subordinate financialisation in ECEs. This chapter presents a novel and alternative theoretical framework to analyse ECEs banks' behaviour, which accounts for the

particular structural pressures faced by Latin American banks' liability structures due to their increasing reliance on market-based credit as a platform to increase credit flow and their subordinate position in global finance. These pressures ultimately constrain the agency of financial institutions in the region vis-à-vis ACEs. Therefore, to better understand the effects of ECEs' subordinate financialisation on economic growth and financial stability, it is essential to comprehend the factors that constrain the liability structures of Latin American banks. In the current era of market-based finance, the liquidity preference of ECEs banks is susceptible to both macroeconomic and bank-specific factors, which are shaped by their subordinate position in global finance and depend on global and domestic investors' perceptions of banks' liquidity and credit risk. Consequently, grasping the significance and implications of banks' liability structures is crucial in accounting for the variegated experiences of subordinate financialisation across different spatial contexts.

This chapter is comprised of three sections. Section 3.1 addresses the fundamental pillars of post-Keynesian economics, including the development of Keynes' original theory of liquidity preference (section 3.1.1), followed by a discussion on the endogeneity of money (section 3.1.2). This debate continues in section 3.1.3, which elucidates Keynes' ideas on banking, followed by a review in section 3.1.4 of the different extensions by Keynesian macroeconomists of Keynes' original liquidity preference, which led to a theory of liquidity preference of bank behaviour within an endogenous credit framework. Subsequently, section 3.1.5 explores the extension of liquidity preference theory to bank behaviour in the open economy, namely peripheral economies, and its links with the emerging literature on subordinate financialisation (section 3.2.1). Finally, section 3.2 proposes an alternative framework for analysing the transformation of the financial structure in Latin American economies using a Minskyan balance sheet approach in the context of subordinate financialised capitalism. Section 3.3 concludes.

3.1 Post-Keynesian Monetary Analysis

3.1.1 Keynes's Liquidity Preference

As Chapter 2 pointed out, a limitation of mainstream economics is its reliance on a real analysis of the economy. One alternative approach that has emphasised and sought to comprehend the crucial role of money and banking in the dynamics of a modern capitalist economy is the post-Keynesian school of thought². The emphasis on a monetary economy is based on the legacy of John Maynard Keynes, who saw money as fundamentally non-neutral in the short and long-run economic processes, where the latter cannot be analysed

² There are, however, a number of distinct strands of 'monetary' economic theories. The scope of this thesis precludes a detailed discussion of all of them.

without considering monetary and financial variables (Keynes, 1933). Keynes (1933, pp.408-409) describes the dichotomy between a real and a monetary economy as follows:

The theory which I desire would deal...with an economy in which money plays a part of its own and affects motives and decisions and is, in short, one of the operative factors in the situation, so that the course of events cannot be predicted, either in the long period or in the short, without a knowledge of the behaviour of money between the first state and the last. And it is this which we ought to mean when we speak of a *monetary economy*.

An economy that acknowledges the existence of ‘money’ operates quite differently than a barter economy (Cottrell, 1994). It radically changes the nature of exchange and implies recognising that all the fundamental aspects of a capitalist economy—that is, production, employment and consumption—are essentially monetary. Keynes identified the reasons for the non-neutrality of money in *The General Theory of Employment, Interest and Money* by highlighting the *store of wealth* function of money³. He argues that the main reason for the existence of a demand for money as a store of wealth relies on ‘our distrust of our own calculations and conventions concerning the future’ (Keynes, 1937c), meaning that the existence of this demand is possible due to the presence of *uncertainty*⁴ as to the future of the interest rate (Keynes, 1936)—and not simply probabilistic risk.

Keynes presents his demand for money in Chapters 13 to 15 of the *General Theory*, which addresses the interest rate determination. It demonstrates that the rate of interest is not the price that brings investment and savings into equilibrium (as in the loanable funds’ theory), but rather that ‘[i]t is the ‘price’ which equilibrates the desire to hold wealth in the form of cash with the available quantity of cash’ (Keynes, 1936, p.144). The interest rate is conceived as ‘the reward of parting with liquidity for a specified period’ (Keynes, 1936, p.143), which is determined in the money market. Thus, liquidity preference is defined as the amount of risk an economic agent is willing to accept in exchange for liquidity (de Carvalho, 2015).

In chapter 13, Keynes described how in conditions of uncertainty, liquidity preference, which he defines as economic agents’ demand for money, arises due to three factors: the transactions motive, the precautionary motive and the speculative motive. In Chapter 15 of the *General Theory*, Keynes emphasises the importance of the speculative motive, arguing that this demand is highly susceptible to fluctuations in interest rate, whereas the other two respond primarily to the level of economic activity. The transaction motive is the need for cash for personal and business transactions. The precautionary motive was

³ Keynes also highlighted the purchasing power of money. However, the focus of the *General Theory* is set on the store of wealth function of money.

⁴ However, Keynes in the *General Theory* abstained from clearly defining uncertainty.

characterised in chapter 13 as an investor's 'desire for security' (Keynes, 1936, pp.145-146) when there is a 'the risk of disappointment' of '[t]he actuarial profit or mathematical expectation of gain calculated in accordance with the existing probabilities – if it can be so calculated'. In other words, the precautionary motive refers to the demand for money that is directly explained by uncertainty per se. However, in chapter 15, this notion was redefined as to 'provide for contingencies requiring sudden expenditure and for unforeseen opportunities of advantageous purchases, and also to hold an asset of which the value is fixed in terms of money to meet a subsequent liability fixed in terms of money' (Keynes, 1936, p.170). The precautionary motive, thus, became a variation of the transaction motive (de Carvalho, 2015).

The speculative motive to hold money emerges when wealth holders believe that interest rates will rise in the future, so they would try to anticipate market expectations to secure profit from their investments. If they anticipate an increase in the interest rate and, consequently, a decline in the price of their bonds, investors will raise their demand for money beforehand to prevent the depreciation of their portfolio. The underlying idea is that expectations about future rates of interest affect the behaviour of economic agents and shift the demands of investors beforehand for different types of assets. That is, liquidity preference is shaped by the feeling of uncertainty (de Carvalho, 2015).

Keynes elaborates further on his monetary theory in chapter 17 of the *General Theory* by formulating an asset pricing theory through the concept of 'own-rates of interest'. Accordingly, 'for every kind of capital-asset there must be an analogue of the rate of interest on money' (Keynes, 1936, p.191). For Keynes, the net benefit of holding an asset (the rate of return) (r) involves three elements: a yield (q) minus its carrying cost (c) plus its liquidity premium (l). Keynes defines the liquidity premium as 'the power of disposal over an asset during a period' (p.226). Regarding this characterisation, money is distinctly defined as the most liquid asset since it serves as a reliable 'adobe of purchasing power' (Davidson, 1978a, p.149), with a liquidity premium that significantly exceeds its carrying costs, resulting in a rate of interest that is fundamentally stable over time or at least relatively more stable than any other asset. In other words, because of its non-financial return, money is favoured above other assets in an uncertain environment (Bonizzi and Kaltenbrunner, 2020). Liquidity is, therefore, a protection against uncertainty, as it indicates the ability to turn an asset into cash at any time and with minimal or no loss (de Carvalho, 2015). With this notion, Keynes' monetary theory provides a way to explain under-employment, as when individuals demand money rather than capital goods, effective demand reduces, resulting in involuntary unemployment.

3.1.2 Post-Keynesian Theories of Money

Nonetheless, as presented in the *General Theory*, Keynes's theory of liquidity preference assumes (more or less explicitly) that the money supply is exogenous and fixed⁵. Keynes (1937c) recognised this constraint in *the General Theory of Employment* published in 1937 and included the 'finance motive' as a driver of the demand for money, which refers to a company's need for funding to undertake investments. Still, this point has been subject to intensive debate, leading some Keynesian macroeconomists to agree that the money supply is endogenous (de Carvalho, 2015).

In this regard, a key issue in post-Keynesian economics is the development of a theory in which money is endogenously created by private bank credit that finances production and consumption (Lavoie, 1984). Endogeneity refers to the ability of private banks to create deposits as a by-product of credit creation (Dow, 1986). Under this view, central banks lack the tools to directly control the volume of money or credit. Therefore, banks' loan extensions, which generate new liabilities, are unrelated to banks' reserve position. As a result, there is a distinction between what constitutes 'money' and 'credit'. 'Money' refers to fiat money (that is, inherently non-valuable money), whose value rests on the state that has issued it rather than on a physical commodity, whereas 'credit' is fundamentally endogenous as banks extend it to borrowers with varying risk profiles. This is how bank deposits become the mechanism through which credit is created.

However, the nature and extent of money endogeneity have been the subject of debate among post-Keynesian economists (Dow, 2006), who argue that there are two distinct approaches to money supply endogeneity, namely the accommodationist and structuralist view (Pollin, 1991)⁶. Both approaches see money arising as the counterpart of bank credit—rejecting the loanable funds theory—but they disagree on whether the supply of bank credit is entirely or partially determined by the demand for bank credit⁷ (Fontana, 2003). In this sense, these views differ in their interpretations of the slopes of the supply curves of monetary reserves and credit-money; that is, on what endogeneity means for the level of reserves and money (Fontana, 2003).

⁵ Keynes assigns two other essential features to money: inelasticity of production and inelasticity of substitution. The former entails that money cannot be simply produced by employing labour; whereas the latter implies that as the demand for money increases, 'there is no tendency to substitute some other factor for it' (Keynes, J.M., 1936, p.199). These attributes, in conjunction with the stability of its rate of interest, make the money rate of interest the benchmark against which all other rates are compared, which in turn establishes as the standard unit of account.

⁶ There is, however, a third approach to endogenous money that has emerged independently from the 'traditional' literature in post-Keynesian economics. That is, the 'monetary circuit' approach (Parguez and Seccareccia, 1999, Realfonzo, 2006). This approach will not be considered in this thesis.

⁷ Bank credit or credit-money refers to the flow of money, whereas money balances indicate the stock of money.

On the one hand, the so-called ‘accommodationists’ or ‘horizontalists’ (Kaldor, 1970; Weintraub, 1978; Lavoie, 1984; Moore, 1988; Rogers, 1989; Lavoie, 1992; Smithin, 1994; Rochon, 1999) have been most closely associated with the work of Kaldor (1985) and Moore (1988)⁸. According to this approach, the elasticity of the credit-money supply is infinite with respect to the interest rate (Moore, 1988), as banks *fully* accommodate firms’ demand for money, while the central bank *fully* accommodates banks’ demand for reserves. In this regard, this view appears to undermine the role of banks’ liquidity preference (Kaldor, 1985), as it is argued that the non-bank public determines the demand for credit money, and this, in turn, determines the money stock, while the interest rate, through the intermediation of banks, is exogenously under the control of the central bank (Moore, 1988). It can be inferred, thus, that banks’ expectations (of risks) when extending credit and its effect on the money stock are not explored by ‘horizontalists’. As a result, this view regards banks as passive agents in the credit market. As Moore (1988, p.xii) puts it, ‘modern commercialised banks are price setters, and quantity takes in both their retail deposit and loan markets’.

The ‘structuralist’ approach (Minsky, 1982a; Chick, 1983; Dow and Dow, 1987; Dow, 1996a; Palley, 1991; Palley, 1996; Chick and Dow, 2002; Palley, 2002) criticise the ‘horizontalists’ precisely because they neglect the significance of liquidity preference in the credit supply process. Particularly important is banks’ liquidity preference, as this view argues that banks can actively manage their balance sheets and can, therefore, vary their willingness to provide credit based on their expectations regarding the risks associated with the borrower’s and lender’s risk. That is, the money supply depends on a bank’s asset and liability management practices (Palley, 1987). Banks’ expectations are constructed from a combination of information, animal spirits, and convention—and cannot be reduced to certainty-equivalence using probability theory—all of which can explain a counter-cyclical pattern of credit rationing (Dow, 1996a). Therefore, this approach contends that the money supply is not horizontal but slightly upward-sloping due to the incorporation of liquidity preference. In recognising the critical role of liquidity preference, this theory also places an active role in the financial structure in affecting an economy’s stability and growth outlook. As Dow (1996a, p.507) puts it: ‘by incorporating an active role...for banks in determining...their own liquidity preference, endogenous credit theory can...demonstrate an active role of finance in the business cycle, in industrial structure (and thus growth potential), and in international income distribution’.

⁸ Kaldor (1973), in particular, criticised Keynes’s view on money. Similar to the quantity theory of money, he contended that the ‘significance’ of Keynes’s theory of liquidity preference depended on the assumptions employed to determine what constituted money. Therefore, it should not be regarded as a relevant concept in determining the money supply.

3.1.3 Keynes's Ideas about Banking

Keynes placed a significant emphasis on banks throughout his writings. Particularly important is the *Treatise on Money* (1930), which comprehensively assesses how banks operate, make balance sheet choices, and create money⁹ in the process (de Carvalho, 2013). Here, banks are explicitly portrayed as decision-making entities that, like other private firms, seek to maximise returns while exposing themselves to minimum risks. In the words of Keynes, quoted in de Carvalho (1999, p.130): ‘bankers are faced with a never-ceasing problem of weighing one thing [profitability] against another [liquidity]’. As such, Keynes depicted banking as a dual activity comprising the creation of credit and the provision of liquidity and demonstrated how these functions could deviate from one another. In other words, these functions are interdependent (Keynes, 1930, Vol 2, p.191). However, when combining these two tasks, banks confront a ‘dilemma’, as ‘the complete attainment of one of its duties is sometimes incompatible with the complete attainment of the other’ (Keynes, 1930, Vol 2, p.193).

In addition, Keynes defined banking institutions as crucial determinants of the level of economic activity. He mentioned: ‘by the scale and the terms on which it is prepared to grant loans, the banking system is in a position...to determine—broadly speaking—the rate of investment by the business world’ (1930, Vol. 1, p.138). Further, Keynes indicates in a (1937c) *Quarterly Journal of Economics* paper the importance of the theory of liquidity preference and its interrelationships with investment. This point was also touched on in the *Treatise of money*, in which Keynes (1971, Vol. 5, p.190) writes:

[B]anks can influence the volume of investment by expanding or contracting the volume of their loans, without there being necessarily any change in the level of bank rate, in the demand schedule of borrowers, or in the volume of lending otherwise than through the banks. This phenomenon is capable, when it exists, of having great practical importance.

In the *General Theory* (1936), banks are hardly mentioned. However, Keynes stressed the impact of real-time and uncertainty on banks’ decision-making. He believed that banks making loan commitments must assume ‘lender’s risk’: ‘[t]his may be due either

⁹ For Keynes, a monetary regime defines what money is, or more precisely, what *state* money is. Money may be a commodity, such as gold or silver, or be *representative* money, such as *fiat* money or *managed* money. In the *Treatise of Money*, Keynes considered a *managed* money regime, in which money is managed to maintain its value in terms of some defined standard, which could be a commodity (as in the gold exchange standards), a labour unit, or a basket of commodities (de Carvalho, 2013). Money creation in those regimes is the result of the interaction between the central bank, which creates the monetary base, and of the banking system, which creates the demand deposits that constitute the largest component of the stock of means of payment of a modern economy.

to moral hazard, that is, voluntary default or other means of escape, possibly lawful, from the fulfilment of the obligation, or to the possible insufficiency of the margin of security, that is, involuntary default due to the disappointment of expectation' (Keynes, 1936, pp.144-145). He added that: '[d]uring a boom the popular estimation of the magnitude of ... both borrower's risk and lender's risk is apt to become unusually and imprudently low' (pp. 144-145).

Despite the repeated emphasis on banking itself, Keynes wrote little about the behavioural aspect of banking. The linkages between the liquidity role of money, investment decisions, and uncertainty were the main topics of the financial discussions of the *General Theory*. Only in an article published in the *Economic Journal* in (1937b) did Keynes broaden the scope of the theory of liquidity preference by applying it to the banks themselves, although he was not explicit about what he meant by 'banks' liquidity preference' (Dow, 1997). It is implied that he was referring to the disposition of the asset side of banks' balance sheets, as banks were depicted as able to distinguish between different types of assets' liquidity. According to the article, banks would demonstrate their preference for liquidity by restricting credit creation (as loans are their least liquid asset) and investing any spare funds, reducing the amount of credit and money in the system as a whole. In other words, bank credit allocation is cyclical (Keynes, 1930, Vol 1, pp.250-262) and varies with changes in interest rate expectations. In this way, Keynes sees banks as crucial determinants of economic activity, as he argues that the 'power of the banks' is derived from 'their control over the supply of money, i.e., of liquidity' (Keynes, 1973, p.211).

In sum, Keynes did not say much about the relation between the behavioural aspect of banking, and its relationship with money and uncertainty. Keynes' emphasis on banks (before and after the *General Theory*) is mostly concerned with the role of commercial banks in the creation and allocation of money in the economy. At the same time, Keynes' monetary theory, specifically liquidity preference theory, emphasises money's unique ability to store value in the presence of fundamental uncertainty. For Keynes, money is an asset chosen among other assets because of its non-financial return in dealing with an uncertain world. In fact, as Keynes emphasised in his debate with Ohlin (1937a), liquidity preference was a theory of choice between two assets: money and bonds, with the purpose of the interest rate being to equalise the 'attractions' of both (p.250). Consequently, Keynes' liquidity preference theory may be interpreted as a theory of money as a store of value (Tily, 2012). The absence of a clear link between banking and liquidity preference might be attributed to Keynes's emphasis in the *General Theory* on the speculative motive rather than the precautionary motive for holding money, which he conflated into the transaction motive (de Carvalho, 2010). As a result, the context-dependent effect of an uncertain future on agents' liquidity preference is not explicit in Keynes's monetary theory but rather implicit.

3.1.4 Keynesian Extensions of Liquidity Preference Theory within an Endogenous Credit Framework

Some post-Keynesian economists further expanded Keynes' liquidity preference theory along these lines and demonstrated that liquidity preference implies the centrality of 'real time' in economic dynamics (Shackle, 1974; Davidson, 1978a). That is, economic agents encounter 'real-time' when they have to make decisions in the face of irreducible uncertainty—as opposed to simply probabilistic risk—regarding the potential outcomes. Money as a store of value may be viewed as a link between the past and the present, as well as between the present and the future, in which the latter is uncertain (Arestis, 1996). If real-time is intrinsic in fundamental uncertainty, then it is a necessary and sufficient condition for the existence of money so that money is fully integrated into the analysis.

Emphasising fundamental uncertainty implies that the future cannot be reduced to a calculation of probabilities. That is, there can never be complete knowledge of the future (Crotty, 1994). Uncertain future outcomes are typically more volatile and of severe magnitude than envisioned in mainstream models that rely on stochastic tools for measuring risk. There is, thus, no reliable method to convert uncertainty into certainty-equivalence (Dymski, 1992). Therefore, economic agents making choices in a (Keynesian) uncertain world rely on expectations about future outcomes that are formed from a combination of information, animal spirits, and convention—which cannot be reduced to certainty-equivalence using probability theory (Dow, 1996a). In Keynesian theory, thus, uncertainty takes a different meaning than risk. It represents the degree of confidence with which expectations are held (Dow, 1986). In particular, it indicates the extent to which probability analysis may be used.

The incorporation of real-time in agents' decisions led many post-Keynesian scholars to re-formulate Keynes' own-rate of interest equation and to interpret Keynes' liquidity preference as a general theory of asset choice rather than a 'demand for money' theory, in which financial assets are defined along a return-liquidity premium spectrum (Minsky, 1975; de Carvalho, 1992). Under this view, Keynes' own-rate of interest is represented as the net benefit of holding an asset (the rate of return equation) (r), which involves four elements: a yield (q) minus its carrying cost (c), plus its liquidity premium (l) and its appreciation or depreciation of its market value (a). These attributes define a spectrum of assets from which investors or banks can choose. Agents would demand each asset class according to their own-rate of interest (r). Assets with higher than average own-rates of interest would face heavier demand, and their current market prices would rise, while the prices of those offering lower-than-average returns would fall. In this sense, the liquidity preference of an asset is reflected in terms of the trade-off between monetary returns ($a + q - c$) (profitability) and the liquidity premium of money (l) (liquidity) (de Carvalho,

1999). That is, the ‘price’¹⁰ economic agents are willing to pay to hold an asset that can be sold quickly with minimal loss (de Carvalho, 2015).

Money becomes a financial asset because of its capacity to settle contractual debts when they come due¹¹ (Davidson, 1978a). Liquidity is, thus, ‘hav[ing] the means of settlement to meet all one’s contractual obligations when they come due’ (Davidson, 1978b, p.61). A completely liquid asset is defined as the means of settlement, a unit of account and a store of value. Other assets derive their liquidity from their degree of convertibility into money without incurring a loss. This means that liquidity preference not only refers to the demand for non-interest-bearing money but also accounts for the difference between interest rates for liquid and less liquid assets, that is, on the specific properties of different assets (Dow and Dow, 1987). Liquidity preference, thus, is seen as the demand for a perfectly tradable asset with stable value (Dow, 2002) or as the portfolio choices of financial agents.

The incorporation of real-time in agents’ decisions led many Keynesian macroeconomists to propose an explicit liquidity preference theory to bank behaviour (as Keynes originally presented) in conditions of uncertainty but within an endogenous-credit context¹² (Dow and Earl, 1982; Dow, 1986; Dymski, 1988; Chick, 1986; Wolfson, 1996; Dow, 1996a; de Carvalho, 1999; Chick and Dow, 2002). Under this view, banks are profitable firms whose function is to assess and absorb default and liquidity risks in financial markets according to their preferences between the risks and expected returns they wish to hold. As both borrower and lender risks are subject to fundamental uncertainty about the future (Wolfson, 1996), banks’ evaluations of risks change according to the degree of uncertainty felt by banks.

Gary Dymski’s (1988) paper is a seminal contribution to this post-Keynesian literature on banking. Dymski developed a micro-level model of the banking firm, which is rooted in Keynes’s insights about the interdependence of banks’ functions of liquidity supply and credit creation, and the banking system’s crucial role in determining the level of economic activity. Dymski’s main argument is that the behaviour of banks cannot be fully understood by looking at static or isolated snapshots of their activities. He contends that a Keynesian approach to banking, which emphasises the endogenous nature of money creation and the active role of banks in determining the level of economic activity, provides a more accurate understanding. By relaxing the treatment of certainty and knowledge and incorporating the notion of ‘real-time’ from post-Keynesian economics, Dymski shows that banks’ two functions suggested by Keynes can become

¹⁰ The price can be understood as the opportunity cost incurred when agents choose to hold more liquid assets as opposed to more profitable ones.

¹¹ According to Keynes (CW, Vol.5, p.3), the primary function of money is the unit of account, which represents the unit in which contracts are expressed.

¹² See Dow and Dow (1987) for a complete account on the liquidity preference for all sectors.

uncoordinated, thus highlighting their interdependence. He suggests that a Keynesian approach to banking can provide insights into the causes and consequences of financial crises and can help policymakers design more effective regulatory policies to prevent future crises.

Thus, the post-Keynesian liquidity preference theory of bank behaviour is explicitly concerned with how the structure of the banking system (or the financial structure, more generally), in the context of uncertainty, affects the demand for credit and the volume of credit and, therefore, aggregate economic activity (Dymski, 1992; Dow, 2006). Specifically, these scholars argue that in conditions of uncertainty, banks' liquidity preference is reflected in their ability to discriminate among assets' liquidity and can, thus, ration credit (as loans are banks' less liquid assets) (Dow and Earl, 1982; Dow, 1982; Dow, 1993). That is, the overall level of credit flows (and hence economic activity) will increase as banks are willing to create credit by increasing their own exposure to default and liquidity risks (Dymski, 1992).

Hyman Minsky's (1982a; 1986) well-known financial instability hypothesis (FIH) is intrinsic to the systematic changes in banks' expectations. Following up on Keynes's concepts of lender's and borrower's risk, Minsky develops the FIH, which shows how banks might change their expectations and attitudes towards risk when making decisions in an uncertain world and can, therefore, ration credit as future outcomes are inherently unstable. As Minsky (1986, p.213) has argued, this change in expectations takes place endogenously:

[T]he successful functioning of an economy within an initially robust financial structure will lead to a structure that becomes more fragile as time elapses. Endogenous forces make a situation dominated by hedge finance unstable, and endogenous disequilibrating forces will become greater as the weight of speculative and Ponzi finance increases.

To develop the FIH, Minsky (1986) focuses on the unrealistic equilibrium paradigm of mainstream economics and advocates for 'periods of tranquillity' instead. From his perspective, relative tranquillity encourages risk-taking and innovative behaviours by financial firms, which raises income even as it disturbs the circumstances that allow for 'tranquillity', a paradox Minsky coined as 'stability is destabilising'. Even if an equilibrium could be attained, the market forces operating in a stable system will drive it toward instability, causing a sequence of behavioural reactions that would inevitably take the economy away from equilibrium (Minsky, 1986).

Minsky's FIH, thus, shows that the ability and increasing willingness of banks to finance firms' investment plans underpins the financial fragility of the economy over the business

cycle to the point where economies are driven from hedge (where both principal and interest can be repaid from profits) to speculative positions to Ponzi finance (where new loans are needed to cover interest payments on existing debt). In this manner, if banks and securities markets share business optimism (that is, if banks believe that clients are creditworthy), then finance is made available and economic activity increases. Rationing in the sense of adverse changes in banks' risk assessment (that is, banks' expectations towards clients' creditworthiness) occurs systematically during the downturn of the business cycle and can also be particular to classes of borrowers (Dow, 1996a). In a yet more turbulent world, these expectations about future outcomes may collapse, and in this case, rationing may rest almost purely on unconstrained animal spirits (Davidson, 1991). Consequently, in an uncertain world, the availability of finance depends primarily on the liquidity preference of financial institutions, which in turn, depends on the state of confidence in the prices of the range of assets (Dow, 1986; Dow, 1995).

As the creation of money by banks fluctuates along the business cycle, banks can determine credit conditions. These conditions affect the dynamics of the 'real' economy, as this fluctuation underpins and amplifies capitalist financial instability. This also suggests that banks have an active and special role in determining aggregate economic activity (and capitalist dynamics)—and are not passive agents accommodating the demand for credit—as their liquidity preference affects the money supply. Therefore, a key issue of this theory of liquidity preference of bank behaviour is that it stresses the analysis of banks' micro-level behaviour as it can be crucial for understanding macroeconomic dynamics.

3.1.4.1 Liquidity Preference in an Endogenous Framework in the Open Economy

The significance of liquidity preference theory to bank behaviour in an endogenous-credit framework has been extended into an open economy context to provide a 'spatial' analysis of how developing economies' institutional structure of the financial sector can contribute to uneven development. A spatial analysis entails acknowledging that processes or events unfold differently across spaces—that is, that agents are heterogenous—and that agents separated by space have location-specific distinctions in their choice sets or resources (Dymski and Cerpa Vielma, 2021; Dymski and Kaltenbrunner, 2021).

In this regard, Victoria Chick and Sheila Dow proposed centre-periphery¹³ models of financial development in a series of articles published between 1986 and 1990. For them, the cost and availability of finance, as well as the demand for investment finance, are

¹³ The term 'core-periphery' is used herein to refer to the international setting, and the term 'centre-periphery' to refer to the intra-national (regional) setting.

governed by liquidity preference relative to the willingness of financial institutions to grant credit, which in turn is affected by their own liquidity preference (Dow, 1990b). As planned investment is determined by consumer demand expectations and the behaviour of financial institutions, and as the level of planned investment is key to regional employment and output, the authors contend that development is contingent upon expectations that create the state of liquidity preference and the behaviour of financial institutions, all of which are likely to differ from region to region. In this way, the authors elucidate the spatial disparities across regions regarding uneven development.

The work of Sheila Dow (1990b) offers a useful starting point. Based on the Canadian experience, this paper contends that peripheral regions are systematically disadvantaged in financial markets. Financial knowledge and the headquarters of large banks and non-bank financial firms are concentrated in the centre, whilst smaller banks or branch offices of large banks provide financial services on the periphery. Banks in the centre have more direct access to domestic and global money markets and offer credit to the most dynamic firms; peripheral banks confront a more moderate demand for credit and lend a portion of their reserves to banks in the centre via the interbank market. When the downturn arrives, and liquidity preference takes over from animal spirits, reserves and liquidity become even more centralised. The financial system leads to a growing regional divide over time.

Chick (1986) examined how banking systems at various 'stages' of institutional development constrain or boost savings mobilisation, money creation, and the financing of production and investment. Subsequently, Chick and Dow (1988) developed a more comprehensive model that envisages five stages of banking development within a centre-periphery setting. In the first two stages, investment is restricted by savings and banks' limited ability to create credit endogenously. In the third and fourth stages, an interbank market develops, and the central bank assumes the lender-of-last-resort role; this enables inter-regional transmissions of reserves and the more speedy expansion of credit, particularly in the centre, as the central bank supplies a backstop when liquidity preference spikes during a recession. In the fifth stage, banks' credit creation and deposit-taking activities become autonomous, and credit supply becomes even more sensitive to an upturn in the demand. Peripheral banks are more able to create credit for local investment. As a result, banks' liquidity preference becomes increasingly significant in regional credit creation as the financial industry gets increasingly sophisticated.

In the fifth stage, banks also employ 'liability management', a financial strategy in which banks compete for deposits throughout a broad range of interest rates since their yield makes them occasionally more appealing than securities for long-term investment (Chick, 1986). Therefore, liability management involves banks aiming to attract deposits (with higher interest rates) throughout the cycle and matching loans for speculative activity. In earlier stages, a counter-cyclical pattern in liquidity preference indicated a counter-

cyclical pattern in the propensity to keep bank deposits. Now, liability management can be utilised to attract funds regardless of the business cycle, and the more aggressive approach to lending may likewise express itself in any period of the cycle (Chick, 1986). In Keynes's perspective, the demand for loans dries up during a recession. Banks have demonstrated that they can find outlets even in a slump if they choose to lend. In this way, banks' liquidity preference at this stage is reflected in banks' strategies in seeking deposits and loan commitments (liability management).

In addition, Chick and Dow (1988) intentionally characterise banking relationships at a general level. The authors highlight, however, that this framework may be extended to intra-national regional disparities or the dualist analysis of advanced and developing economies in dependency theory. Chick and Dow (1988) note, following an extensive discussion of the centre-periphery frameworks of Baran (1957) and Cardoso and Faletto (1979), that while dependency theory has focused on trade and foreign investment, a financial framework can demonstrate how 'monetary factors reinforce the real process' (Chick and Dow, 1988, p.7).

This framework, however, mentions access to international capital markets as one component of stage five but does not refer to lending and borrowing beyond national borders. Dow (1995), in turn, makes this leap, placing developing economies' cross-border borrowing and lending into a centre-periphery framework. She focuses on how the centre-periphery financial framework can address peripheral nations' capital and credit dependency on core nations. That is, her (1995) model follows the Latin American structuralist argument that these economies depend on foreign credit to expand their capital formation instead of concentrating on how liquidity preference can determine credit creation conditions as the financial system develops¹⁴. Dow (1995) explains that because countries rely on foreign credit to increase their rate of capital formation and are dependent on primary goods and low-level manufactured products that are sold in volatile markets, they experience boom-and-bust cycles in which 'large inflows of...direct investment' alternate with periods of 'export shortfall and withdrawal of inward investment' resulting in 'an urgent need for borrowing to finance the balance of payments deficit' (Dow, 1995, p.5).

According to Dow (1995), one dependence component is that only advanced economies have the 'sophisticated financial system that can create credit to finance investment and provide a high return on domestic savings' (Dow, 1995, pp.5-6). Citing Minsky (1982b),

¹⁴ Chick and Dow (1988) note that banks in developing economies are usually in the first or second stage of banking development, where they serve as financial 'intermediaries between savers and investors who borrow from them' (p.9). That is, it is a stage in which savings precede investments (as banks need bank reserves to make loans). Given the anticipated early stage of banking development in developing economies, Dow (1995) draws on the structuralist literature to argue that banks in peripheral economies lack the ability to independently create credit, and hence, their liquidity preference plays no significant role.

she argues that because developing economies' 'banking system is at an earlier stage of evolution' (Dow, 1995, p.6), with underdeveloped interbank markets, their banks' credit-creating endeavours will be inferior and more reserve-constrained. This indicates that, as anticipated by Minsky's FIH, banks in advanced economies would systematically over-lend throughout the cycle. Her analysis precisely describes the 1982 Latin American debt crisis: the beginning of the crisis prompts liquidity preference concerns that lead banks in advanced economies to pull back on lending, with capital flight exacerbating the initial shock.

While Dow (1995) uses Andre Gunder Frank (1978) as one of her sources, she does not agree with his claim that the financial structure and, thus, capitalist accumulation produces both development and underdevelopment. This concept is consistent with the Chick-Dow framework in that the centralisation of credit power and monopolisation of liquidity during crises are integral to financial processes. However, unlike Frank, Dow does not attribute this to a characteristic inherent to capitalism¹⁵. Still, the Chick-Dow framework concentrates on the role of finance in the broader economy, overlooking the widespread adoption of financial motives, institutions, and practices in capitalism as a whole, which is now known as 'financialisation' (Sawyer, 2014b).

Financialisation has become increasingly prominent in discussions about the transformation of the global economy and the increasing integration of domestic economies into global finance, as scholars seek to understand the role of (global) finance in modern capitalist economies. At the heart of this debate is the question of how secular changes in the relations of capitalist accumulation (Powell, 2018) can lead to opportunities for exploitation and expropriation (Bonizzi et al., 2020). While the analysis of financialisation in ECEs is relatively novel, there is a growing consensus that the phenomenon plays out in distinctive ways across countries. An increasing number of researchers have explored how financialisation processes differ significantly across geographies, with ECEs exhibiting more variegated forms compared to advanced economies (Becker et al., 2010; Bonizzi, 2013; Lapavitsas and Powell, 2013; Brown et al., 2015; Ward et al., 2019; Karwowski, 2020; Karwowski, 2022), and to be intertwined with structural economic and financial subordination (Bonizzi et al., 2020). However, there is still a need for better analytical and empirical clarity about what this phenomenon means (Christophers, 2015), particularly for ECEs.

The following section will explore this issue in depth, arguing that the flow of capital is now occurring at the global level. By understanding the concept of financialisation as a global phenomenon, this discussion will shed light on the complex dynamics of global finance and the challenges it poses for ECEs. Notably, the subordinate position with

¹⁵ The sole reference to 'capitalism' in this paper mentions Keynes' view that the stable development of monetary and financial relations are a prerequisite for capitalist growth.

which ECEs experience financialisation (Bonizzi et al., 2020). This raises a question similar to that posed by Frank and other dependency theorists regarding capitalism: whether the subordinate position of ECEs in financialisation processes is inherent to the operation of global financial processes or whether it is the result of the flawed implementation of financial policies. As stated, Dow (1995) does not address it.

3.1.5 Financialised Capitalism, Market-based Finance, and the Subordinate Financialisation of Emerging Capitalist Economies

A significant body of literature has aimed to conceptualise the growing phenomenon dubbed ‘financialisation’. While the interest in this phenomenon has been more extensive for ACEs, a smaller but growing literature has also attempted to define a theory of financialisation for ECEs. A significant part of the existing literature on financialisation in ECEs has focused on documenting the diversity of the financialisation experiences across different sectors, including non-financial corporations (Demir, 2007; Powell, 2013; Levy-Orlik, 2013), financial institutions (Lee 2012; Rethel, 2010), and households (Karaçimen, 2014; Fernandez and Aalbers, 2016; Aalbers et al., 2020).

While financialisation provides a valuable analytical method for evaluating the manifestations of financial transformations in ECEs in diverse institutional, spatial and social contexts, there is a need for better analytical and empirical clarity about what this phenomenon means (Christophers, 2015), particularly for ECEs. On the one hand, some academics in the Marxist and structuralist theory have sought to provide a theory of financialisation that reflects the role of external actors in driving this phenomenon forward in ECEs (Becker et al., 2010; Kaltenbrunner and Paineira, 2018). On the other hand, some academics have contended that financialisation in ECEs should not be viewed as externally driven but as a product of local institutions and internal processes (Karwowski and Stockhammer, 2017).

Other scholars have attempted to conceptualise financialisation as a global phenomenon, characterised by the global expansion of circuits of capital, indicating the transition of capitalism into a new stage of financialised capitalism (Bonizzi et al., 2020; Bonizzi et al., 2022). Financialised capitalism is portrayed as inherently global and uneven, with ECEs adopting a specific subordinate position that is both inherent to and determines their experience and empirical manifestations of this global process. This argument follows closely what Chick and Dow (1988) also noted: that the lived experiences of financialisation vary dependent on one’s position in an uneven hierarchy of classes and nation-states, allowing in this way for spatial variegation. This implies that the subordinated position of ECEs in financialisation processes is inherent to the operation of global financial processes. The focus of subordination in financialised capitalism is

placed on the creation and value extraction from ECEs to ACEs¹⁶, which constrains the agency of ECEs agents (Bonizzi et al., 2022)¹⁷.

In an effort to characterise this new stage, two fundamental features of financialised capitalism have been identified (Bonizzi et al., 2022). The first is that production is carried out through global production networks (Coe and Yeung, 2015). This entails that the transmission of value occurs via global and adaptable networks, which are controlled by a limited number of large, powerful corporations primarily based in ACEs. This thesis demonstrates in Chapter 5 that this value extraction is not only restricted to non-financial firms located in ACEs, but also, involves the largest financial institutions and megabanks in the United States (Cerpa Vielma et al., 2019). In this way, financialised capitalism not only needs and maintains the subordinate positions of ECEs in global capitalism (Bonizzi et al., 2022) but also reshapes and generates new forms of subordination at distinct levels.

A second fundamental feature of financialised capitalism is the transformation of finance into a globalised market-based system driven by the US structural power in global finance (Bonizzi et al., 2020; Dutta et al., 2020; Gabor, 2020; Bonizzi et al., 2022). This power is reflected, on the one hand, by the rising internationalisation and dominance of the US dollar (Gabor, 2020; Bonizzi et al., 2022), and, on the other, by the ‘Americanisation’ of national financial systems (that is, the export of the US model of market-based finance), (Konings, 2007; Fichtner, 2017; Gabor, 2020). This ‘Americanisation’ of national financial systems is reflected in this thesis in two empirical phenomena: the transformation of the institutional structure of Latin American financial systems (Chapter 5) and the transformation of the practices and behaviours of Chilean banking institutions (Chapter 6).

Market-based finance¹⁸ in contemporary capitalism refers to novel ways of creating credit through financial markets, mainly securities markets, collateral-based money, derivative markets (Gabor and Ban, 2016; Gabor, 2016b; Tooze, 2018) and through a constellation of non-traditional financial institutions outside commercial banks, which compose the modern ‘shadow banking’ system (Caverzasi et al., 2019; Braun and Gabor, 2020), rather than through the traditional banking system. In this regard, the asset management industry has acquired an increasingly significant role in the credit creation process (Braun, 2021). Money markets are crucial to the dynamics of the financial system and liquidity management (Mehrling, 2010; Gabor, 2016b; Gabor, 2020). It is in these markets that

¹⁶ A growing and significant proportion of this value is captured by financial capital.

¹⁷ The emphasis on the value transfer is based on Marxist writings on imperialism (Luxemburg, 1913; Lenin, 1916; Baran, 1952; Frank, 1967). By drawing on this literature, Powell (2013) showed that financialisation in the periphery is ‘shaped by imperial relations between states’ (p.3); therefore, it is theorised as to be subordinate.

¹⁸ Market-based finance in the literature has been varyingly referred to as ‘money manager capitalism’ (Wray, 2011), ‘shadow banking’ (Gabor and Ban, 2016), and ‘the age of asset management’ (Haldane, 2014).

financial institutions manage the liquidity of their balance sheet, typically in the form of collateralised lending (Bonizzi and Kaltenbrunner, 2020).

The critical macro-finance literature effectively makes this link between liquidity structures and financial fragility in market-based finance. Their analytical focus of financial processes lies in hierarchical interlocking balance sheets of the different financial agents and the varying ‘moneyness’¹⁹ of these actors’ liabilities (Pozsar, 2014; Mehrling, 2017; Gabor, 2018; Tooze, 2018; Bonizzi and Kaltenbrunner, 2020; Dutta et al., 2020; Gabor, 2020; Murau, 2020; Murau and Pforr, 2020). As a result, liquidity problems in money markets can quickly become systemic due to the interconnected nature of balance sheets, which can easily transmit financial fragility prompting financial institutions to respond to changing circumstances (Bonizzi and Kaltenbrunner, 2020). Market-based finance, thus, entangles assets and liabilities from financial institutions in novel ways. Therefore, it is crucial to understand the novel liquidity practices of financial institutions to understand the causes of financial instability.

This perspective of examining financial behaviour through institution-specific balance sheets in a credit money system finds its origins in the work of Hyman Minsky (1975). His work forms the basis of an institutional view of money that emphasises the importance of the asset-liability structure and hierarchical relations between financial institutions (Mehrling, 2013; Gabor and Vestergaard, 2016). Minsky explicitly considers both sides of the balance sheet, with particular attention to the liability pressures on agents’ asset choices (Minsky, 1975; Minsky, 1980; Minsky, 1982a; Minsky, 1986).

Viewing monetary dynamics from a balance sheet perspective highlights the interdependent relationship between assets and liabilities of hierarchically structured institutions, rather than solely focusing on the properties of different assets, as some post-Keynesian economists have long pointed out. This makes liquidity preference institutionally specific, as it depends on the nature of agents’ liabilities. This balance-sheet interpretation can have significant implications for financial stability and economic growth prospects, as focusing on the asset side of balance sheets may not be adequate to alleviate financial vulnerabilities stemming from the liability structure of financial agents (Kaltenbrunner, 2015; Bonizzi and Kaltenbrunner, 2019; Bonizzi and Kaltenbrunner, 2020).

Recent research indicates that banking institutions, particularly those operating in ACEs, have thrived in the era of market-based finance (Hardie and Howarth, 2013; Royo, 2013; Hardie and Maxfield, 2013). In fact, some have even achieved dominance in financial markets (Hardie et al., 2013; Tooze, 2018), rather than being undermined. Some scholars

¹⁹ In the critical macro-finance literature, the term ‘moneyness’ pertains to the degree of ease and security with which assets can be converted into the state’s money. This concept is akin to what post-Keynesians refer to as liquidity premium.

attribute this trend to the persistent efforts of US banking firms since the 1960s to break out constraints on their size, activities, and markets (Cerpa Vielma et al., 2019). Some of these endeavours have been associated with banks' leveraging strategies (Knafo, 2022), particularly since the rise of liability management. Under this revolutionary approach, US banks set asset (credit) growth targets and met them by borrowing in the interbank market (Minsky, 1957). However, when the limits of interbank borrowing were reached, especially in cyclical downturns, they developed liability-side innovations to obtain the necessary borrowings to meet their asset-side commitments (Cerpa Vielma et al., 2019). The aim of these strategies was to raise financial resources from money markets, rather than relying solely on deposits.

There is by now abundant empirical evidence indicating that a key contributing factor to the global financial crisis of 2008, was the increasing reliance of banking institutions operating in ACEs on market-based credit, particularly through the rise of wholesale funding markets (Hardie and Howarth, 2013; Hardie and Maxfield, 2013; Hardie et al., 2013; Beau et al., 2014; Truno et al., 2017; Pérignon et al., 2018; Hardie and Rethel, 2019; BoE, 2019; Knafo, 2022). More specifically, ACEs banks turn to market-based credit as a platform for increased credit flow.

Wholesale funding refers to a type of financing that banks obtain from institutional investors' liabilities such as other banks, pension funds, insurance funds, money market mutual funds and other financial intermediaries (Hardie and Howarth, 2013). It is called 'wholesale' because the amounts involved are typically large. When banks wish (or need) to borrow funds beyond their retail deposit base or when they need to raise substantial amounts of funds quickly, they can turn to wholesale funding markets. Generally, these funds are at lower cost than retail deposits. Wholesale investors are often more concerned with earning a return on their bank investment—just as they would be if they had invested in any other form of business—than with needing payment or safekeeping services (Beau et al., 2014).

Wholesale funding for banks comes in many forms, such as interbank loans, repos, commercial paper, and bonds (Gorton and Metrick, 2012), and a wide range of investors provide it. It can also be classified as secured and unsecured funding. Banks can access secured wholesale funding when it is secured by collateral²⁰. One common approach to obtaining secured funding is through securitisation. Many banks pool together several tranches of illiquid assets, such as loans, and convert them into liquid financial securities against which asset-backed bonds can be issued (Gabor, 2016a). This allowed the extension of house mortgages and credit card loans to nonprime borrowers by large, sophisticated financial organisations in ACEs (Nesvetailova, 2017). Mortgage-backed

²⁰ If the bank becomes insolvent and unable to return the funds, the investor who provided the funds has a recourse to certain (pre-agreed) assets held by the bank.

securities are tradable in the secondary mortgage market, allowing banks to raise funds secured against their (otherwise illiquid) mortgage assets. Another approach for raising secured funding is via repo transactions. In these transactions, a bank sells an asset, such as a government bond, and agrees to repurchase it at a higher price on a specific date. It is a secured loan as the counterparty has recourse to collateral (the government bond) until the repurchase date. The difference between the sale and repurchase price represents the counterparty's return for providing cash to the bank and the cost of funding (Beau et al., 2014).

Alternatively, banks may raise unsecured funding. This funding is non-collateralised, meaning it is not secured by specific assets and is backed by the overall creditworthiness of the bank (Truno et al., 2017). For example, banks may receive unsecured deposits from other banks, large corporates, pension funds, insurance companies and other financial market participants. On the other hand, unsecured funds may be sourced from financial markets: in this case, rather than the financial investor depositing money with a bank, the bank issues a bond or other type of debt instrument that an investor can buy. Examples include the issuance of short-term commercial paper and certificates of deposit or medium-term notes and bonds for a longer time horizon (Hardie and Howarth, 2013). However, unsecured funding exposes investors to diverse risks, particularly credit and liquidity risk, which can have significant cost implications for banks, as Chapter 6 elaborates. In light of this evidence and given the interlocking nature of assets and liabilities across various financial agents in the era of market-based finance, it is essential to understand not only the liquidity practices of non-bank financial institutions, but also, those of banks themselves. This is particularly important in regions such as Latin America, where banks have historically dominated the financial landscape (de Carvalho et al., 2009; dos Santos, 2009; dos Santos, 2011; Karwowski and Stockhammer, 2017).

The following section will explore how Minsky's ideas can enhance the post-Keynesian liquidity preference theory of bank behaviour. It argues that a bank's liquidity preference is not solely determined by its portfolio preferences based on the properties of different assets but is also shaped by the structural pressures of its liabilities. In addition, section 3.2.1 shows that by using a Minskyan balance sheet framework, it is possible to analyse the specific structural pressures faced by Latin American banks due to their subordinate position in global finance. These pressures ultimately constrain the agency of financial institutions in the region vis-à-vis ACEs. Consequently, understanding the financial fragility that can arise between assets and liabilities in market-based finance is crucial, as well as the factors that constrain the agency of Latin American banks due to their subordinate position in global finance. These factors are particularly evident in cross-border balance sheet relations, where funding conditions in ACEs financial markets can have fundamental implications for financial dynamics in ECEs.

3.2 A Minskyan Balance Sheet approach

As discussed in previous sections, the post-Keynesian liquidity preference theory to bank behaviour depends on the properties of different assets. This entails that the focus has been on assets' ability to store wealth and the speculative motive for holding money (Davidson, 1978a; Chick, 1983; de Carvalho, 2015), meaning that an increase in banks' liquidity preference is mainly attributable to a general rise in uncertainty in the economy. However, some Keynesian macroeconomists have provided an alternative interpretation of Keynes' original statement of liquidity preference by explicitly defining banks' portfolio decisions in a framework in which liquidity preference does not only refer to a bank's decision between assets with varying degrees of liquidity under conditions of uncertainty but also, on the nature of banks' liability structures that finance those assets.

In this regard, the work of Hyman Minsky (1975; 1982a) has provided a substantial foundation for these developments by explicitly incorporating in the analysis of capitalist dynamics both sides of the balance sheet, particularly the liability pressures on agents' asset choices and the implications of a mismatch between the two (assets and liabilities) for financial stability (Minsky, 1975; 1980; 1982a; 1986). From a Minskyan theoretical framework, a capitalist monetary economy can be defined as one in which economic actors' portfolio decisions depend on the fragile interconnection of financial agents' balance sheets, where assets create cash inflows and liabilities create cash outflows. As Minsky (1975, p.68) puts it:

In a capitalist economy, one way every economic unit can be characterized is by its portfolio: the set of tangible and financial assets it owns, and the financial liabilities on which it owes...Each economic unit makes portfolio decisions. A portfolio decision has two independent facets. The first relates to what assets are to be held, controlled, or acquired; the second relates to how the position in these assets—i.e., their ownership or control—is to be financed.

Minsky (1975) re-interpreted Keynes's own-rate of interest from Chapter 17 of the *General Theory* by defining the rate of return (r) of an agent's portfolio in terms of its liability structure in the context of the business cycle. For Minsky, the benefits of holding an asset (r) involve three elements: (q) the rate of cash inflows generated by a given asset (the quasi-rents), (c) the portfolio's carrying costs—namely, the cash outflows of the liabilities that were issued to finance assets' holdings in that portfolio—and (l) the implicit yield that liquid assets owe to their ease of disposal (an asset's market price) (de Carvalho, 1999).

From this perspective, money serves as the universal unit of account and medium of exchange for liquidating financial obligations denominated in that unit (Bonizzi and Kaltenbrunner, 2020). The unit of account function of money reflects that money is a unique liquid asset because it is the ‘object’ that can settle contractual debts denominated in that unit²¹ (Minsky, 1975, p.70). That is, it can be used to pay one’s debts. Liquidity, thus, is the ability to honour contractually fixed cash outflow commitments. Subsequently, liquidity premium is not the degree an asset may be converted into money without suffering a loss but rather represents the cash inflows an asset is expected to generate relative to an investor’s liabilities (Minsky, 1975). This means that assets with different liquidity premia have to offer higher yields to investors that are proportional to their exposure to liquidity risks. In periods of economic distress, this reward increases as investors’ exposure to liquidity risks increases. Agents assess the illiquidity of an asset in its expected rate of return and, thus, in its current market value. In this way, in deciding the composition of their balance sheets, financial agents speculate that their (liability) cash outflows resulting from their commitments can be met by their (assets) cash inflows resulting from their operations.

The case of a commercial bank is particularly important for Minsky as usually, a significant portion of its liabilities are shorter-term than its assets, requiring it to constantly refinance its position whenever a short debt matures. This indicates that banks are constantly speculating that their cash liabilities issued or paid to finance positions in assets (the carrying or funding costs for extending loans) will be met by their cash inflows (that is, the quasi-rents for extending loans, (q)). However, as banks’ assets earn cash inflows according to a contractually determined schedule and deposits are on demand, it means that at any time, the cash flow from deposit withdrawals at a bank can significantly surpass the cash gain from contract fulfilments.

If the bank is operating normally, there will be sufficient cash flows to meet its obligations. If the bank has a net deficit, it must sell secondary reserve assets on the money market for cash or borrow funds by issuing debt. In principle, the financial system contains the resources necessary to acquire these assets or debts. A given bank’s net deficit must be compensated by net surpluses elsewhere in the financial system. Therefore, the case of bank runs is particularly critical under this view since the cash required by banks and other financial institutions to fulfil withdrawals surpasses the cash accumulations at other banks or financial institutions. In this situation, the unit losing liabilities must either sell its assets or fail because it cannot satisfy its commitments.

Likewise, it is possible for a bank to incur cash obligations over a period exceeding its anticipated cash receipts from operations. Similarly, in this case, the bank would be

²¹ Money in today’s world consists of cash, central bank reserves, and bank deposits. These means of settlement are legally supported by the state.

required to liquidate financial assets (or cut bank loans), withdraw cash, sell its own debt, or issue new debt to fulfil its obligations. In addition, if a bank would like to increase its portfolio size, that is, increase its loan extensions, to avoid a mismatch between its cash flows, it is also required to issue new debt. However, this is still a speculative decision. A bank can, therefore, extend more credit, yielding (q), by increasing its liabilities, thus raising (c), or by decreasing its liquid assets, thus lowering (l) (as loans are profitable but not liquid assets), or both. The point is that all bank choices are speculative in nature and dependent on the structure of the liabilities used to finance the acquisition of assets.

Extending Minsky's (1975) perspective to develop a liquidity preference theory of bank behaviour under a balance sheet approach requires recognising that banks' lending decisions depend not only on banks' assessment of borrowers' and lenders' risks but also on the pressures of their existing liability structures that finance their assets, and whose obligations are to be settled with money. Therefore, liquidity preference becomes institutionally specific (Bonizzi and Kaltenbrunner, 2020), as it depends on agents' liability structures. This might have significant implications for financial stability and economic growth prospects, as focusing on the asset side of banks' balance sheets may not be adequate to alleviate financial vulnerabilities stemming from the liability structure of financial agents (Kaltenbrunner, 2015; Bonizzi and Kaltenbrunner, 2019; Bonizzi and Kaltenbrunner, 2020). Therefore, to gain a better understanding of financial fragility, it is essential to comprehend the factors that constrain the liability structures of banks. However, this understanding needs to account for the different structural pressures that economic agents in ECEs can face. In this regard, the following section delves into how ECEs' subordinate position in global finance might also have crucial implications for ECEs banks' liquidity preference.

3.2.1 Extending a Minskyan Balance Sheet Approach: A Liquidity

Preference Theory for Banks in Emerging Capitalist Economies

Extending a Minskyan balance sheet approach to develop a liquidity preference theory for banks located in ECEs in the context of subordinate financialisation, implies explicitly considering in their liquidity preference, the particular structural constraints that Latin American banks' liability structures experience as a result of their increasing reliance on market-based finance and their subordinate location in global finance. Scholars analysing ECEs' financial integration have shown that cross-border capital flows to ECEs have flooded their markets over the past decade, vastly exceeding prior waves (Bonizzi, 2016; Bonizzi, 2017b; Bonizzi, 2017a; Kaltenbrunner and Painceira, 2018; Bortz and Kaltenbrunner, 2018; Bonizzi and Kaltenbrunner, 2019). Particularly important for this shift is the emergence of private pension funds and insurance companies, which have enhanced the role of institutional investors in this region, as Chapter 4 shows (Bonizzi et

al., 2021; Cerpa Vielma and Dymski, 2022) by allocating a growing proportion of their investments in ECEs (Bonizzi and Kaltenbrunner, 2019) via wholesale funding markets (Hardie and Rethel, 2019). This phenomenon is not restricted to cross-border capital flows only, as domestic institutional investors have also become crucial actors in placing funds in these markets, as Chapter 4 shows.

As bank borrowing increasingly occurs via financial markets, specifically wholesale funding markets (as Chapters 4 and 6 show), macroeconomic and bank-specific factors determine access to these (domestic or international) wholesale funding markets²². Following post-Keynesian precepts, global and domestic investors' perceptions of liquidity and credit risk determine these macroeconomic and bank-specific factors, which in turn determine the costs at which banks can access market funding. This means that any surges of confidence and fear among institutional investors (due to internal structural problems, for example) could constrain their liability structures, implying that their own perception of liquidity preference is subject to change at any time (Bonizzi and Kaltenbrunner, 2019). This could result in considerable liquidity constraints for banks in ECEs. These factors are even more critical in a global setting, as a slight relocation of global institutional investors' portfolio holdings could substantially affect capital flows to ECEs, given the magnitude of these flows.

An additional factor to which banks are exposed in market-based credit is that ECEs' banks need to offer higher returns to attract capital flows (and avoid capital flights) in the form of higher interest rates and security (such as the accumulation of foreign exchange reserves), to compensate for the lower liquidity premium of their currencies, as the post-Keynesian literature on currency hierarchy has highlighted (Andrade and Prates, 2013; Kaltenbrunner, 2015; Bonizzi, 2017a; De Paula et al., 2017). According to this view, the international liquidity of currencies depends on the confidence of foreign agents in the central bank's capacity to act as a lender of last resort by utilising its reserves to maintain the currency's value (Davidson, 2003). Due to the varying degrees of liquidity, currencies have varying levels of attractiveness for international agents.

Therefore, in conditions of uncertainty, investors would demand higher yields for holding assets denominated in less liquid currencies, which are proportional to their exposure to liquidity risks. In the case of ECEs' banks, institutional investors acquiring banks' debts (like a bond, for example) will demand higher returns as a reward for their exposure to liquidity risks for holding an asset denominated in a relatively illiquid currency. These returns, from the deficit unit side (the bank), constitute the carrying costs (c), namely, the cash outflows of the liabilities that were issued to finance assets' holdings (loans, for example) in its portfolio. As long as ECEs banks adopt market-based credit practices,

²² The focus of this chapter is not set on how this shift occurred, but it assumes that it occurred. Chapters 4, 5 and 6 are dedicated to demonstrating empirically how this transformation took place.

banks' funding costs (c) would also depend on institutional investors' fear and confidence surges, domestically and internationally.

Consequently, following Minsky's interpretation of Keynes' liquidity preference theory, the decision of an ECE bank to extend credit (i.e., the benefit of holding an asset) depends on three factors: the cash inflows generated by its assets (such as loans) or the 'quasi-rents' (q), the funding costs associated with its liabilities (c)—namely, the cash outflows of the liabilities that were issued to finance banks' assets' holdings—and the implicit yield that liquid assets owe to their ease of conversion into money (l) (an asset's market price). The importance for ECEs banks lies on (c), that is, their funding costs, which are composed of a risk-free rate, credit risk premia, liquidity risk premia, and other costs (Beau et al., 2014). Specifically, macroeconomic components and bank-specific factors affect the credit and liquidity risk premia. Mathematically:

$$r = q - c + l$$

Where (c) is a function of the risk-free rate, macroeconomic and bank-specific factors that affect credit and liquidity risk premia, and other costs.

This reflects both the institutional specificity of liquidity preference (as it depends on each bank's funding costs) and the subordinate position that Latin American economies occupy in global finance, as banks' lending decisions are influenced not only by internal factors but also by external factors that may have nothing to do with their economies. This means that changes in liquidity and credit availability in ECEs are also dependent on surges of confidence and fear among domestic and global investors—rather than domestic cycle fluctuations (Cerpa Vielma and Dymski, 2022). Even further, in conditions of uncertainty, when institutional investors are unable to meet their cash obligations, they will be forced to sell their lesser liquid assets (that is, ECEs' assets which are denominated in currencies at the bottom of the currency hierarchy), and foreign capitals may leave ECEs. As these global flows of funds and credit depend on a global financial cycle (Borio, 2012), this could result in significant wild swings in financial-market sentiment and money flows across global borders. This could have substantial implications for ECEs' macroeconomic dynamics and stability, mainly owing to banks' liquidity constraints.

These power dynamics are particularly apparent in these cross-border subordinate relations, as funding conditions in ACEs financial markets can have fundamental implications for financial dynamics in ECEs (Bonizzi et al., 2022). By explicitly considering the structural constraints of Latin American banks' liability structures, it is possible to understand the power that cross-border (creditor) flows wield over borrowers

in the Global South. This means that the agency of Latin American banks is more constrained vis-à-vis ACEs banks, which reflects, in this way, how Latin America's subordinate position in global finance constraints the agency of these institutions. This, in turn, shapes their variegated experiences of financialisation. In this way, this thesis shows in Chapter 6 that by using a Minskyan balance sheet approach, it is possible to understand the structural pressures of ECEs' banks in the era of market-based finance and financialised capitalism. In particular, it reflects that the market-based nature of global finance subjects banking institutions in ECEs to liquidity pressures deriving from the market-based nature of their liabilities and their subordinate position in global finance. Particularly, the distinct form of market-based finance identified here includes the increasing reliance of Chilean banks on market-based credit, namely, the use of wholesale funding, Chilean banks greater involvement in trading and market-making activities, and the rise of private pension funds that enhanced the role of Latin American institutional investors. Furthermore, the increasing involvement of banks in trading and market-making activities along with the rise of domestic and international institutional investors have played a crucial role in shaping banks' liability structures.

In this way, Minsky's institution-specific balance sheet approach to bank behaviour within a credit money world in the context of financialised capitalism provides a useful framework for providing a liquidity preference theory for banks located in ECEs in the context of subordinate financialisation, as it provides a view of monetary dynamics characterised by financial agents' interconnected balance sheets (that is, the interplay between financial agents' assets and liabilities). Minsky, however, focused on non-financial corporations as the primary drivers behind capitalist dynamics. Instead, this thesis claims that financial institutions, particularly, banks, are also crucial in financialised capitalism. Consequently, the extension of Minsky's balance sheet approach in the context of subordinate financialised capitalism contributes to a better understanding of market-based finance and subordinate financialisation in Latin American economies.

3.3 Conclusion

This chapter has developed an alternative framework for analysing the transformation of the financial structure of Latin American economies. This approach involves eight main points:

1. Capitalist economies are fundamentally monetary and may be represented as the fragile interconnection of financial agents' balance sheets.
2. Money is (but not exclusively) endogenously created by private bank credit, and the functioning of a monetarist capitalist economy depends on the banking

system's creation of new monetary units that finances production and consumption.

3. Economic agents make decisions in conditions of fundamental uncertainty. That is, they confront 'real-time'.
4. Banks have an active and special role in determining aggregate economic activity (and capitalist dynamics)—and are not passive agents accommodating the demand for credit—as their liquidity preference affects the money supply. Therefore, analysing banks' micro-level behaviour is crucial for understanding macroeconomic dynamics.
5. Banks' liquidity preference depends not only on their assessment of borrowers' and lenders' risk in conditions of fundamental uncertainty but also on the pressures of their existing liability structures to finance their asset positions.
6. To analyse the transformation of the financial structure in Latin American economies, monetary and financial phenomena should be considered spatial. That is, acknowledging that processes or events unfold differently throughout space and that agents separated in space have location-specific differences in their choice sets or resources (Dymski and Cerpa Vielma, 2021; Dymski and Kaltenbrunner, 2021).
7. By recognising the importance of 'real space', it is feasible to recognise that power resides in specific locations but not others. Therefore, the transformation of the financial structure in Latin American economies can be analysed in a context in which financial relations in a global monetary and financial system are hierarchical. In this context, Latin American nations occupy a specific subordinate place which is both inherent to and determines their experience and empirical manifestations of a global transformation process of finance.
8. A real-time and real-space approach should be historically informed, institutionally rooted, and aware of power distribution²³.

The purpose of the subsequent chapters is to evaluate the validity of these claims and assess their implications.

²³ Chapter 4 concentrates on the last point.

Chapter 4

Empirical Evidence on the Transformation of the Latin American Financial Structure

Introduction

This chapter provides historical empirical evidence on the transformation of the financial structure of Latin American economies over the past 40 years. The Latin American country-level data includes Argentina, Bolivia, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru and Uruguay¹. Financialisation here refers to a multifaceted phenomenon that encompasses the institutional transformation of Latin American financial systems, the adoption of market-based credit by Chilean banks, and the rise of private pension funds that have enhanced the role of Latin American institutional investors. This chapter identifies three key drivers that contributed to this structural shift as the liberalisation of cross-border capital and investment flows in the context of financial globalisation, the deregulation of banking, and the adoption of private pension systems. The adoption of these drivers can be linked to both push and pull factors: recurring financial crises requiring foreign intervention (mainly by the IMF) and the prospect of engaging with the financial instruments and megabanks driving the globalisation of finance.

This thesis adopts an understanding of the current stage of mature capitalism as financialised capitalism, which locates the variegated experiences of financialisation in Latin American economies within an inherent global and uneven context. This means that for Latin American economies, the encounter with financialisation is from a subordinate position, and this position shapes their variegated experiences of financialisation further. This indicates that the subordinated position of ECEs in financialisation processes is inherent to the functioning of global financial processes. These drivers are analysed here as part of the shift of financial capitalism toward market-based finance driven by the US structural power in global finance (Bonizzi et al., 2020; Dutta et al., 2020; Gabor, 2020; Bonizzi et al., 2022). This power is reflected in the ‘Americanisation’ of national financial systems (that is, the export of a US ‘model’ into domestic financial systems). In particular, this chapter argues that these drivers are the result of the World Bank’s and IMF’s ‘policy pushes’ towards increasing integration of Latin American financial systems into this uneven and global system of finance, which reflects, at the same time, the efforts to ‘Americanise’ national financial systems. The focus is placed on the creation and value extraction in Latin American economies from the United States, which constrains the agency of these economies’ agents (Bonizzi et al., 2022).

¹ In certain circumstances, the exclusion of certain nations may arise as a consequence of insufficient data availability.

This chapter contributes to the empirical documentation of subordinate financialisation in ECEs by providing an account of three drivers that have underpinned the transformation of the financial structure in Latin American economies, which have entailed three empirical phenomena. First, this chapter shows that the liberalisation of cross-border financial flows and the opening of Latin American financial markets led to an increase in the size of cross-border capital flows into these economies, particularly after the 2000s. Fluctuations in cross-border capital flow coincide with what Borio (2012) and Drehmann et al. (2012) dubbed the ‘financial cycle’. In addition to growing in scale, capital flows to ECEs have experienced considerable qualitative shifts in recent years (Kaltenbrunner and Paineira, 2018). Traditional Latin American investors have been complimented on the investor side by a diverse variety of additional actors, including institutional investors (pension, mutual, and insurance funds) and new types of mutual fund investors such as exchange-traded funds and macro hedge funds (Kaltenbrunner and Paineira, 2018). Given the extent of these flows, a minor reallocation of their portfolio holdings might significantly affect capital flows to ECEs.

Second, this chapter demonstrates that the deregulation of the banking industry led to an increase in the entry of foreign banks, particularly leading US too-big-to-fail (TBTF) megabanks, through the establishment of cross-border subsidiaries or mergers and acquisitions (M&As), and the broader adoption of their lending and funding practices. The increased presence of foreign banks led to increased competition in these economies’ financial markets, and to the transfer of their financialised practices to domestic banks, as Chapter 6 documents. In addition, Chapter 5 shows that US TBTF banks have been complemented by novel actors such as US fund managers and insurance companies. This particular institutional setting allows US TBTF megabanks and financial institutions to spread market-based practices and supply market-based funds to Latin American economies.

Deregulations of the banking industry also involved the removal of market barriers between commercial banking, investment banking, and insurance, permitting commercial banks to operate in a broad range of businesses and access financial markets (de Carvalho et al., 2009). However, this policy is examined in further detail in Chapter 5. Finally, this chapter illustrates that the adoption of private pension systems led to the rise of private domestic pension funds, which has enhanced the role of domestic institutional investors. The main consequence of the enhanced role of domestic institutional investors is that Latin American pension funds have been further integrated into global cash flows, which makes them sensitive to changes in global perceptions and shifts in liquidity preference (ECLAC, 2019).

The remaining of this chapter describes how these factors and deregulations contributed to a structural transformation in Latin American finance. Section 4.1 introduces the three key historical changes seen in this thesis as the core drivers of the structural

transformation of Latin American financial systems. Subsection, 4.1.1, describes the opening of domestic financial markets to foreign financial flows and investment, and shows an increase in size since the 2000s of cross-border capital flows to Latin American financial markets. The increase in size of capital flows reveals three phenomena: first, that the movement of capital inflows into Latin America is affected by international crisis moments, such as the Asian Financial Crisis and the GFC, rather than by domestic or regional crisis dynamics. This, at the same time, highlights what some post-Keynesians have already pointed out: the intrinsic hierarchy of global financial markets measured by the international currency hierarchy. This means that there are nations with uniformly inferior positions in the currency hierarchy, which correspond to ECEs currencies, whereas ‘hard’ currencies, in particular, the dollar, are seen as a ‘safe haven’ (Kaltenbrunner, 2015; De Paula et al., 2017). And third, that increased openness among ECEs to foreign financial flows and the increased presence of foreign investors in these countries has exacerbated exchange rate volatility due to the ease of reversal for these flows (Gabor, 2010; Kaltenbrunner and Paineira, 2015). Subsection 4.1.2 describes the process of banking deregulation in Latin America and puts it in context with the deregulations in the US banking and financial sector. Subsection 4.1.3 documents the shift to private pension systems in Latin America, which enhanced the role of institutional investors. Section 4.2 concludes.

4.1 Core Drivers of the Structural Transformation of Latin American Financial Systems

Beginning in the 1970s, several Latin American nations adopted deregulating structural reforms, including opening their markets to cross-border financial flows, foreign ownership and competition, deregulating banking and financial markets, and adopting private pension systems. These changes, along with monetarist macroeconomic approaches to economic stabilisation, were consistent with a development strategy that the IMF and the World Bank consistently advocated (Katz, 2001; dos Santos, 2011). Occasionally, governing regimes have freely implemented deregulation and opening policies. On the contrary, authoritarian governments applied these reforms in the case of Chile and Uruguay in the mid-1970s (Foxley, 1983).

These policies were sometimes externally imposed as disciplinary measures, as in the reform programmes the IMF implemented in response to the 1982 Latin American debt crisis, and sometimes due to external promises of engaging with international financial institutions and instruments driving the globalisation of finance, as when the ‘second’ Washington Consensus promised that opening capital accounts would attract foreign savings and increase economic growth (Bresser-Pereira and Varela, 2004). Altogether,

Mexico, Argentina, and Colombia, among others, adopted such reforms in the late 1980s and early 1990s (Katz, 2001).

Two main justifications for these shifts were put forwards: in terms of capital flows, it was assumed that capital would move from industrialised nations, where it has low marginal returns, to developing nations, where its relative scarcity implies higher marginal returns. In addition, it was predicted that cross-border capital flows would increase stability by enabling countries to access various funding sources. That is, the proponents of liberalising cross-border financial flows and investment aimed to boost economic growth and efficiency (Ocampo and Stiglitz, 2008) based on the neoclassical precept of perfect capital markets. Regarding the deregulation of banking, the idea was that by removing all regulations and barriers to entry to competitors, markets would achieve financial development, and, as a result, efficient allocation of resources could occur. Reducing in this way, ‘underdevelopment’, a characteristic that more traditional approaches to economics (as reviewed in Chapter 2) saw as intrinsic to ‘less-developed economies’, such as Latin America. The adoption of privatised pension systems was justified by the same empty promises that had been made for opening the door to foreign savings: ‘private schemes would mobilise a greater amount of ‘funds’ available to be lent out to support real investment, thus favouring economic growth’ (Bonizzi and Guevara, 2019, p.3).

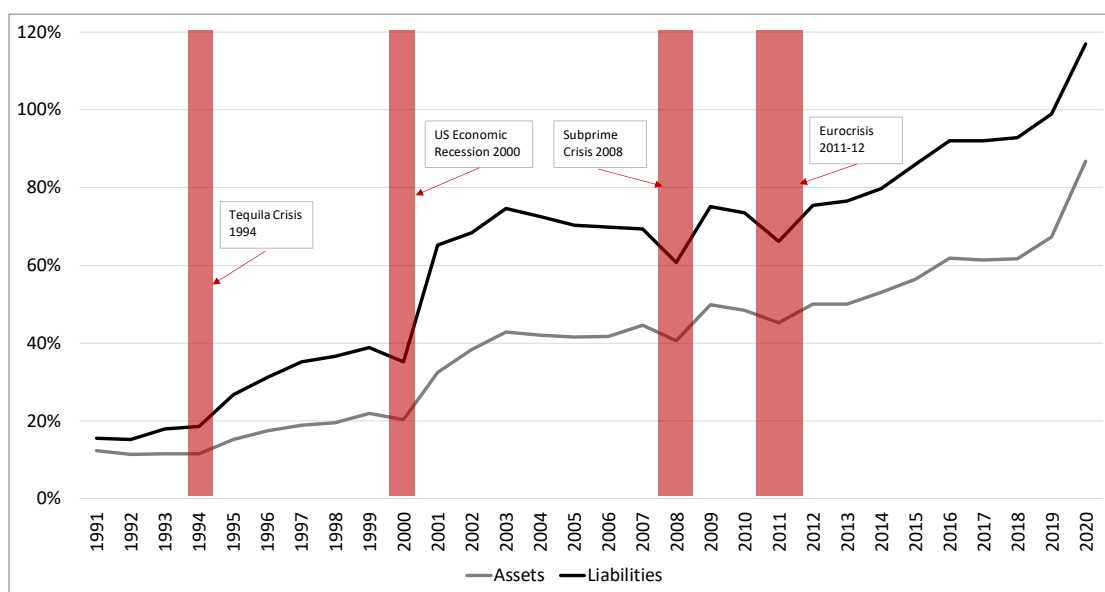
4.1.1 The Liberalisation of Cross-border Financial Flows and the Opening of Latin American Financial Markets

From the 1970s through the early 1990s, several Latin American nations abandoned decades of protectionism and government control, liberalised their capital accounts, and opened their domestic financial markets, following the McKinnon and Shaw thesis that alleged that overregulated markets were impeding the development of these countries. An open capital account was seen as a key component of this liberalisation process. As Chapter 2 has pointed out, the argument in favour of freeing up international financial flows was based on the notion that capital would move from industrialised nations, where it has low marginal returns, to developing nations, where its relative scarcity implies higher marginal returns. Foreign inflows were perceived as an essential additional source of investment funding, which could simultaneously drive domestic institutions to be more efficient (Karwowski, 2020). In addition, it was predicted that cross-border capital flows would increase stability by enabling countries to access various funding sources. That is, the proponents of the liberalisation of cross-border financial flows and investment aimed that liberalisation would boost economic growth and efficiency (Ocampo and Stiglitz, 2008). As a result, financial globalisation, which refers to the expansion of cross-border

financial investment, was promoted by US institutions and ideology, such as the IMF and the World Bank.

Financial liberalisation and globalisation marked the beginning of Latin American financial integration into a hierarchical global financial structure. In the 1970s, Chile, Argentina and Uruguay liberalised their economies, while Bolivia, Colombia, Ecuador, Mexico, Paraguay and Peru followed afterwards. Figure 4-1 shows the steady expansion of cross-border capital flows as a percentage of the GDP in Latin American economies from 1991 to 2020. Despite the earlier commencement of this process, cross-border capital flows to Latin America have dramatically expanded since the 2000s, as Figure 4-1 displays. Although increased cross-border flows have been mostly documented as a widespread phenomenon in advanced economies, recent evidence shows that Latin American financial markets have become increasingly integrated in the past decades (Bonizzi, 2016; Kaltenbrunner and Paineira, 2018), particularly through the increasing investment allocations of international institutional investors to ECEs since the 2000s (Bonizzi, 2016; Bonizzi, 2017a; Bonizzi, 2017b; Bonizzi and Guevara, 2019; Bonizzi and Kaltenbrunner, 2019; Bonizzi et al., 2021; Bonizzi et al., 2023).

Figure 4-1: International Investment Position (% GDP), Latin America, 1991-2020



Source: Author's calculations based on the IMF Balance of Payments and International Investment Position Statistics and OECD World Development Indicators Database

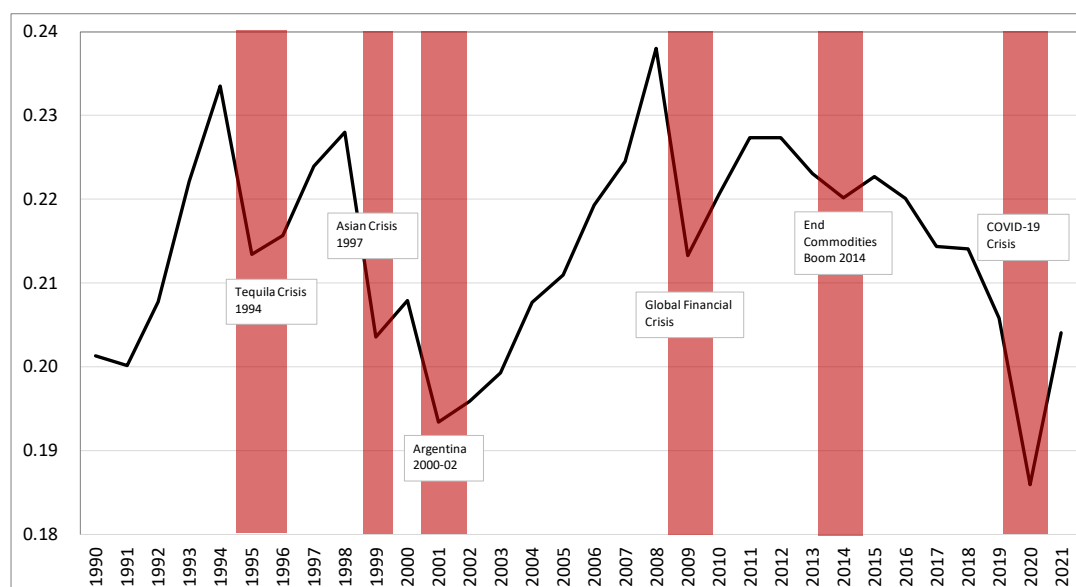
Foreign liabilities have grown from around 20 per cent in the early 1990s to almost 120 per cent in 2020. It is interesting to note that in 2019, foreign liabilities exceeded the GDP of some of these economies. On the other hand, assets have grown from 16 per cent in the early 1990s to approximately 86 per cent in 2020. Since the turn of the millennium,

foreign assets and liabilities have increased exponentially at a pace that lasted until 2008. Since 2012, cross-border capital flows have steadily increased; however, the expansion rate has decreased. Moreover, Figure 4-1 also reflects that throughout the period (1991-2020), foreign liabilities have been larger than foreign assets, indicating a negative net international investment position (as Figure 4-3 shows) for all the countries as a whole. This suggests that Latin American financial markets have entered financial globalisation via foreign lending and investment (the liability side), with foreign assets lagging behind. Indeed, foreign liabilities as a proportion of GDP show a larger and more pronounced expansion than of assets.

Frequent financial crises in emerging economies especially since the 1990s (Valencia and Laeven, 2008; Laeven, L. and Valencia, 2013; Laeven, M.L. and Valencia, 2018; Laeven, L. and Valencia, 2020), have generated a backlash against financial liberalisation and financial globalisation. Increased openness among ECEs has heightened the exposure of these economies to foreign financial flows, which has intensified exchange rate volatility due to the ease of reversal for these flows (Gabor, 2010; Kaltenbrunner and Paineira, 2015). Moreover, capital inflows has increased the risk to generate asset price inflation, ultimately leading to financial and exchange rate crises when the unsustainable nature of price rises becomes evident (Arestis and Glickman, 2002).

Noteworthy, sharp declines in cross-border capital flows coincide with economic and financial crises in the world, but whose origin has been in advanced economies. The global financial crisis of 2008 resembles a slump. Similarly, the Euro-crisis shows a decline in both foreign assets and liabilities in 2011, as shown by the shaded areas in Figure 4-1. On the other hand, Latin American crises, such as Mexico's Tequila crisis in 1994 and Argentina's 2001 crisis (*Corralito*), do not seem to have affected capital flows dynamics for the countries analysed.

Figure 4-2: Gross Capital Formation (%GDP), Latin America, 1990-2021



Source: Prepared by the author based on the World Bank Data Catalogue

Figure 4-2 reveals that investment (gross capital formation) as a share of GDP in Latin America has declined consistently in the same post-subprime-peak years that saw a surge in the inflow of overseas capital flows. In addition, this figure unveils that the dynamics of cross-border capital flows do not obey domestic business cycles. The shaded areas in Figure 4-2 reflect that Latin American (domestic) crises have reduced domestic investment. However, this cycle does not seem to coincide with capital flow dynamics reflected in Figure 4-1.

These dynamics, however, seem to coincide with what Borio (2012) and Drehmann et al. (2012) dubbed the ‘financial cycle’. The basis of this cycle is rooted in the excessive risk-taking of the global financial system (Borio, 2014), and it is portrayed as more prolonged and more profound than the business cycle². As capital flows are the product of a financial choice rather than a real one, they are vulnerable to liquidity preference concerns, which translates into surges of confidence and fear among global investors, as the post-Keynesian literature has emphasised. Indeed, the financial cycle’s peaks are inextricably linked to systemic banking crises, that is, to financial crises (Drehmann et al., 2012; Borio, 2012).

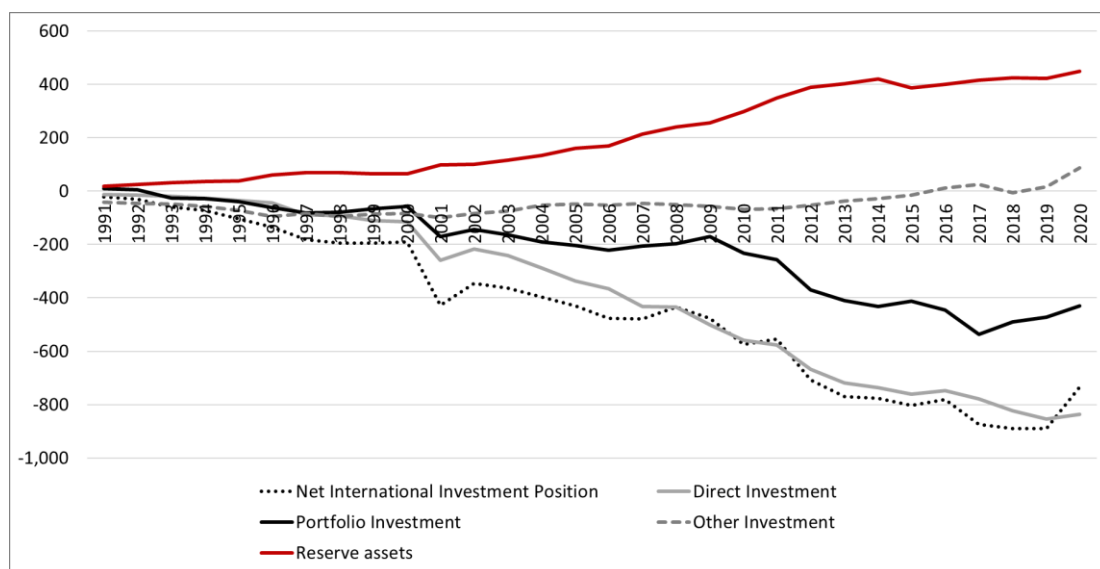
This view of a global ‘financial cycle’ channelling funds in and out of economies eradicates the relationship between business-cycle fluctuations (Figure 4-2) and financial flows (Figure 4-1). In other words, based on these figures, it is fair to conclude that financial flows in Latin American economies are no longer dependent on the domestic

² The business cycle is identified in the macroeconomic literature with short-term fluctuations (up to 8 years) (Borio, 2014).

business cycle but are at least as dependent on surges of confidence and fear among global investors. Recent empirical research (Aiolfi et al., 2011) confirms this notion; it shows that the dynamics of the Latin American business cycle are idiosyncratic, affected by idiosyncratic local shocks, global business cycles, and global crises. Figure 4-1 depicts traces of all these factors without any synchronisation.

Due to the lower liquidity of their currency, Latin American economies are at a disadvantage (Andrade and Prates, 2013; Kaltenbrunner, 2015; Bonizzi, 2017a; De Paula et al., 2017), which makes their financial assets, by definition a risky investment, prone to more significant volatility (Bonizzi, 2017a). Indeed, the literature (including mainstream economists: see Stiglitz (2004), for example) has characterised capital flows as highly volatile, resulting primarily from changes in international market conditions rather than domestic ones (Kaltenbrunner and Paineira, 2018). This coincides with the pattern of capital flows' dynamics and the shaded areas in Figure 4-1.

Figure 4-3: Net International Investment Position (USD Billion), Latin America, 1991-2020

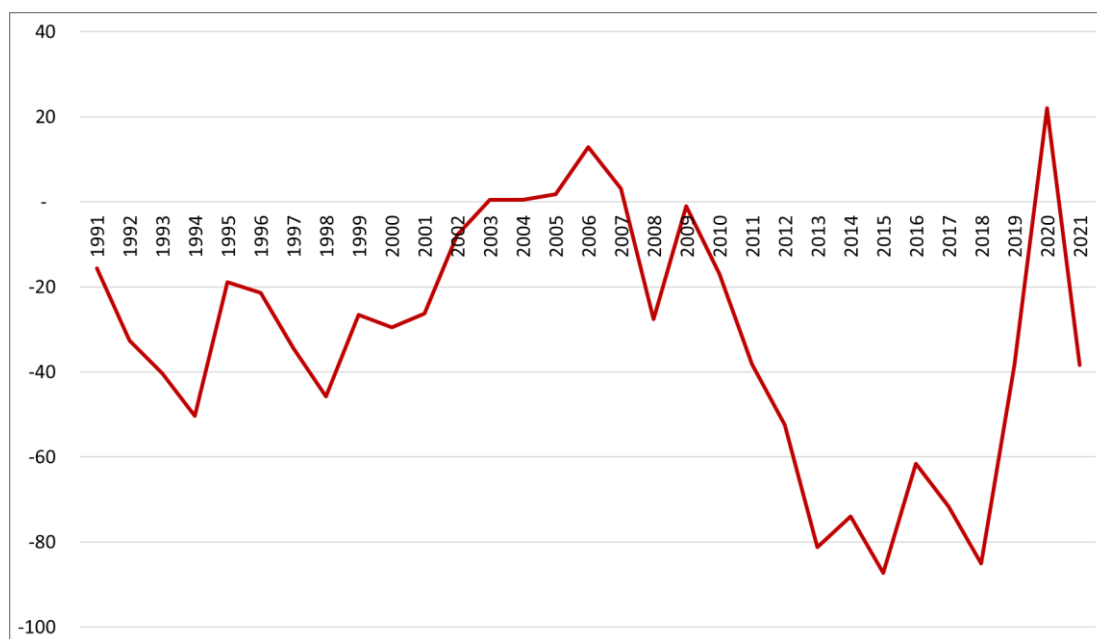


Source: Author's calculations based on the IMF Balance of Payments and International Investment Position Statistics

This 'disadvantage' is evident in Figure 4-3, which displays Latin American economies' vast accumulation of foreign exchange reserves since the turn of the millennium. While Latin American countries' overall net investment position is negative for two components—direct and portfolio investment—and close to zero for other investments, reserve assets have systematically increased throughout the 2000-2020 period shown (this is the case for every country individually). The vast accumulation of reserves (mainly in US Dollar) shows to be independent of these economies' current account position (Figure

4-4), and directly results from Latin America’s accelerating financial integration and subordinated nature. This reflects two phenomena. First, the extraordinary and enormous wave of capital inflows compared to the size of local financial markets has placed unsustainable strains on domestic liquidity, asset prices, and exchange rate (Kaltenbrunner and Paineira, 2018). Secondly, being at the bottom of the international monetary hierarchy entails that Latin American economies need to be ready for large and unexpected capital outflows into currencies with greater liquidity premia. Reserve accumulation is a precautionary measure to meet this demand and prevent an excessive impact on the local economy. This phenomenon further illustrates that for Latin American economies, financial integration has been induced mainly by foreigners rather than locals investing abroad, as liabilities as a share of GDP are larger than assets, as Figure 4-1 shows.

Figure 4-4: Current Account (USD Billion), Latin America, 1991-2021



Source: IMF Balance of Payments and International Investment Position Statistics

In addition to growing in scale, capital flows to ECEs have experienced considerable qualitative shifts in recent years (Kaltenbrunner and Paineira, 2018). Traditional Latin American investors have been complimented on the investor side by a diverse variety of additional actors, including institutional investors (pension, mutual, and insurance funds) and new types of mutual fund investors such as exchange-traded funds and macro hedge funds (Kaltenbrunner and Paineira, 2018). Given the extent of these flows, a minor reallocation of their portfolio holdings might significantly affect capital flows to ECEs.

Since the late 1970s, (mainly) Anglo-Saxon nations have been characterised by the rising institutionalisation of household savings, notably through the adoption of funded pension schemes. As the literature on financialisation in ACEs shows, this shift in the type of investors resulted from this policy. Institutional investors and asset managers have evolved into a mass industry serving vast segments of the population, such that they successfully define the extremely high trading volume that exists in capital markets nowadays (Grahl and Lysandrou, 2006).

4.1.2 Latin American Bank Deregulation and Foreign-bank Entry in

Context

Accompanying the opening of Latin American capital accounts were deregulations and the remaking of Latin American banking systems in the mid-1990s, some of which involved the entry of foreign banks through the establishment of cross-border subsidiaries or M&As, the widespread adoption of their lending and funding practices, which the World Bank consistently supported³ (dos Santos, 2011), and the removal of market barriers between commercial banking, investment banking, and insurance, permitting commercial banks to operate in a broad range of businesses and access financial markets (de Carvalho et al., 2009).

As indicated in this chapter's introduction, the deregulation of Latin American banking systems must be viewed in the context of developments in the core of global finance, limited here to the United States. The US's leading role in global finance was attained through a series of drastic measures: broad-based, multi-step deregulation of commercial banks beginning in 1980; regulatory approval for a large-scale banking M&A wave (Dymski, 1999); large US banks replacing lost loan customers in the late 1970s by making massive loans to regions profiting from exploding commodity prices, particularly Latin America (Cerpa Vielma et al., 2019); US policy-makers rescue of those banks amidst the fallout from the Latin American debt crisis; policy measures that established securitisation as the new form of credit provision and shadow banks as the core suppliers of credit; and the innovative borrowing strategies to obtain funds to make or purchase loans by both commercial and shadow banks (Hardie and Maxfield, 2013).

A key policy due to the near-collapse of US money markets two years after the 1982 Latin American debt crisis prompted US authorities to designate eleven US money-centre banks as TBTF (Ioannou et al., 2019). The creation of Brady bonds in 1989 concurrently contributed to the recapitalisation of these banks by eliminating their 'bad debt' from their balance sheets. These bonds also established worldwide securities that would act as global

³ Indeed, from the mid-1990s onwards, the World Bank studies provided the core arguments in favour of foreign-bank entry into developing economies.

monitors of defaulting nations' 'good behaviour'. The TBTF US banks recovered from their losses in Latin America by establishing systems for packaging, selling, and servicing mortgage-backed securities. The massive growth of this market, forced by the collapse of US savings and loan institutions, allowed the transition of TBTF banks toward fee-based income and wholesale funding (Cerpa Vielma et al., 2019).

As new channels for riskier assets arose, market-based lending grew further. Large banks constructed loan-origination-to-securities platforms, packaged and sold aggressive consumer loans (including subprime mortgages), and created facilities for hedging and risk position-taking (Dymski, 2010). The emergence of market-based funding, such as the wholesale funding of assets that remained on commercial banks' balance sheets (Hardie and Maxfield, 2013), which was hidden in off-balance sheet activities, was of particular importance. Most banks' wholesale funding consisted of collateral-based lending to each other through various OTC markets. After the subprime crisis of 2008, the fragility of this sort of market-based funding was particularly evident. Following, the elimination of all barriers between commercial banking, investment banking and insurance facilitated the worldwide expansion of financialisation, as US TBTF banks and their competitors from other advanced economies grew via innovation and expansion into new market sectors (Cerpa Vielma et al., 2019; dos Santos, 2011; 2013). These innovations and severe bank competition increased the scale and scope of globalised financial markets in middle-income countries (dos Santos, 2013).

In the 1990s, the significant increase in foreign banks and the establishment of new institutions significantly intensified competitive pressures on Latin American banks (Hawkins and Mihaljek, 2001). The Tequila crisis of the mid-1990s in Mexico revealed that newly privatised banks might operate irresponsibly during weak regulation. This led to foreign banks acquiring these privatised institutions, resulting in 82 per cent of banking-sector assets being in foreign hands (Haber, 2005). M&As played a significant role in financial consolidation. Facilitated by the removal of product and geographic constraints (Goddard et al., 2012), M&As were seen as a means of improving efficiency, as 'borders between financial products, banks and non-bank financial institutions and the geographical locations of financial institutions have started to break down' (Hawkins and Mihaljek, 2001, p.3). Therefore, a wave of financial M&As occurred in Latin America, many across national borders involving foreign banks (Peek and Rosengren, 2000; de Carvalho et al., 2009; Williams, J., 2012; Alarco, 2018; Díez et al., 2017). For example, in Argentina and Chile, foreign banks typically entered the market via cross-border M&A rather than starting from scratch (de Carvalho et al., 2009).

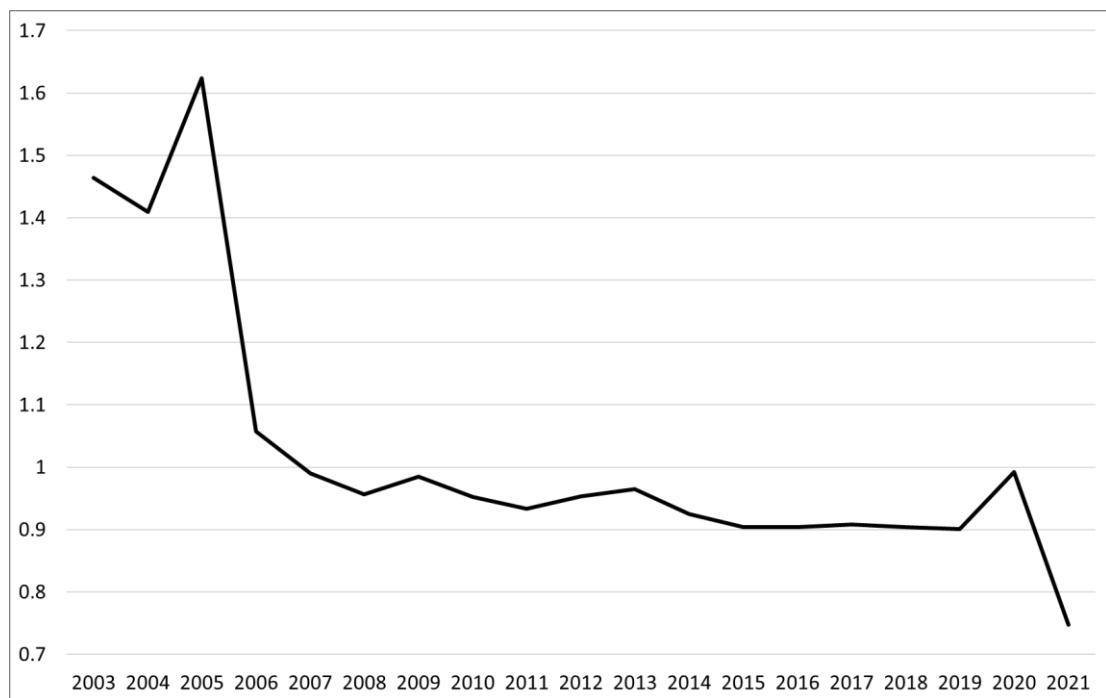
It is debatable how financial M&As have altered financial outcomes. Some empirical evidence indicates that more 'efficient' institutions tend to have more market shares in highly concentrated markets both in banking (Williams, J., 2012) and pension funds (Agostini et al., 2014). Chortareas et al. (2011) demonstrate that larger Latin American

banks in Brazil, Argentina, and Chile have certainly earned higher-than-normal profits. Nevertheless, de Carvalho et al. (2009) raise concerns that rapid gains in market concentration in the aftermath of the M&A wave increase profitability through larger interest margins—that is, monopoly pricing. According to Chortareas et al. (2011), increasing concentration increases the likelihood of financial crises. Tabak et al. (2013) note that the rise of systematically significant banks in Latin America can reduce systemic stability and adversely affect the performance of smaller banks.

Domestic banks are, in any case, competing with foreign-owned banks. In general, the banks expanding into Latin American markets have been TBTF megabanks whose profits are derived less from lending than from providing a global platform for market-based transactions and risk hedging (Cerpa Vielma et al., 2019). Moreover, as Chapter 5 shows, removing entry barriers to Latin American financial markets led to the entry of US fund managers and insurance companies, which has increased this competition further. This particular institutional setting allows US TBTF megabanks and financial institutions to spread market-based practices and supply market-based funds to Latin American economies. This aligns with the pattern observed by Correa et al. (2012) for Latin American economies. They demonstrate that foreign-owned banks propagated market-based practices and earned above-average profits in the markets they entered. Similarly, this concurs with dos Santos' (2011; 2013) observation that foreign banks typically spread 'financialised' practices in these economies.

In addition, as discussed in Chapter 3, a key development in the global financial system is the shift towards market-based finance, which refers to novel ways of creating credit primarily through securities markets, collateral-based money, and derivative markets (Gabor and Ban, 2016; Gabor, 2016b; Tooze, 2018) rather than the banking system, which flows in tandem with the US dollar global financial cycle (and not the business cycle) (Borio, 2012; Rey, 2015). This thesis contends that this transformation has occurred within the constellation of financial institutions outside traditional commercial banks and within banks themselves. Thus, it is suggested that banks in Latin American economies are also becoming increasingly market-based.

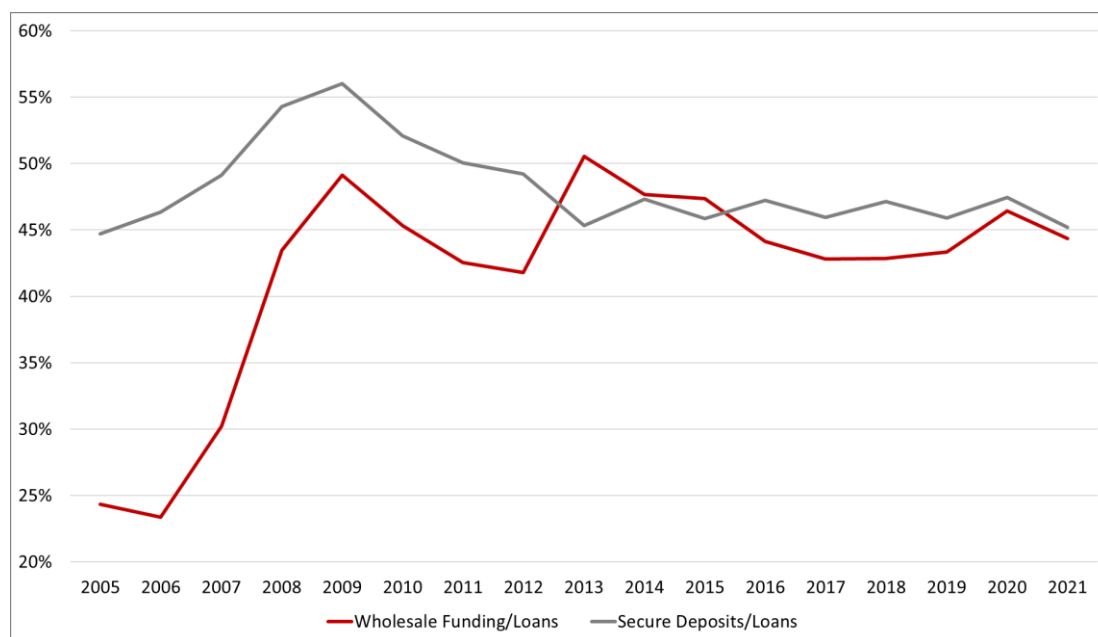
Figure 4-5: Bank Customer Deposits to Total Loans (%), Latin America, 2003-2021



Source: IMF's Financial Soundness Indicators. Note: Mexico and Paraguay are not included.

The increasing prominence of market-based funding is demonstrated by the evidence in Figure 4-5, which depicts a decline in the customer-deposit-to-loan ratios in Latin America from 2003-2021. This suggests that the deposit base backing loan extensions has been decreasing steadily. Alternatively, this figure suggests that banks' loan extensions have been increasing beyond their deposit base. Figure 4-6 provides a tentative answer as it reflects that deposits are no longer the sole funding source for banks, as wholesale funding and other market-based liabilities have expanded consistently (Hardie et al., 2013).

Figure 4-6: Wholesale Funding vs Secure Deposits as a Percentage of Bank Loans, 100 Largest Latin American Banks by Asset Size, 2005-2021



Source: Prepared by the author based on the Orbis Bankfocus Database. Note: These data represent the percentage of bank loans supported by wholesale funds and secure deposits (savings and time deposits) in the 2005-2021 period for the 100 largest banks in Latin America by asset size, as recorded for 2022 in the Orbis Bankfocus Database.

It considers banks from Argentina, Bolivia, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru and Uruguay, whose assets are greater than 4 USD Billion.

In fact, Figure 4-6 illustrates the proportion of bank loans supported by wholesale funds versus the proportion of bank loans supported by secured deposits for the 100 largest Latin American banks throughout the 2005-2021 period. This figure reflects that market-based funds have grown not only outside the financial system but also within the banking system itself. This entails that Latin American banks are borrowing funds beyond their deposit base from financial markets. As of 2021, this novel source of funds constitutes around 45 per cent of Latin American banks' funding base. Broad-based growth in wholesale funding is evident in the pre-crisis period, peaking in 2009 and 2013. After 2013, Latin American banks' reliance on wholesale funding records was at constant or slightly depressed levels until 2020. Still, since 2013, wholesale funding has consistently been a crucial source of banks' funding. This figure, thus, demonstrates that some Latin American banks are capable of conducting autonomous credit operations. In other words, these data emphasise that banks in Latin America are not reserve-constrained.

In contrast, banks' reliance on deposits to support customer loans reached its highest point in 2009, surpassing 55 per cent of Latin American banks' funding base. However, this proportion has decreased systematically after this period, and even at some point between

2013 and 2015, it was lower than wholesale funding. After 2015, the volume of wholesale funding decreased, and by 2020 it presented relatively similar proportions. Comparing this figure to Figure 4-2, it can be demonstrated that banks' autonomous credit-creation capacities are unrelated to the domestic business cycle. Similar to the dynamics of capital flows, this might suggest that wholesale funds' availability is unrelated to the domestic business cycle and might depend on a global financial cycle. When comparing this figure to the dynamics of capital flows with respect to these countries' GDP in Figure 4-1, it is possible to observe that the fluctuating dynamics of these flows mirror those of cross-border capital flows. This might indicate that a proportion of Latin American funding originates from cross-border capital flows (in domestic wholesale markets).

It must be emphasised that many market-based financial markets, including wholesale funding markets, are organised as hierarchical network structures (Veld et al., 2020): to cite three examples, the interbank (Silva et al., 2016b), repo (Hüser et al., 2021), and credit-default swaps (Cont and Minca, 2016) markets. These hierarchical systems are stable and cost-efficient for member institutions but promote collective risk-taking (Silva et al., 2016a). This risk-taking, when it reaches its threshold limits, can harm or even destroy these network links, as was the case in the European interbank market during the 2008 financial crisis (Fricke and Lux, 2015), where banking networks diffused contagion (Gallegati et al., 2008).

While the 2008 crisis demonstrated to some experts that these funding markets are inherently a source of financial contagion and excess risk-taking (Gallegati et al., 2008), for global-market insiders, preserving the structure of global financial markets was worth any price, even global stagnation (Tooze, 2018). Preserving this structure required protecting the core hubs of global liquidity, money markets, and securitisation networks (and their asset prices). The availability of repo funding, as Kaltenbrunner and Paineira (2018) note, along with the availability of wholesale funding, as this thesis shows, has encouraged the further expansion of market-based credit markets in Latin America, which is, in turn, a crucial factor in these countries' build-up of international reserves. To preserve access to global liquidity, Latin American central banks have had to acquire international reserves in amounts sufficient to reassure their counterparties (Borio, 2014), as depicted in Figure 4-3. As Caballero et al. (2017) stated, they were required to undertake these purchases due to the global 'shortage of safe assets' to maintain access to market-based global finance. Chapter 6 elaborates on this idea in further detail.

This entails that Latin American countries have fundamentally overborrowed not just to ward off speculation against their currency but also to participate in the global financial system. It is the availability of this collateral that has also allowed cash-rich non-bank Latin American institutions such as pension funds to participate in money markets (Figure 4-9) and allowed these nations to offer a spatial fix for US banks after the subprime crisis (and their subsequent bailout) (Harvey, 2001). This highlights the connection between

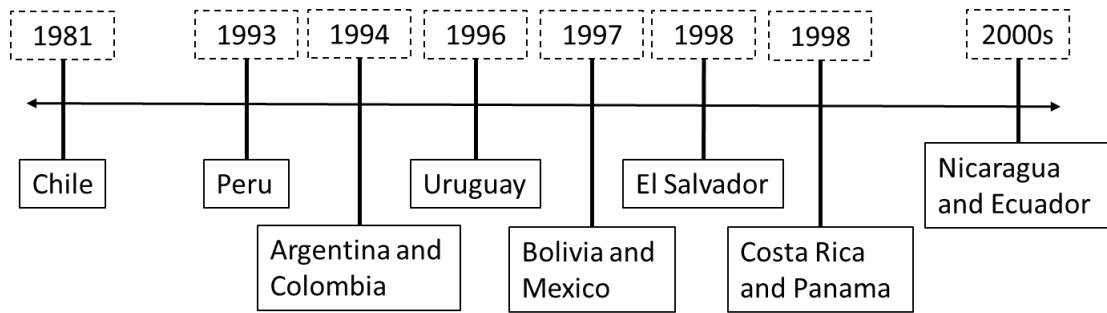
the financial crisis and the hierarchical structure of cross-border finance. According to Kaminsky, Graciela Laura and Vega-Garcia (2016), a further lesson from the subprime crisis is that financial crises may arise from the global core, not from problems on the periphery.

There are multiple hierarchical structures in these global money markets, most of which are maintained by the Federal Reserve and overseen by the Financial Stability Board. These hierarchical relations in contemporary financial markets are highlighted by the small number of central banks that have swap lines with the Federal Reserve. Only Argentina, Brazil, and Mexico hold this privilege in Latin America. Then, other hierarchical relationships between Latin American central banks are enabled. These hierarchical structures are evident in global markets and among domestic banks in Latin American nations. Latin American leading banks (the ‘top 100’ highlighted in Figure 4-6) have more immediate access to these markets, as demonstrated by the amount of wholesale funds these banks use to back up loan extensions. Domestic banks, on the other hand, are more constrained.

4.1.3 Market-based Pensions, Institutional Investors, and the Search for Yield

The same empty promises that had been made for opening the way to foreign savings were used to justify savings accumulation for pension plans: ‘private schemes would mobilise a greater amount of ‘funds’ available to be lent out to support real investment, thus favouring economic growth’ (Bonizzi and Guevara, 2019, p.3). These promises led to the transformation of Latin American pension systems from traditional Pay-As-You-Go (PAYG) to privatised pension schemes. Traditional PAYG systems were built on a social solidarity idea, with non-contributory pensions funded by a communal fund against risk and public sector support. Privatised pension systems via the creation of *Administradoras de Fondos de Pension*, on the other hand, favoured individual capitalisation over intergenerational solidarity and state support in retirement provisioning (Bonizzi and Guevara, 2019).

Figure 4-7: Adoption of Individual Capitalisation Schemes in Latin America

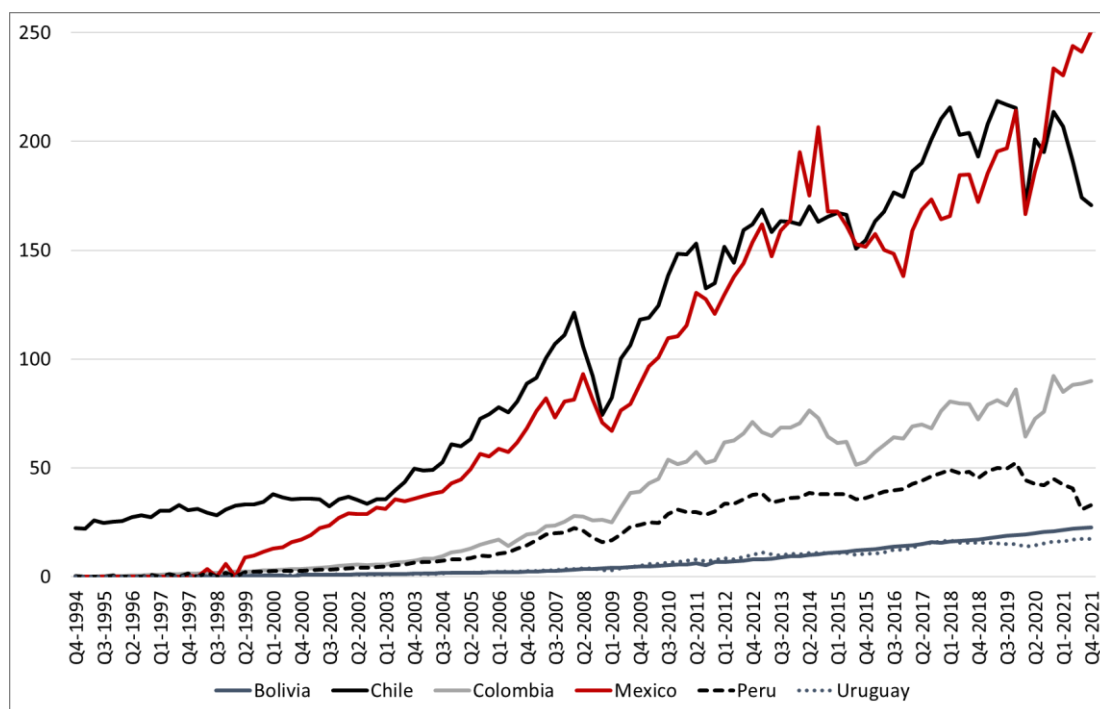


Source: Prepared by the author based on the International Federation of Pension Funds Administrators Data. See <https://fiapinernacional.org/>.

Chile's early adoption of pension reforms in 1981 had a cascade effect, encouraging the adoption of individual capitalisation systems elsewhere in Latin America (Figure 4-7): Peru (1993), Argentina and Colombia (1994), Uruguay (1996), Bolivia and Mexico (1997), El Salvador (1998), Costa Rica and Panama (2000), and Nicaragua and Ecuador in the 2000s.

The adoption of private pension plans has been associated with an increase in pension fund assets in advanced economies (Engelen, 2003; Hassel et al., 2019). A growing inflow has followed this into financial markets and high demand for financial assets (Bonizzi et al., 2021). This inflow has been recognised as a critical determinant of financialisation and market-based finance (Gabor, 2020), driving the expansion of capital markets and the financial sector more generally (Toporowski, 2002) and shaping innovations in financial instruments (Fernandez and Aalbers, 2016; Bonizzi and Churchill, 2017). This widespread adoption of market-based pensions has pressured global pension fund managers to earn sufficient returns to fulfil their future obligations. Since bonds have consistently returned low yields in the years following the implementation of market-based pension reforms, it has led institutional investors to seek higher-yielding assets in diverse global corners: Asia (Lee 2012), the European Union (Bonizzi and Churchill, 2017), housing markets (Fernandez and Aalbers, 2016), and particularly, emerging markets (Bonizzi and Guevara, 2019; Bonizzi and Kaltenbrunner, 2019; Bonizzi et al., 2021).

Figure 4-8: Assets Under Management (USD Billion), Latin American Pension Fund Administrators, 1994Q1-2021Q4

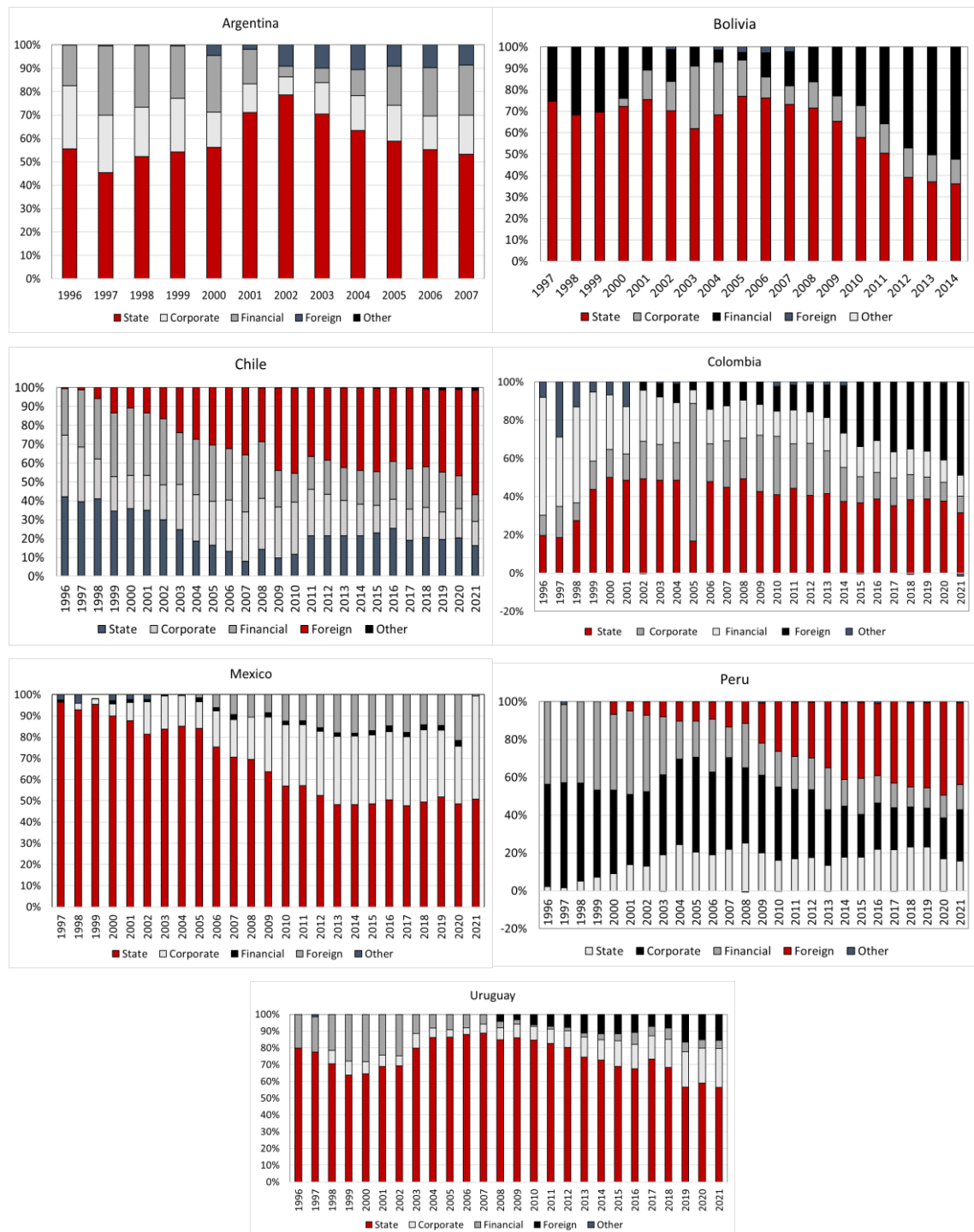


Source: International Federation of Pension Funds Administrators Statistics. Note: Argentina, Ecuador and Paraguay are not included

However, in the last few decades, domestic private pension funds have also become more prominent actors in financial markets across Latin America, as Figure 4-8 displays⁴. Figure 4-8 depicts the rise in private pension assets for six countries in Latin America. In Chile, Mexico, Colombia and Peru (less so in Uruguay and Bolivia), these assets increased immediately after deregulations in the 1990s and 2000s and rose dramatically after the 2008 financial crisis. This entails that Latin American fund managers (AFPs) of market-based pension portfolios have been under no less pressure: the rising number of individual savings accounts in the region has increased the challenge of meeting their future commitments. As seen in Figure 4-9, they have responded by allocating assets to capital markets.

⁴ See Bonizzi, Churchill and Guevara (2020) for example.

Figure 4-9: Pension Funds' Portfolio Investments (%), Argentina, Bolivia, Chile, Colombia, Mexico, Peru and Uruguay, 1996-2021



Note: Paraguay is not included.

Source: Prepared by the author based on the International Federation of Pension Funds Administrators (FIAP) Statistics

Figure 4-9 reflects domestic pension funds' portfolio investments for Argentina, Bolivia, Chile, Colombia, Mexico, Peru and Uruguay. This figure reveals some patterns amidst

these funds' search for yield. It appears that pension funds' investments are supporting all economic sectors. In particular, pension funds in Argentina, Bolivia, Mexico, Uruguay, and to a minor extent, Colombia are diverting their portfolio investments towards the state, reflecting significant financialisation of the state in these economies. However, following the 2008 financial crisis, investments in this sector appear to be declining in all nations.

Mexico's corporate sector was the only one to consistently have higher funding by pension funds. In addition, a proportion of pension funds in Peru, Colombia and Chile are diverting their portfolio investments towards foreign financial derivatives, including private equity and fixed-income investments, rather than investing in the state. In addition, pension funds' portfolio investments also seem to be backing up a portion of the domestic financial sector, as is the case for all countries except Mexico and, to a lower extent, Uruguay. Even though this percentage is lower than the proportion of other investments (such as the foreign sector in Chile, Colombia and Peru), it suggests that pension fund administrators are investing substantial quantities in the money and capital markets. As shown in Figure 4-8, financial institutions (such as banks) have acquired market-based debt since the beginning of the 21st century due to the investment of domestic pension funds in domestic financial markets.

As shown in Figure 4-9, the combination of financial deregulation and domestic investors' search for returns has led to a growing allocation of domestic institutional investors' asset demand into diverse sectors, including the foreign sector. That is, these investors' search for return has joined the global 'wall of money' (Fernandez and Aalbers, 2016). Opening access to global financial markets provides new investment opportunities for non-residents while also enabling resident wealth holders to acquire assets and provide financial services domestically and externally (de Carvalho et al., 2009). It is crucial to notice that privatised pensions are only one set of institutional investors operating in Latin America (Bortz and Kaltenbrunner, 2018). These investors also include endowments, mutual funds, insurance companies and sovereign-wealth funds (Kaltenbrunner and Paineira, 2018).

The consequence of the enhanced role of domestic institutional investors is that Latin American pension funds have become more integrated into global capital flows, which makes them vulnerable to changes in perception and shifts in liquidity preference (ECLAC, 2019). Evidence that cash-rich non-bank Latin American institutions such as pension funds are participating in global money markets (as in Figure 4-8 and Figure 4-9) is once again reflected in the amount of international reserves that these economies have systematically accumulated since the beginning of the 2000s (Figure 4-3). This indicates that these countries have basically overborrowed not just to ward off speculation against their currency, as suggested in section 4.1.1, but also to participate in the global financial system.

4.2 Conclusion

This chapter provided descriptive empirical evidence on the transformation of the financial structure of Latin American economies in the past 40 years for Argentina, Bolivia, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru and Uruguay. As dependency theorists have long acknowledged, foreign markets and institutions have consistently played a role in ECEs. However, the degree of integration is far more extensive in the era of global finance. As illustrated in this chapter, the liberalisation of cross-border capital and investment flows, the deregulation of banking and the adoption of private pension systems have further integrated Latin American financial markets. This chapter demonstrates that the adoption of these drivers has resulted in three empirical phenomena, all of which have shaped the financial structure of Latin American economies.

First, the liberalisation of cross-border financial flows and opening of Latin American financial markets led to an increase in the size of cross-border capital flows into these economies, particularly after the 2000s. This chapter demonstrates that fluctuations in cross-border capital flows coincide with economic and financial crises in the world but whose origin has been in advanced economies rather than domestic crises. These dynamics, however, coincide with what Borio (2012) and Drehmann et al. (2012) dubbed the ‘financial cycle’. In addition to growing in scale, capital flows to ECEs have experienced considerable qualitative shifts in recent years (Kaltenbrunner and Paineira, 2018). Traditional Latin American investors have been complimented on the investor side by a diverse variety of additional actors, including institutional investors (pension, mutual, and insurance funds) and new types of mutual fund investors such as exchange-traded funds and macro hedge funds (Kaltenbrunner and Paineira, 2018). Given the extent of these flows, a minor reallocation of their portfolio holdings might significantly affect capital flows to ECEs.

This view of a global ‘financial cycle’ channelling global institutional investors’ funds in and out of economies eradicates the relationship between business-cycle fluctuations and financial flows in Latin America. This reflects that Latin American capital flows are subject to surges of confidence and fear among global investors, as the post-Keynesian literature has emphasised. In fact, the financial cycle’s peaks are closely related to systemic banking crises, that is, financial crises (Drehmann et al., 2012; Borio, 2012).

Since the 1990s and especially after the 2008 financial crisis, the US dollar and US-centred megabanks have strengthened their position at the centre of global finance (Ioannou et al., 2019). The Federal Reserve guarantees the wholesale money market, upon which the global financial system depends. This underwriting—the necessity to preserve super-leveraged shadow banks and megabanks’ balance sheets—requires that central banks in core nations maintain very low-interest rates; otherwise, megabank and fund

balance sheets would reveal global insolvency. This might be why money managers are desperate for yield-bearing assets (including those running Latin American pension funds). This, in turn, leads to wild swings in financial-market sentiment and money flows across global borders. Not only do money-market managers ‘purchase to sell’ as Minsky would have put it, but they also buy before others buy, to sell before others sell. This financial-investor logic feeds the global financial cycles, as Borio (2012) noted.

Due to the lower liquidity of their currency, Latin American economies are at a disadvantage (Andrade and Prates, 2013; Kaltenbrunner, 2015; Bonizzi, 2017a; De Paula et al., 2017), which makes their financial assets, by definition a risky investment, prone to more significant volatility (Bonizzi, 2017a). Latin American economies have had to accumulate vast foreign exchange reserves to overcome this ‘disadvantage’, particularly since the turn of the millennium. This accumulation reflects, on the one hand, the growing financial integration of Latin America and, on the other, its subordinated nature. Reserve accumulation is a precautionary measure to avoid a disproportionate impact on the domestic economy. This phenomenon further confirms that financial integration has been mostly induced by foreigners rather than locals investing abroad for Latin American economies.

Second, this chapter demonstrates that the liberalisation of cross-border investment flows and deregulation of the banking industry led to an increase in the entry of foreign banks, particularly leading US TBTF megabanks, through the establishment of cross-border subsidiaries or M&As, and the broader adoption of their lending and funding practices. This has led to increased competition in these economies’ financial markets. Chapter 5 shows that US TBTF banks have been complemented by novel actors such as US fund managers and insurance companies. This particular institutional structure permits US TBTF megabanks and financial institutions to spread market-based practices and provide market-based funds to Latin American economies.

In addition, this chapter demonstrates that efforts to ‘modernise’ Latin American financial markets and instruments have involved the importation into these economies of key financial practices that have evolved in advanced economies, particularly from the United States. One of these practices involves Latin American banks’ shift towards market-based borrowing. This shift is further explored in Chapter 6. This entails that Latin American banks are borrowing funds beyond their deposit base from financial markets. This reflects two issues: first, Latin American banks are not reserve-constrained, and second, wholesale funds’ availability is unrelated to the domestic business cycle and may be influenced by the global financial cycle.

Banks’ shift toward wholesale funding can affect the prospects for financial stability, economic growth and inflation in these economies. This was evident in the aftermath of the 2008 financial crisis, when banks’ funding costs grew significantly relative to risk-

free interest rates, exerting upward pressure on lending rates. Moreover, reliance on wholesale funding was a significant indicator of bank vulnerability during the crisis for advanced economies (Cihak and Poghosyan, 2009; Huang and Ratnovski, 2011; Ratnovski and Huang, 2009), especially for the United States and the United Kingdom (Hardie and Howarth, 2013; Hardie and Maxfield, 2013). This is not only true at the individual level, as demonstrated by these studies, but wholesale funding has also been identified in the United States as a substantial factor contributing to rising systemic instability (Pozsar, 2015). This is crucial for Latin American economies, where a large proportion of wholesale funds are in the form of cross-border capital flows. This means that banks' funding bases are dependent on surges of confidence and fear among global investors, which translates into a higher vulnerability and volatility of funds for these economies. Finally, the adoption of private pension systems has resulted in the rise of private domestic pension funds, which has enhanced the role of domestic institutional investors. Pension funds in Latin America have become increasingly integrated into global financial flows as a direct result of the enhanced role of domestic institutional investors, which makes them sensitive to changes in global perceptions and shifts in liquidity preference (ECLAC, 2019).

In sum, operationalising globalised financial practices in nations with uniformly inferior positions in the currency hierarchy creates new financial vulnerabilities. The adoption of the market-based credit approach requires access to overseas capital and currency markets, which locks in the asymmetric structure of global financial power. Adopting this approach also exposes these economies to the possibility that the core institutions of global finance will again, as in 2008, generate a catastrophic crisis. Ironically, the institutional shifts that allow Latin America to participate in global markets also make them a new venue for surplus extraction and loss absorption. To use a concept coined by Andre Gunder Frank (1966), this modernisation represents a new chapter in the 'development of underdevelopment'.

Chapter 5

Social Network Analysis: The Institutional Transformation of the Latin American Financial Structure

Introduction

This chapter examines ownership data of 1,258 financial firms established in Argentina, Bolivia, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, and Uruguay using social network analysis (SNA) for the 2018-2021 period. As this thesis has argued, the financial structure of Latin American economies has been transformed in the past 40 years. The key drivers of this structural shift have been identified in Chapter 4 as the liberalisation of cross-border financial flows and investment, the deregulation of banking, and the adoption of private pension systems. Following this discussion, this chapter aims to use a quantitative method to empirically assess these drivers, particularly the liberalisation of cross-border investment in the financial sector, the deregulation of banking, and the adoption of private pension systems, in shaping the institutional structure of Latin American financial markets.

In addition, this chapter aims to analyse the interactions between global and Latin American financial institutions by using SNA. As argued, this thesis adopts an understanding of the current stage of mature capitalism as financialised capitalism, which locates the variegated appearances of financialisation in Latin American economies within a global and uneven context. This means that the subordinated position of ECEs in financialisation processes is inherent to the operation of global financial processes. The focus of subordination in financialised capitalism is placed on the creation and value extraction from ECEs to ACEs, which constrains the agency of ECEs agents. This transmission of value occurs via global and adaptable networks, which are controlled by a limited number of large, powerful corporations primarily based in ACEs (Bonizzi et al., 2022). This chapter demonstrates that this value extraction is not only restricted to non-financial firms located in ACEs, but also, involves the largest financial institutions and megabanks in the United States (Cerpa Vielma et al., 2019). In this way, financialised capitalism not only needs and maintains the subordinate positions of ECEs in global capitalism (Bonizzi et al., 2022) but also reshapes and generates new forms of subordination at distinct levels.

This chapter demonstrates how analysing these drivers in the context of financialised capitalism reflects three transformations at the meso-level in Latin American financial markets. First, the opening of Latin American financial markets to foreign ownership and competition in the form of the liberalisation of cross-border investment led to an increase in the entry of leading foreign US banks into Latin American financial markets in the mid-1990 (de Carvalho et al., 2009; dos Santos, 2011). These firms entered these markets

either through M&As or by establishing cross-border subsidiaries in these economies (de Carvalho et al., 2009). This chapter shows that as of 2021, this foreign-owned banking structure has been complemented with US-owned non-bank financial institutions, which determines a particular institutional structure of Latin American financial markets as highly foreign-owned and market-based. In other words, the ‘Americanisation’ of national financial systems has involved an institutional ‘Americanisation’ of these systems. This structure allows US financial firms to increase their profits by extending the scale and scope of globalised financial markets into Latin American economies and to sell dollar debt (Konings, 2007; Cerpa Vielma et al., 2019).

Second, the adoption of private pension systems led to the creation of AFPs in Latin America. These fund management firms institutionalised retirement income, which has led to an increase in pension funds in these economies, as Chapter 4 shows. In ACEs, this increase has resulted in a growing inflow into financial markets and has created a large demand for financial assets, as low global yields have led institutional investors to desperately seek higher-yielding assets to meet their future commitments (Bonizzi et al., 2021). This chapter shows that as of 2021, this highly-foreign-owned institutional structure is also clearly evident in the asset management industry in Latin America, as most of the key Latin American AFPs are owned by leading US financial firms. Similar to ACEs, the increasing number of individual savings accounts in the region has pressured foreign-owned and Latin American AFPs to seek higher-yielding assets in diverse global corners. Chapter 4 shows that they have responded by allocating assets to domestic and global capital markets.

Third, banking deregulation in Latin America involved the removal of market barriers between commercial banking, investment banking, and insurance, allowing commercial banks to participate in a wide range of businesses and access financial markets (de Carvalho et al., 2009). In addition, it allowed commercial banks to incorporate subsidiaries that engage in a variety of non-traditional banking activities. This chapter illustrates how the attenuation of barriers to entry in the provision of banking services also led to a particular institutional setting as of 2021. This institutional structure includes domestic and foreign-owned commercial banks operating mainly as financial conglomerates, as this structure facilitates banks to operate in conjunction with non-banking subsidiaries. Some subsidiaries include insurance companies, asset management companies, non-depository credit intermediation institutions, mutual and pension funds management companies; brokers; real estate and mortgage finance institutions; and other financial companies. This structure poses severe challenges to banking and financial regulation, particularly when a consolidated picture of their activities and risks is required. This structure also permits commercial banks to venture into non-banking-related businesses and to use some of these channels to conduct their core banking businesses (as Chapter 6 reveals).

This chapter contributes to the body of research on subordinate financialisation in ECEs, by providing an institutional account of the transformation of the financial structure in Latin American economies. This reflects that Latin American economies also encounter financialisation from a subordinate position at the meso-level. The foreign-owned and market-based institutional structure of Latin American economies exhibits the efforts of the United States to transform national domestic economies into another market for increasing profits and selling US dollar debt. This is what it is meant by the ‘Americanisation’ of national financial systems (Konings, 2007; Gabor, 2020; Bonizzi et al., 2022).

This entails, however, that domestic-owned financial institutions are structurally subordinated to foreign-owned financial institutions, especially US-owned, as domestic-owned institutions (banks and AFPs) are less able to access and participate in global finance (money and capital markets). Even further, domestic-owned banks are less able to access domestic capital markets, given the different ‘restrictions’ in the form of prices these banks have vis-à-vis foreign-owned banks, as Chapter 6 shows. This hegemonic position of US-owned financial institutions in domestic markets reflects how the US’s structural power in global finance has driven a particular form of ‘Americanisation’ of national financial systems, which is translated here as a particular manifestation of financialisation in ECEs.

This chapter is comprised of four sections. Section 5.1 explains the methodology followed in this chapter. Section 5.2 describes how Latin American financial markets’ institutional structure has become foreign-owned. In particular, it highlights the role of the US and Spanish financial firms as key actors in the banking sector as well as the asset management sector in these economies. Section 5.3 reflects how this institutional structure has also become market-based. It highlights the importance of insurance and asset management companies as predominant foreign-owned actors in Latin America. Section 5.4 concludes.

5.1 Methodology

5.1.1 Research Methods and Objectives

This chapter uses SNA to empirically assess ownership data of 1,258 financial firms established in Argentina, Bolivia, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, and Uruguay. The main objective of this chapter is to assess the extent the drivers identified in this thesis are reflected in the institutional financial structure of these economies. This assessment involves country and firm-level data. SNA provides a set of powerful tools for the empirical research of financial firms’ interactions, as it focuses on the structure of relationships between entities, as well as the effect of such structure on

other social phenomena (Cronin, 2016). That is, the essence of SNA is analysing a phenomenon's structural context. In this way, SNA is consistent with the social ontology followed in this thesis, as it allows to analyse the underlying structures and context around the institutional structure of Latin American financial markets (Grandjean, 2021). In other words, it permits an in-depth assessment of the phenomena that creates these networks, as it considers not only the nature of the nodes but also the structural aspects of a connection between nodes of different types. These interconnections are represented as links among units interacting in a network (Wasserman and Faust, 1994), allowing researchers to examine how and why actors (nodes) interact with one another, as well as their proximity and centrality. By using network analysis, it may be feasible to uncover the 'modus operandi' of particular financial institutions.

In addition, as discussed in Chapters 3 and 4, the liberalisation of cross-border financial flows and investment and the deregulation of banking in Latin America led to an increase in the entry of foreign financial firms. This thesis claims that this increasing presence of foreign financial firms involves a creation and value extraction in Latin America from ACEs, which occurs via global and adaptable networks, which are controlled by a limited number of large, powerful financial institutions and megabanks primarily based in the United States. As SNA provides a rich methodological toolkit for the study of social relationships that are at the core of heterodox economies (Cronin, 2016), it is crucial to use this research method to uncover the meso-level interactions in these economies, as well as the influential actors in it, that shape the institutional structure surrounding them. Standard econometric tools employed in the social sciences are less able to provide detailed analysis at the meso-level, as they assume the independence of economic variables and cannot capture institutional variables. In contrast, SNA assumes that connections between nodes will likely be maintained and strengthened over time and that network data is intrinsically interdependent (Cronin, 2016).

The application of network analysis in economics is relatively novel. Early studies include research on inter-country and inter-industry trade data to explore core-periphery structures (Smith and White, 1992), the interlinks generated by US companies' sharing directors, and the enduring links between contracting firms and contractors (Useem, 1979; Eccles, 1981). More recently, SNA has been applied to examine ownership structures of multinational corporations (Vitali et al., 2011; Vitali and Battiston, 2014) using shareholders' information (Engel et al., 2021). Others have employed SNA to examine the structure of foreign direct investment (FDI) in non-financial sectors. Visintin (2011), for example, analyses the international networks of trade and FDI that exhibit a 'hub-and-spoke' structure, whereas Haberly and Wójcik (2015) examine the determinants of offshore FDI. Using SNA, they demonstrate that tax heavens show a high concentration of financial flows and that offshore FDI presents a strong relationship between colonial powers and their current and former colonies.

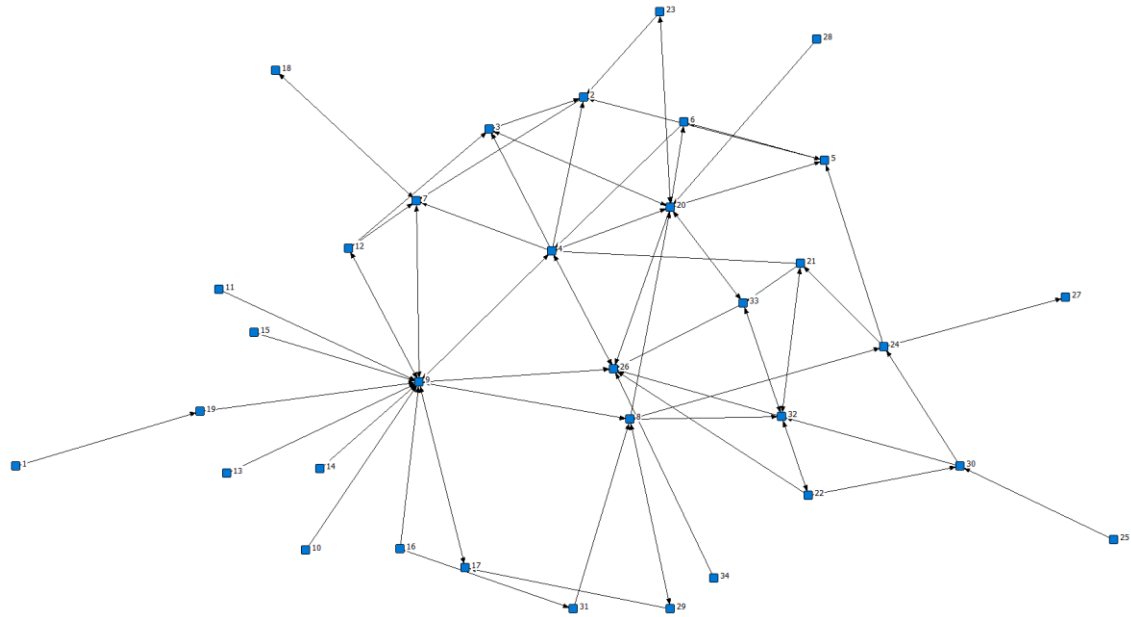
However, the application of SNA to examine ownership structures of financial institutions, particularly in Latin American economies, is somewhat limited. Existing research examines the global interconnectedness of Latin American elites in terms of interlocking directorates (Cárdenas, 2015). Others have applied SNA to evaluate the growth of East Asia's and Latin American international economic integration (Reyes et al., 2010). More recently, Díez et al. (2017) use network analysis to examine the shifting influence of Spanish corporations in FDI through M&As in Latin America from 1999-2012. Still, as SNA is a relatively novel and developing field, its applications remain limited, particularly to an institutional level.

5.1.1.1 Network Visualisation

SNA consists of a collection of tools for measuring, visualising, and interpreting social interactions. These interactions can occur between individuals, organisations, institutions, groups of people, or communities (Cronin, 2016). These interactions can be visually represented in a network graph $G = (V, E)$, which consists of circles, typically referred to as vertices (V) or nodes, and a set of edges (E) connecting those nodes (Freeman, 1978). It denotes a simplified representation of the relationship between two components. Edges depict connections depending on their nature (Grandjean, 2021), and nodes represent the agents with which this interaction takes place. Relationships may be either directed or undirected and weighted or unweighted. A network is directed when its edges have directions and vice versa. That is, when there is a structure and direction to the relationships between two nodes. When a relationship is considered to be weighted, the edge representing it will be thicker or thinner based on the strength of the relationship or the number of times it appears in succession. When a relationship is unweighted, each edge's value equals one.

In this study, directed and unweighted networks are used to examine the ownership data of 1,258 financial firms established in Argentina, Bolivia, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, and Uruguay. The nodes will consist of foreign and domestic legal entities (firms and natural persons) holding ownership shares in the sample of countries, Latin American financial firms, the sample of countries, and controlling shareholders' countries of origin. The networks generated for this research, thus, illustrate the geographical presence (country-level) of the different financial institutions (firm-level). Nodes indicate the relative importance of certain institutions with bigger sizes. The following sections go into detail about the data, relationships, and the construction of these networks.

Figure 5-1: Example of a Directed and Unweighted Network Graph



Source: Prepared by the author

Figure 5-1 illustrates an unweighted directed network consisting of 33 nodes. In this graph¹, each circle (node) represents an entity (such as a firm or financial institution), and the connections between the nodes (edges) represent a relationship between the two nodes (such as ownership data, in this case). Each node is distinctly identified, and they can be labelled by numbers, letters or names. The arrows between the nodes 19-9 in Figure 5-1 illustrate a direction to the relationship. This indicates that node 19 provides something such as information to node nine but not vice versa (Cronin, 2016). Similarly, the directed edge from node 13 to 9 indicates that node 13 gives information to node 9. However, node 9 is not providing anything to node 19 or 13. The information the nodes provide can take multiple forms, such as ownership information used in this chapter.

A key aspect of network visualisation is representing both particular and overall data. For example, node 9 obtains information from nodes 7, 12, 11, 15, 19, 13, 14, 10 and 16, while it gives information to nodes 4, 26, and 8 and exchanges information with nodes 7, 12 and 17. In addition, the network depicts the concentration of information flow, which in this case is focused on the nodes 9, 26, 20, 8, 32, 4, 33 and 21. Further, the network graph represents the relative ‘central’ position of node nine compared to other nodes and the network as a whole (Cronin, 2016). In this way, network visualisation enables the

¹ The main difference between a graph and a network is that a graph is an abstract mathematical object, while the network is its concrete counterpart (an empirical object where elements are linked to each other). This means that when analysing a network, this is first modelled as a graph, and once it is analysed with the tools of graph theory, then it is possible to translate the results into the language of a network. Therefore, the word ‘network’ will be used throughout the text, as it refers to data that has already been analysed.

simultaneous presentation of social interactions at the individual and global levels, providing a rich context for each. In addition to the visual tools that SNA provides, mathematical metrics can be calculated to examine complex networks, which are reviewed in the following section.

5.1.1.2 Network Indicators

Table 5-1 displays the network metrics and indicators that have been calculated in this study:

Table 5-1: Network Metrics

Network Indicator	Calculations
Degree Centrality	$DC(i)_{tot} = \sum_{j=1, j \neq i}^n w_{j,i} + \sum_{j=1, j \neq i}^n w_{i,j}$ <p>where n is the number of nodes in the network, j is a given node of the network, $w_{i,j}$ represents the value of the edge flowing from i to j, and $w_{j,i}$ represents the value of the edge flowing from j to i</p>
In-Degree	$DC(i)_{in} = \sum_{j=1, j \neq i}^n w_{j,i}$ <p>where $w_{j,i}$ represents the value of the edge flowing from node j to i.</p>
Outdegree	$DC(i)_{out} = \sum_{j=1, j \neq i}^n w_{i,j}$ <p>where $w_{i,j}$ represents the value of the edge flowing from node i to j.</p>
Eigenvector Centrality	$W \times EIC = \lambda \times EIC$ <p>where W is the adjacency matrix, and λ is the maximum eigenvalue of the adjacency matrix.</p>
K-Core Value	$C_k(i) = \frac{(W^k)_{i,i}}{d_i(d_i - 1)}$ <p>where W denotes the adjacency matrix and d_i denotes the degree of node i.</p>

Degree centrality measures the nodes that have important positions in a network. It consists of counting the number of links each node has on the basis that the node with the most links to other nodes is likely more at the centre of the network. Therefore, a higher score indicates a larger number of connections. In this study, this value is the number of links that reflect more centric shareholders, that is, either domestic or foreign-owned financial institutions, as well as their respective geographical locations. As the ties in these networks are directional, it is possible to distinguish between incoming and outgoing links.

The incoming links are indegree centrality, which reflects the value or number of links a node receives. That is the arrows that point towards a node. At the same time, outgoing links are referred to as outdegree centrality. It reflects the value or number of links that leave a node. In this study, indegree centrality reflects the Latin American financial firms that foreign shareholders own. It also reflects the geographical concentration of foreign shareholders. In contrast, outdegree centrality indicates the relative importance of a foreign or domestic shareholder in terms of the number of financial firms owned in the region's sample. In other words, it reflects key actors (at the firm and country-level) in Latin American financial systems.

Eigenvector Centrality measures how well nodes are connected to well-connected positions (nodes with higher degree centrality values), which reflects the importance of a node's neighbours (Cronin, 2016; Engel et al., 2021). The closer a node is connected to other important nodes, the higher its eigenvector centrality. It is particularly useful to calculate eigenvector centrality when analysing the hierarchy of the nodes in a network (Grandjean, 2021), as it reflects the influence of a node in a network. Therefore, this study measures how close Latin American countries and financial firms are to central nodes in the network, which can exert influence and disseminate information or practices over nodes with higher eigenvalues. This, to unfold the internal hierarchies that might be taking place in the Latin American financial systems and the possible transfer of practices to their closest neighbours.

After identifying particularly central nodes in the network structure through centrality indicators, it is possible to analyse the parts of a network that are more connected than others. That is, a network's 'core' and 'peripheral' areas. A fruitful approach is to identify the nodes belonging to the highest 'k-core', a subgroup where all nodes are connected to each other by a degree of k or more (Seidman 1983). In other words, k-core reflects a node's number of immediate connections. In this way, the k-core analysis identifies the group of nodes that seem to dominate the network structure and around which the others revolve, and the most distant nodes form a periphery. In this study, this value is calculated to understand the hierarchies that underpin Latin American financial systems and the position of these economies in the global architecture of finance.

5.1.2 Data

Archival ownership-data on financial firms from Argentina, Bolivia, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, and Uruguay were gathered from Orbis and Bank Focus Databases². Both databases offer comprehensive information for firms, obtained directly from official regulatory organisations, firms' annual reports, private correspondence, company websites, and associated information suppliers. For each financial firm, the information collected was the following: ownership data, which corresponded to a list of the controlling shareholders' legal entities (companies and natural persons), their respective shares, controlling shareholders' country of origin, and entity type³. The minimum percentage considered in this exercise as a controlling shareholder was 20 per cent of the voting shares⁴. In addition, other data were extracted for each Latin American financial firm, including the primary sector of activity of the firm (NACE Revision 2 codes)⁵, specialisation⁶, the country of establishment (independently of their controlling shareholders' country of origin), and when available, financial data, particularly, total assets and revenues. The institutions selected for this research were financial firms whose industry was classified according to the NACE Rev. 2 codes in section K: Financial and Insurance Activities. However, some institutions were

² Compiled by Bureau and van Dijk.

³ Shareholders' type of entity is classified by Orbis database as follows: (A) insurance company; (B) bank; (C) industrial company; (D) unnamed private shareholders; (E) mutual and pension funds, nominee, trust, and trustee; (F) financial company not elsewhere classified; (J) foundation/research institute; (I) individuals or families; (H) self-ownership; (L) other unnamed private shareholders; (M) employees, managers, and directors; (P) private equity firms; (Q) branch; (S) public authorities, states, and government; (V) venture capital; (Y) hedge fund; and (Z) public quoted companies.

⁴ A controlling shareholder is defined as any person who owns on their own or along with another stakeholder with whom they are acting in concert, more than half of the voting shares in a company. However, in practice, a controlling shareholder may control the firm with considerably less than 50% of the shares if the remaining shares are held by a large number of individuals (Law and Smullen, 2008). Because of data availability, only 20 per cent was considered in this exercise.

⁵ NACE Rev. 2 is the revised classification of the official industry classification used in the European Union adopted at the end of 2006 that ranges from sections A-U. The level of aggregation used in this research were firms belonging to 'section K: Financial and Insurance Activities', namely 'activities of holding companies', trusts, funds and similar financial entities, fund management activities, activities of head offices, business and other management consultancy activities'.

⁶ Provided by Bank Focus and obtained directly from firms' annual reports and other sources, namely: Commercial Bank; Savings Bank; Cooperative Bank; Real Estate and Mortgage Finance Institution; Investment Bank; Islamic Bank; Other Non-Banking Credit Institution; Specialised Governmental Credit Institution; Bank Holding Company; Central Bank; Multi-lateral Development Bank; Micro-Financing Institution; Securities Firm; Private Banking; Investment and Trust Corporation; Finance Company; Clearing and Custody Institution; Group Finance Company; Non-Bank Holding Company; Asset Management Company; and Fintech Bank.

omitted from this search, including central banks, specialised governmental credit institutions, and cooperative banks.

To deal with missing and duplicated data, the following adjustments were performed to the database: (1) when there were multiple links from one shareholder to the same firm, these shares were aggregated into a single link; (2) in case direct percentage shares were missing, the total percentage figures were used; (3) in case both the direct and total percentage figures are missing, the link is removed. That is, only financial firms with direct or total shareholder information were considered in this exercise; (4) firm-level data was referred to the years between 2018 until 2021 to cover missing data.

Table 5-2: Number of Financial Firms Analysed by Country

	Number of Domestic-owned Financial Firms	Number of Foreign-owned Financial Firms	Number of Financial Firms owned in Latin America	Total
Argentina	98	52	3	150
Bolivia	24	6	0	30
Chile	344	160	12	504
Colombia	74	64	15	138
Ecuador	26	22	2	48
Mexico	129	112	3	241
Peru	39	45	9	84
Paraguay	12	9	0	21
Uruguay	10	32	0	42
Total	756	502	44	1258

Source: Prepared by the Author

Table 5-2 shows the number of financial firms analysed by country for this exercise. From a total of 15,810,291 active firms⁷, a sample of 1,258 financial firms in Argentina, Bolivia, Chile, Colombia, Ecuador, Mexico, Peru, Paraguay, and Uruguay were analysed. The rows represent the values for each Latin American country. The first column corresponds to the sample of Latin American countries; the second column denotes the number of domestic-owned financial firms in that country; the third column reflects the number of foreign-owned firms in that country, while the fourth column shows the number of financial firms these countries own in another Latin American country (from the sample). The last column displays the total number of financial firms analysed by

⁷ This number represents the total number of active corporations in these economies, which includes non-financial corporations.

country. Taking Argentina, for example, it is possible to observe from this table that from a total of 150 financial firms analysed (as reflected in the last column), 98 are domestic-owned (that is, the controlling shareholders are from Argentina). In contrast, the remaining 52 (represented in the third column) correspond to the total number of foreign-owned firms in that country. It also reflects that Argentina owns three financial companies in the sample of Latin American countries.

The last row of this table indicates the aggregate amounts for each column. That is, the total number of domestic and foreign-owned financial firms in Latin America, the total number of Latin American-owned financial firms in the sample of countries, and the aggregate amounts of financial firms analysed by each country. These aggregates reflect that there are 756 domestic-owned financial firms in the sample of Latin American countries versus a total of 502 foreign-owned financial firms. Of these 502, 44 correspond to financial companies that Latin Americans own. These aggregates suggest that the percentage of Latin American-owned companies is much inferior compared to other countries. In other words, from the total number of financial firms analysed in Latin America, around 60 per cent are domestic-owned, whereas almost 40 per cent are foreign-owned. These numbers reflect an institutional structure in the financial sector that is primarily domestic-owned but with a significant presence of foreign-owned financial firms.

Table 5-3: Percentage of Domestic and Foreign-Owned Financial Firms in Latin America

	Domestic	Foreign
Argentina	65.3%	34.7%
Bolivia	80.0%	20.0%
Chile	68.3%	31.7%
Colombia	53.6%	46.4%
Ecuador	54.2%	45.8%
Mexico	53.5%	46.5%
Peru	46.4%	53.6%
Paraguay	57.1%	42.9%
Uruguay	23.8%	76.2%
	60.1%	39.9%

Source: Prepared by the author based on data obtained from Orbis and Bank Focus

Table 5-3 shows the percentage of domestic and foreign-owned financial firms in the region's sample. As mentioned, about 40 per cent of the financial firms analysed are foreign-owned, whereas 60 per cent of the firms in the sample correspond to domestic-

owned. It is possible to notice that there are groups of countries which count with a larger presence of foreign actors and a small group of countries that count with a smaller share. Bolivia, for example, shows the highest domestic-owned percentage of financial firms from the sample, holding 80 per cent of the firms analysed. Chile also shows a small presence of foreign-owned financial firms, where around 68 per cent correspond to financial firms owned by Chileans, whereas around 32 per cent correspond to foreign-owned financial firms. The countries that show the most significant relative percentage of foreign-owned financial firms are Uruguay, Peru, Mexico, Colombia, Ecuador and Paraguay, with 76.2, 53.6, 46.5, 46.4, 45.8 and 42.9 per cent, respectively.

Table 5-4: Number of Financial Firms in Latin America by Shareholders' Country

	Argentina	Bolivia	Chile	Colombia	Ecuador	Mexico	Peru	Paraguay	Uruguay	Total of Financial Firms Owned in Latin America
Argentina (AR)	98	0	1	0	0	0	0	1	1	101
Australia (AU)	1	0	2	1	0	1	0	0	0	5
Bolivia (BO)	0	24	0	0	0	0	0	0	0	24
Brazil (BR)	5	1	10	0	0	0	0	1	3	20
Canada (CA)	1	0	16	5	0	4	5	0	5	36
Cayman Islands (KY)	0	0	3	0	0	0	1	0	0	4
Chile (CL)	0	0	344	3	0	0	9	0	0	356
China (CN)	1	2	3	1	0	1	4	0	0	12
Colombia (CO)	2	0	7	74	0	3	1	2	0	89
Costa Rica (CR)	0	0	0	0	1	0	1	0	0	2
Ecuador (EC)	0	0	0	1	26	0	1	0	0	28
France (FR)	8	0	6	6	0	7	1	0	0	28
Germany (DE)	4	0	4	6	1	10	0	0	2	27
Honduras (HN)	0	0	0	1	0	0	0	0	0	1
Hong Kong (HK)	0	0	0	0	0	0	0	0	0	0
Ireland (IE)	0	0	1	2	0	1	0	0	0	4
Italy (IT)	3	0	3	1	1	0	0	0	0	8
Japan (JP)	2	0	2	1	0	6	1	0	0	12
Korea (KR)	0	0	0	0	0	1	0	0	0	1
Lichtenstein (LI)	0	0	2	0	0	0	0	0	0	2
Mexico (MX)	0	0	2	0	0	129	1	0	0	132
Netherlands (NL)	1	0	3	0	1	0	1	1	0	7
New Zealand (NZ)	0	0	1	0	0	0	0	0	0	1
Norway (NO)	0	0	0	0	1	0	0	0	0	1
Panama (PA)	0	0	1	0	1	0	0	0	1	3
Paraguay (PY)	0	0	0	0	0	0	0	12	0	12
Peru (PE)	0	1	2	4	0	1	39	1	0	48
South Africa (ZA)	0	0	0	1	0	1	0	0	1	3
Spain (ES)	5	0	28	15	3	19	8	1	6	85
Sweden (SE)	0	0	0	0	0	0	1	0	0	1
Switzerland (CH)	4	0	11	4	2	9	2	0	5	37
United Kingdom (GB)	2	0	10	1	3	6	1	1	2	26
United States (US)	13	1	42	11	8	42	7	1	5	130
Uruguay (UY)	0	0	0	0	0	0	0	0	10	10
Venezuela (VE)	0	1	0	0	0	0	0	0	1	2
	150	30	504	138	48	241	84	21	42	1258

Source: Prepared by the Author

Table 5-4, in contrast, shows the number of financial firms in Latin America analysed by shareholders' country. The rows depict the shareholders' nationality that own a firm in the sample of Latin American countries. The columns depict the number of firms owned

in each sample country by shareholders' nationalities. The last column reflects the aggregate totals for each shareholder's nationality, and the last row reflects the total number of financial firms analysed for each country. For example, it is possible to observe from this table that the United States owns 13 financial firms in Argentina, 1 in Bolivia, 42 in Chile, 11 in Colombia, 8 in Ecuador, 42 in Mexico, 7 in Peru, 1 in Paraguay, and 5 in Uruguay. From the total of financial firms analysed, the United States owns 130. This means that of the total of 502 foreign-owned financial firms in Latin America, 25 per cent is owned by the United States.

5.1.3 Construction of the Networks

For this exercise, two-mode networks⁸ were constructed to analyse ownership data of 1,258 financial firms established in Argentina, Bolivia, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, and Uruguay (Wasserman and Faust, 1994). The nodes in this analysis correspond to 1,258 Latin American financial firms; 2,375 foreign and domestic controlling shareholders' legal entities (firms or individuals); and 35 countries, where 9 represent Latin American economies, and the remaining 26 correspond to the controlling shareholders' country of origin. The links between the nodes indicate ownership information from a foreign or domestic shareholder to a Latin American financial institution, as well as from a shareholder's country of origin to a Latin American nation. As the links are assumed to be unweighted in this research, they do not reflect the percentage of controlling shareholders' voting shares. That is, the links only indicate the number of subsidiaries established in the sample of countries. This study excluded relations between two non-Latin American firms or economies.

In total, 24 matrices and 24 networks were built along with their associated metrics. To capture the overall interactions between institutions and countries, four matrices and four networks were built. One network contained the interactions between domestic and foreign controlling shareholders' legal entities and Latin American financial firms. A second network omitted domestic controlling shareholders. In both cases, the nodes represented controlling shareholders' legal entities (either companies or natural persons) and Latin American financial firms. The directed edges represented the relationships between shareholders and Latin American financial firms. That is, one link entails one relationship between a shareholder and a Latin American financial firm. This relationship was expressed in terms of the number of financial firms owned. So, one link entails the ownership of one financial firm in each country. A third network was constructed to show

⁸ The benefit of using two-mode networks is that they reflect the structural characteristics of the connections between two different sets of nodes (Grandjean, 2021). That is, they reflect hierarchical or vertical relationships between nodes of different type, not only relationships between the nodes themselves.

the interactions between domestic and foreign controlling shareholders' countries of origin and the sample of nine Latin American countries. Similarly, a fourth network reflected similar interactions but omitted domestic shareholders' country of origin. In both cases, the nodes represented the countries, and the links reflected the relationship between countries.

In addition, two matrices and two networks were generated for each nation-state in the sample, including Argentina, Bolivia, Chile, Colombia, Ecuador, Mexico, Peru, Paraguay, and Uruguay. Similarly to the networks constructed to capture overall interactions, one network reflected the interactions between domestic and foreign controlling shareholders' country of origin and the financial firms established in each country, whereas the second network excluded domestic shareholders' interactions. That is, it reflected solely the interactions between foreign controlling shareholders' country of origin and foreign-owned financial firms established in each country.

Table 5-5: Edgelist Example

	A	B
1	1	19
2	2	3
3	2	5
4	2	7
5	3	2

Source: Prepared by the author

The UCINET software package was used to analyse financial firms' ownership data. Initially, data were prepared by the construction of 'edgelists'. Table 5-5 portrays an edgelist containing the first five rows of the spreadsheet's data required to build the network graph in Figure 5-1. An edgelist is a list of edges (relationships) connecting the network's nodes (Cronin, 2016). Each row denotes a link between two nodes indicated in the A and B columns. Specifically, these could be defined as arcs from the nodes in column A to the nodes in column B, as they reflect the direction from one node to another. Once the edgelists were compiled, they were imported into UCINET, where the matrices and networks were generated, and the metrics were calculated.

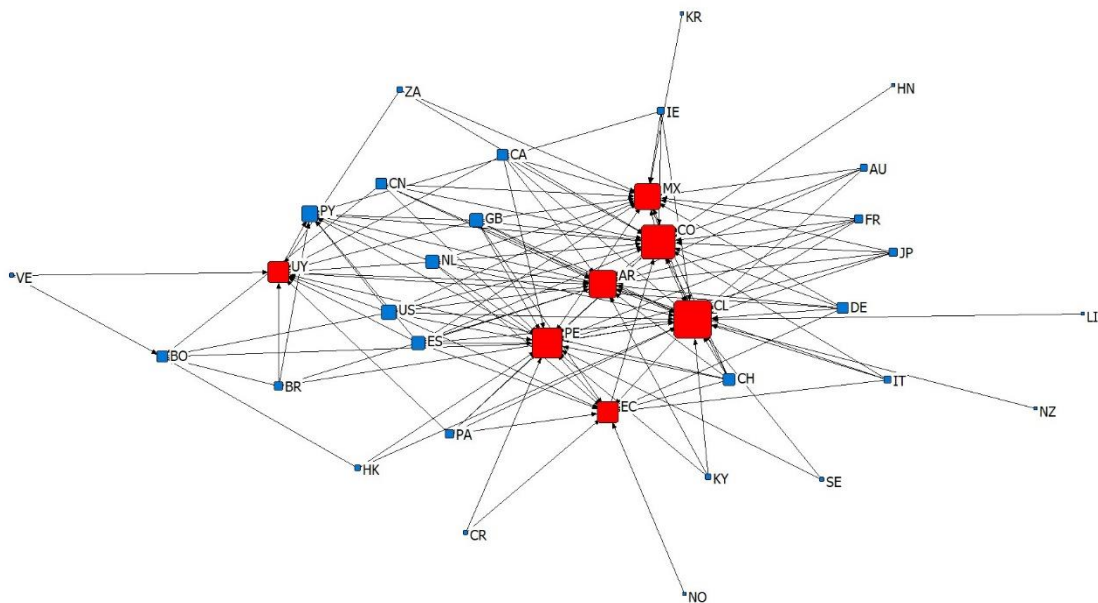
5.1.4 Possible Limitations

One weakness related to the type of data used in this study is that archival data typically need a great deal of cleaning and checking to ensure that nodes are identified correctly and consistently (Cronin, 2016). For example, when identifying financial firms, the

challenge is to ensure that ‘CITIGROUP INC.’ listed as one shareholder is the same institution as the ‘CITIGROUP INC’ listed on another and to determine whether this is the same controlling shareholder as ‘Citi Group Inc’ or ‘CITIGROUP’ on another. Where these are incorrectly identified as the same, a false positive appears, reflecting a network that will be erroneously dense; if incorrectly identified as different, a false negative appears, which translates into erroneous gaps in the network. Data were cleaned and checked multiple times to avoid these wrong identifications, especially after calculating the indicators. This iterative process was especially repeated when identifying key actors. However, there could be minor identification errors along the data that are not particularly significant as this chapter aims to identify the key actors in Latin American financial markets.

5.2 A Foreign-owned Institutional Structure: The Role of US and Spanish Financial Firms in Latin American Financial Markets

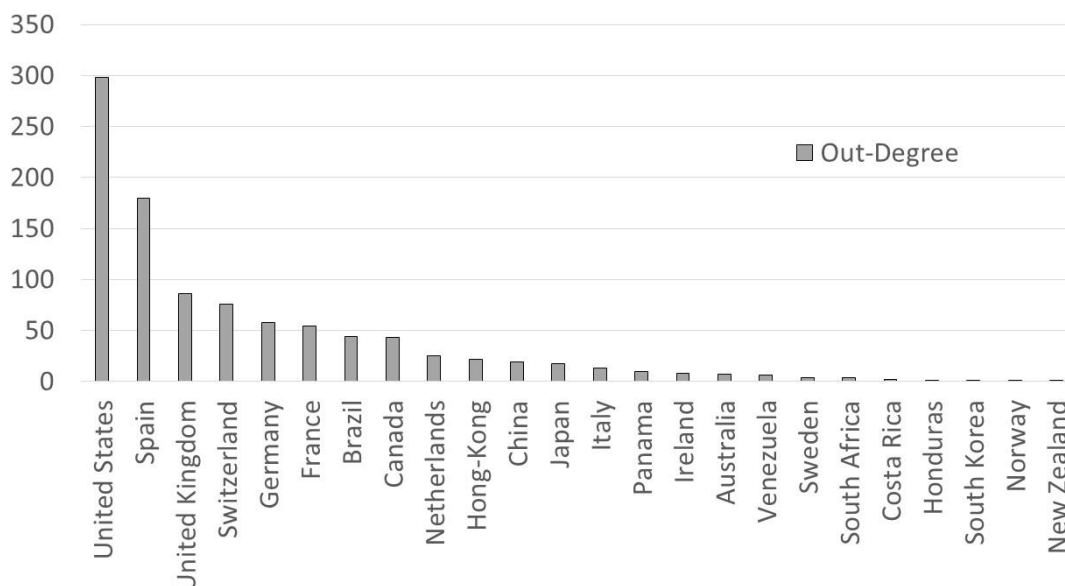
Figure 5-2: Network Visualisation of Foreign and Domestic Firms by Country and Centrality



Source: Prepared by the Author

Other countries, such as Panama and Canada, have appeared at the centre of the network but have not seen their size increase. This means that these countries are not central in terms of the number of connections they present but might be central as they connect key sections or subgroups of the network that would be otherwise disconnected. Identifying such nodes is crucial as they might not be related to the ‘core’ of a network but are still key agents within the structure. To understand the type of centrality these countries reflect, the following figures calculate each centrality indicator and analyses mathematically what it means for these countries, for example, to appear at the centre or periphery of the network structure.

Figure 5-4: Geographical Presence of Foreign Firms in Latin America by Nationality (Out-Degree Centrality Indicator)



Source: Prepared by the author

Figure 5-4 depicts the outdegree centrality indicators calculated for foreign shareholders in terms of the number of financial firms in Latin America they own. This figure reflects, at the same time, the nationality of these institutions, which have expanded geographically into these economies in the form of equity participation in domestic financial companies (M&As) or cross-border branches or subsidiaries. It is possible to notice a small but dominant group of countries that show high overall levels of centrality; that is, countries with a large presence in Latin American financial markets; a second medium-sized group that has some relevance in Latin America; and a large group of countries which occupy more secondary positions.

US financial firms are by far the actors with the most presence in Latin American financial markets, followed by Spanish firms. The situation of the most central foreign shareholders

shows that financial firms from these countries have expanded geographically in size and scope. This indicates that these nations' firms are largely penetrated in Latin American financial systems and have a more prominent geographical presence measured by the ownership of a large number of financial firms in a large number of Latin American countries. These are the nations which, from a global standpoint, are at the centre of the network, maintaining most interactions with all agents participating in this network. In addition to the most central actors in these economies, a second group of countries seem to play a role in Latin American financial markets, but to a lower extent. These are: UK, Swiss, German, French, Brazilian and Canadian financial corporations. The remaining countries seem to have penetrated to a much lower extent, and those include: the Netherlands, China, Japan, Italy, Panama, Ireland, Australia, Venezuela, Sweden, South Africa, Costa Rica, Honduras, South Korea, Norway and lastly, New Zealand.

As referenced throughout this thesis, US financial firms' leading role in Latin America is primarily attained by the US's leading role in global finance. This role was achieved in several drastic steps: broad-based multi-step deregulation of commercial banks beginning in 1980; regulatory permission for a large-scale banking M&A wave (Dymski, 1999); large US banks replacing lost loan customers in the late 1970s by making massive loans to regions benefitting from exploding commodity prices, particularly Latin America (Cerpa Vielma et al., 2019); US policy-makers rescue of those banks amidst the fallout from the Latin American debt crisis; and the policy measures that established securitisation as the new form of credit provision and shadow banks as the core suppliers of credit (Cerpa Vielma and Dymski, 2022).

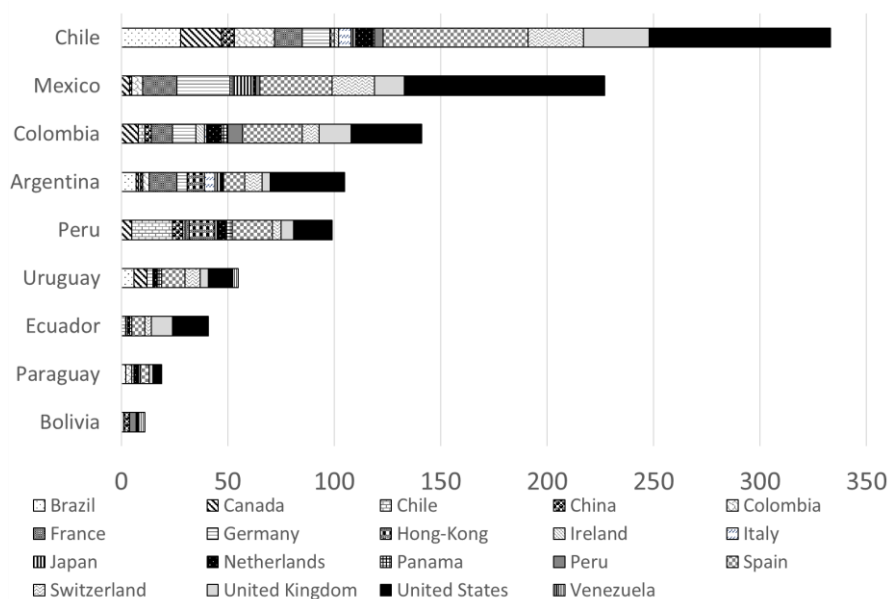
A critical step was US regulators' designation of eleven US money-centre banks as TBTF, a measure dictated by the near-meltdown of US money markets two years after the 1982 Latin American debt crisis (Ioannou et al., 2019). The creation of Brady bonds in 1989 simultaneously contributed to these banks' recapitalisation by removing this bad debt from their balance sheets and creating global securities that would serve as global monitors of defaulter governments' 'good behaviour'. The TBTF US banks recuperated from their Latin American losses by developing systems for bundling, selling, and servicing the mortgage-backed securities market. The considerable expansion of this market, necessitated by the meltdown of US savings and loan institutions, facilitated TBTF banks' shift toward fee-based income. Market-based lending expanded further as market outlets for riskier securities emerged. Large banks built loan-origination-to-securities platforms, packaged and sold aggressive consumer loans (including subprime mortgages), and developed facilities for hedging and position-taking in risk (Dymski, 2010). The removal of all barriers between commercial banking, investment banking and insurance facilitated the global growth of financialisation, as US TBTF banks and their competitors from other advanced economies expanded by innovation and expansion into new market areas (dos Santos, 2013; Cerpa Vielma et al., 2019). These innovations and

extreme bank competition enlarged the scale and scope of globalised financial markets, extending their reach into middle-income countries (dos Santos, 2013), coinciding with banking deregulations, privatisation and M&As in Latin American financial markets.

On the other hand, the extensive penetration of Spanish financial firms into Latin American financial markets can be mainly explained due to the incorporation of Spain into the European Union (EU) in 1985. The Spanish banking sector saw a considerable increase in competition, and private banks were obliged to redefine their strategies to maintain their levels of profitability (Calderón Hoffmann and Casilda Béjar, 2000). The establishment of the Single European Market meant the elimination of barriers to the free circulation of capital among the member countries of the European Union, as well as the freedom to establish and provide banking services. Thus, the financial sector in Spain and the rest of the European Union began to develop new growth and concentration strategies to adapt to this new competitive environment (Casilda Béjar, 1997). Since the end of the 1980s, the most prominent Spanish banks followed a strategy based on M&As to strengthen their market presence (nationally and internationally) and to increase their competitiveness (Calderón Hoffmann and Casilda Béjar, 2000; Casilda Béjar, 2020), converting Spain in the largest investor in Latin America in the 1990s (Calderón, 1998). As a result, Spanish financial firms' central role in Latin American financial markets stems from their seizing the purchase opportunities generated by the 1990s privatisation processes in this region (Calderón Hoffmann and Casilda Béjar, 2000).

Similarly, reports of the Economic Commission for Latin America and the Caribbean (ECLAC) on Latin American FDI show that during the 1990s, unprecedented amounts of FDI were flowing into this region, primarily to the banking sector, with Spanish and US banks serving as the leading investors in this region (Domanski, 2005; Belaisch et al., 2005; de Carvalho et al., 2009). Additional investments have come from UK, Dutch, French and Canadian banks, especially between 1991 and 2005 (Calderón and Vodusek, 1998; de Carvalho et al., 2009). Although still significant, Spain has seen its dominant position in Latin American financial markets reduced due to the emergence of new competitors, undermining Spain's importance as an investor in the region (Díez et al., 2017). On the contrary, Swiss financial firms appear to be relatively novel actors in Latin American financial markets. However, Swiss companies have been expanding and consolidating their position in Latin America since 2002 over other industries, such as mining, services and manufactured goods sector (ECLAC, 2003).

Figure 5-5: Largest Geographical Presence of Foreign Firms in Latin America



Source: Prepared by the author

When the outdegree centrality indicator is decomposed by Latin American country (Figure 5-5) to examine the presence of foreign owners by individual country, it is possible to notice that again, US and Spanish companies are the actors that show the highest outdegree level for almost all countries, except for Bolivia. This implies that US and Spanish corporations have the strongest penetration in almost every Latin American financial system. In the Chilean financial sector, the agents with a larger presence are US firms, followed by Spanish, UK, Swiss, Brazilian, and Canadian firms to some extent. The Chilean financial system also seems to be the market populated with the highest number of foreign actors compared to the other countries in the region. In the past decade (after the 2008 financial crisis), Chile's number of foreign entities increased dramatically, reaching two-thirds of the total system in number (Marshall Rivera, 2020).

The Mexican financial system also shows a significant presence of foreign actors, where US corporations, followed by Spanish, German, Swiss and UK firms, are the most important foreign institutions. In Colombia, it is also possible to notice that US firms play a significant role in its financial sector, followed by Spanish firms and, to some extent, the UK, German and French companies. The Argentinian financial sector seems highly populated by US firms, followed by French, Spanish and Swiss firms. Besides the US and Spanish firms, Chilean firms are novel actors that appear to be highly penetrated in the Peruvian financial system. This result shows that structural reforms were effective in attracting firms outside the Latin American borders and from within. This result can relate to the way in which specific structural reforms took place in these countries, in particular, privatisations. While it is known that diverse Latin American economies transferred the

main public corporations to private ownership, this was not always successful (de Carvalho et al., 2009). Bolivia, Colombia and Peru faced strong opposition from civil society and eroded interest among potential foreign investors. While in Ecuador and Venezuela, privatisation attempts were sometimes abandoned. However, in countries where privatisations firmly took place, assets have tended to gravitate into the hands of a few, such as Chilean firms (ECLAC, 2003). This could, in part, reflect their ability to expand internationally.

The Peruvian financial sector is also highly penetrated by Chinese¹⁰ firms, being the first Asian country to have a strong presence in any Latin American financial market. Although Chinese corporations were relatively unknown in Latin America until a few years ago, their direct investment in the region has become very significant in many industries and countries of the region since 2010 (Chen and Pérez Ludeña, 2014; Suanes, 2016). In the financial sector, Chinese banks and financial institutions have ventured into Latin America by buying undervalued financial assets overseas, as the subprime crisis struck a severe blow to financial institutions in developed countries, which opened an excellent opportunity for Chinese financial investors to buy undervalued financial assets in these economies (Chen and Pérez Ludeña, 2014; Pérez Ludeña, 2017). In addition, although Chinese firms have not appeared central in other Latin American financial markets, they still show some degree of penetration in every country except Uruguay, Ecuador and Paraguay, reflecting this country's growing importance in Latin American financial systems.

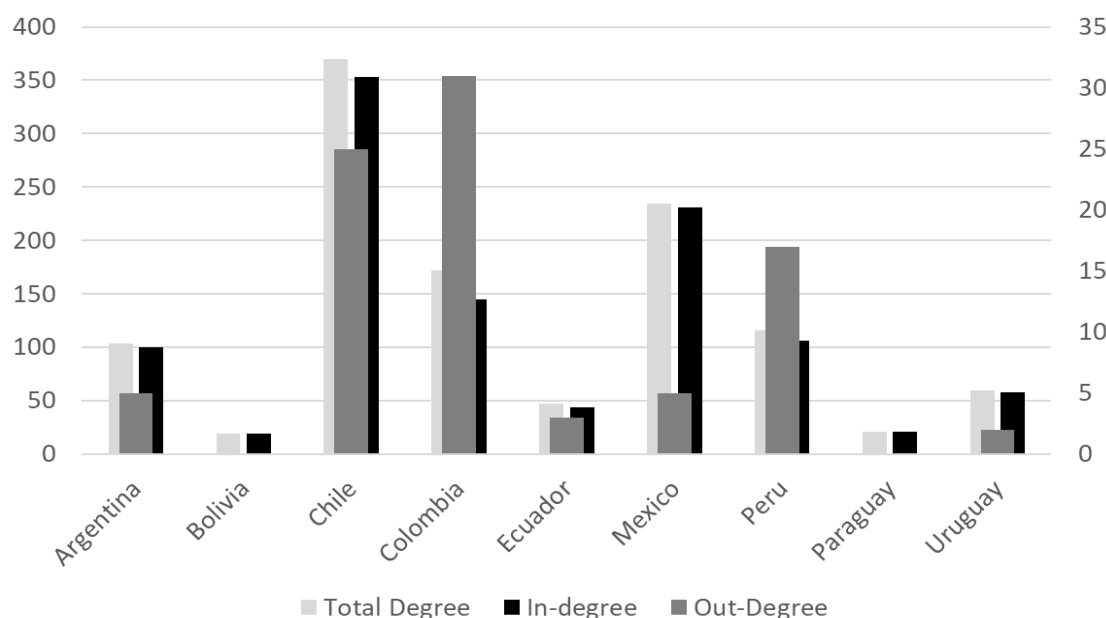
The Uruguayan financial system reflects similar key foreign actors as the Chilean financial system, given that it is largely penetrated by the US and Spanish firms, followed by Swiss, Brazilian and UK corporations. This is a strange coincidence, which could be due to many factors. One reason might be that Chile and Uruguay are both member countries of the Organisation for Economic Co-operation and Development (OECD), which could imply that these have, among other reasons, a more 'developed' institutional framework and a good economic performance over the last half-decade compared to the OECD member average (OECD, 2018). However, it is essential to highlight here that although this seems odd, it does not indicate causality of any kind.

The Ecuadorian financial system shows that US financial firms are largely the actors with the most influence, similar to Argentina. This is followed by the UK and Spanish firms as well. The Paraguayan financial system does not seem to show a significant presence of foreign financial firms, but it seems that, like other Latin American countries, the foreign actors who are most important in its financial system are Spanish and US firms.

¹⁰ Although Hong Kong shows a large number of financial firms owned in Latin America, for this thesis purposes, the Special Administrative Region of Hong Kong will be treated as China as most China's FDI is registered as flowing from this region (Chen and Pérez Ludeña, 2014).

Finally, Bolivia's financial system also presents a small presence of foreign shareholders. Peru, Venezuela, and China seem the most influential actors in the Bolivian financial system.

Figure 5-6: Degree Centrality Indicators for Argentina, Bolivia, Chile, Colombia, Ecuador, Mexico, Peru, Paraguay and Uruguay



Source: Prepared by the author

Figure 5-6 shows the centrality indicators for Argentina, Bolivia, Chile, Colombia, Ecuador, Mexico, Peru, Paraguay and Uruguay. The total degree centrality indicator shows that Chile, Colombia, Mexico and Peru are countries with high levels of centrality in the network, whereas Argentina, Bolivia, Paraguay and Uruguay occupy more peripheral positions in the network. This entails that Chile, Colombia, Mexico and Peru are at the centre of the network, maintaining most interactions with all agents participating. However, there are significant differences between the type of centrality these countries show, notably their importance as asset buyers or suppliers. This means that there is a more significant geographical concentration of foreign firms in these countries or that these countries have established more contacts with international markets through the ownership of financial firms in a wide range of Latin American countries.

This difference is captured by the in and outdegree values. Higher outdegree values reflect the relative importance of a foreign or domestic financial firm in terms of the number of financial institutions owned in the region's sample, making it a key actor in Latin American financial systems. The leading domestic players in this study who show higher

outdegree values are Chile, Colombia and Peru. This means that these countries are either crucial actors in their domestic financial sectors or have internationalised their financial firms throughout Latin America and are, therefore, more connected to international markets. This can also reflect enlarged financial systems due to their financial firms' ability to expand geographically. The international expansion of Latin American corporations (including financial firms), the so-called 'trans-Latins', has been active since the 1990s (CEPAL, 2005). Since the last decade, many of the largest financial companies in Latin America have been also pursuing active internationalisation strategies (CEPAL, 2013). However, the latest ECLAC reports show that there has been a decrease in trans-Latins FDI, which also includes financial FDI.

The geographical concentration (attractiveness for foreign firms to expand geographically) is reflected in the in-degree values for Latin American economies. The values show that foreign financial firms tend to concentrate in fewer countries. These include Chile, Mexico and Colombia. As described in Chapter 4, these economies have implemented far-reaching structural reforms that made it easier for foreign financial firms to enter their economies and be profitable. Mexico and Chile are remarkable 'successful' cases in applying structural reforms, as Mexico's mid-1990s Tequila crisis led to the takeover of most privatised banks by foreign banks (Correa et al., 2012). In contrast, Chile has remained the most open economy in Latin America (Marshall Rivera, 2020). In addition, these three economies show large and developed financial systems (due to the diversity of market-based agents, as the following section shows), which appears to be an important location advantage for foreign financial firms. Similarly, as outdegree values showed for Chile and Colombia, these economies count with solid financial firms that have had the ability to expand internationally.

Out and in-degree values for these economies reflect a trend towards a network structure in which most countries in Latin America are relatively marginalised from international financial firms' interactions, such as Argentina, Bolivia, Ecuador, Paraguay and Uruguay, as they show lower in and outdegree values. One reason that might explain this divergence in values is that either country with low outdegree values has a higher presence of domestic financial firms, or their financial markets are still relatively underdeveloped, and financial firms do not have the capacity to expand internationally, such as Bolivia. In addition, since the financial crisis in 2008, M&As opportunities have been exploited by fewer countries (Díez et al., 2017), which could also explain low in-degree values. This also means that M&As as a way for international actors to enter Latin American financial markets have been decreasing since 2008.

5.3 A Market-based Institutional Structure: The Rise of Bank Holding Companies

Table 5-6: Financial Specialisation of Spanish, American, British and Swiss Financial Firms in Latin America

Company Name	Out-Degree Centrality	Country	Specialisation
Banco Santander	25	Spain	Commercial Bank
Citigroup Inc.	24	United States	Bank Holding Company
BBVA	23	Spain	Commercial Bank
Zurich Insurance Group	15	Switzerland	Insurance Companies
MetLife Inc.	12	United States	Life Insurance
MAPFRE	11	Spain	Composite insurance
Chubb Ltd.	9	Switzerland	Insurance Company and Bank Holding Company
Principal Financial Group	8	United States	Insurance Company
JP Morgan Chase & Co	7	United States	Bank Holding Company
HSBC Holdings	7	United Kingdom	Bank Holding Company
UnitedHealth Group	5	United States	Health Insurance
W. R. Berkley Corporation	5	United States	Non-Life Insurance
The British United Provident Association	5	United Kingdom	Non-Life Insurance
Mutua Madrileña Automovilista	4	Spain	Composite insurance
Prudential Financial Inc	4	United States	Life Insurance
Liberty Mutual Holding Co Inc	3	United States	Non-Life Insurance
Ohio National Mutual Holdings Inc	3	United States	Insurance Company
AES Corporation	3	United States	Corporate, Utilities
PACCAR Inc	3	United States	Corporate, Transport Manufacturing
Co Sociedad de Gestión y Participación	3	Spain	Corporate, Business Services
General Motors Company	3	United States	Corporate, Transport Manufacturing

Note: Values smaller than two were omitted from this table.

Source: Prepared by the author

However, what type of financial institution currently dominates Latin American financial systems? According to numerous studies, in the 1990s, the presence of foreign banking increased dramatically in this region (Freitas and Prates, 2000; Cardenas et al., 2003; Focarelli, 2003; Moguillansky et al., 2004; de Carvalho et al., 2009). In general, the banks expanding into Latin American markets have been either large consolidated ‘Spanish Banking Groups’ (Casilda Béjar, 2020; Casilda Béjar, 1997; Calderón Hoffmann and Casilda Béjar, 2000) or TBTF megabanks whose profits derive less from lending and more from the fees they derive from supplying a global platform for market-based lending and risk hedging (Cerpa Vielma et al., 2019). Table 5-6 reflects the list of foreign shareholders’ entity types, who showed higher outdegree values in Figure 5-4, along with

their specialisation¹¹ area by nationality. The list includes Spanish, US, British and Swiss firms. It is possible to notice in Table 5-6 that while foreign banking firms still have a significant presence in the institutional structure of Latin American financial markets (in grey), these institutions are being complemented by an increasing number of foreign financial companies that are related to the insurance business (in yellow). This phenomenon is also reflected in Table 5-7, which shows the decomposition of foreign-owned financial firms in Latin America by percentage.

Table 5-7: Foreign-owned Financial Firms in Latin America by Percentages

Entity Type	US/ES/UK/CH		
	Banks	Non-Banks	Total
Insurance Companies	11.3%	88.7%	39.3%
Commercial Banks	100.0%	0.0%	16.8%
Fund Management/Investment Firms	34.8%	65.2%	13.3%
Holding Companies	70.6%	29.4%	9.8%
Non-Depository Credit Intermediation	100.0%	0.0%	8.1%
Mutual and pension fund	42.9%	57.1%	4.0%
Leasing and Automotive Loans	83.3%	16.7%	3.5%
Brokers	100.0%	0.0%	1.2%
Real estate & mortgage finance institution	100.0%	0.0%	1.2%
Credit Bureau	50.0%	50.0%	1.2%
Other Financial Companies	50.0%	50.0%	1.2%
Investment Banks	100.0%	0.0%	0.6%
Total	48.9%	51.1%	100%

Note: These percentages are calculated based on the centrality values of US, Spanish, UK and Swiss financial firms, which are available in Appendix B (reflected as the number of financial firms).

Source: Prepared by the author

Table 5-7 reflects the decomposition of financial firms in Latin America owned by US, Spanish, UK, and Swiss financial institutions by percentage. The first column reflects the type of entities found in Latin America that are foreign-owned. The second column reflects the percentage of these Latin American firms that foreign banks own, while the third column indicates the percentage owned by foreign non-banks. The last column of this table shows the total percentage of each type of financial firm (represented in rows) in Latin American financial markets owned by US, Spanish, UK, and Swiss financial institutions.

¹¹ Orbis and Bank Focus provides this information, which is obtained directly from firms' annual reports and other sources.

Foreign insurance companies largely dominate Latin American financial markets, as Table 5-7 shows, composing almost 40 per cent of the total of US, Spanish, British and Swiss-owned institutions in these economies¹². Foreign banking firms may appear to have lost their dominant position attained in the 1990s, as they now account for only 16.8 per cent of the Latin American financial institutions. However, there is a surprising point to notice here. Even though Table 5-7 shows that (foreign) banking institutions have reduced their dominant position, this is not the case. They continue to be highly present in Latin American markets, as seen by their control of 48.9 per cent of Latin American financial institutions. This reflects the increasing involvement of US, Spanish, British and Swiss banks into non-banking businesses. It also reflects how this institutional structure permeates Latin American financial markets: from the total of foreign-owned insurance companies established in Latin America, 11.3 per cent are owned by banking institutions. This structure is similar for fund management firms, of which 34.8 per cent are owned by US, Spanish, British and Swiss banking institutions, holding companies, non-depository credit intermediation institutions, mutual and pension funds, leasing and automotive loans, brokers, real estate and mortgage finance institutions, and other financial companies. This illustrates how the removal of market barriers between commercial banking, investment banking, and insurance has allowed (foreign) commercial banks to venture into non-banking-related businesses and to use some of these channels to conduct their core banking businesses.

The large number of foreign insurance companies in Latin American financial systems needs to be analysed in the context of the pressures resulting from structural funding deficits and low yields in the asset management industry. The widespread adoption of private pension systems in the world has pressured pension fund managers to obtain returns sufficient to meet their future commitments. Moreover, since bonds have persistently returned low yields in the years since market-based pension reforms were implemented, leading institutional investors have sought higher-yielding assets in diverse global corners: Asia (Lee 2012), the European Union (Bonizzi and Churchill, 2017), housing markets (Fernandez and Aalbers, 2016), and emerging markets more generally (Bonizzi and Guevara, 2019; Bonizzi and Kaltenbrunner, 2019). This reflects that the entry of foreign insurance companies into ECEs' markets (reflected in the ownership of AFPs and insurance companies) is part of the US, Spanish, UK and Swiss financial companies' strategies to increase returns.

Another point to highlight from Table 5-7 is the large number of 'holding companies' in Latin American financial systems, which reflects organisational shifts: foreign-owned banks and insurance companies are operating mainly as financial conglomerates, as seen in Appendix B. This structure facilitates commercial banks to participate in a wide range

¹² The list of financial institutions owned by these firms in Latin America is provided in Appendix B.

of businesses and access financial markets by operating in conjunction with non-banking subsidiaries. Usually, the controlling firm is a 'banking group', and the subsidiaries include commercial banks; fund management firms; insurance companies; leasing institutions; brokers; and non-depository credit institutions, which may comprise spin-off firms that focus on granting credit to specific client structures. On the other hand, the institutional structure of the insurance sector comprises a holding firm that manages the domestic insurance business in Latin America; fund management companies; investment companies; and domestic pension funds. This reflects that foreign insurance companies control most of the pension fund system in Latin America, which again reflects the pressure on fund managers to obtain returns.

This result coincides with what has been shown in Chapter 4: the rise of domestic private pension assets, which increased immediately after deregulations in the 1990s and 2000s and rose very sharply after the 2008 financial crisis in Chile, Mexico, Colombia and Peru (less so in Uruguay and Bolivia). Similarly, data for the portfolio investments of Argentina, Bolivia, Chile, Colombia, Mexico, Peru and Uruguay pension funds reveals some patterns amidst these funds' search for yield. All six nations have experienced rapid growth, which has not slowed after the 2008 crisis (state investments in Colombia constitute the sole exception). Pension funds in Peru, Colombia and Chile, are diverting their portfolio decisions towards foreign financial derivatives, including private equity and fixed-income investments, more than investing in local companies and the (domestic) state. Moreover, all economic sectors are compromised by being backed up by pension funds' investments. Bolivian pension funds dramatically increased their investments in the financial sector after the 2008 crisis; meanwhile, the state sector received a massive boost from pension funds after the crisis in Uruguay, Argentina, Bolivia and Mexico. Mexico's corporate sector was the only one to have higher pension funds funding consistently.

It should be emphasised that privatised pensions represent just one of several institutional investors operating in Latin America in the deregulated era: endowments, mutual funds, insurance companies, and sovereign-wealth funds also have rising market shares. This shift from bank-based savings instruments to asset management by institutional investors has an important implication: clients and not fund managers bear gains and losses (Law and Smullen, 2008). This contrasts with banks' guaranteed (if stodgy) returns for their depositors; that is, as these managers are under pressure to deliver yield, this could lead to boom-bust instability, as happened with derivatives tied to mortgages and hedge funds (Lysandrou and Nesvetailova, 2015) and more recently with the leveraged-loan market (Wigglesworth, 2019).

Table 5-8: Outdegree Centrality Values for Chilean, Colombian and Peruvian Shareholders

Company Name	Out-Degree Centrality	Country	Specialisation	Owner
1 Falabella S.A.	17	Chile	Corporate, Retail	
2 Grupo Aval Acciones y Valores	17	Colombia	Bank Holding Company	
3 Credicorp Ltd.	13	Peru	Bank Holding Company	
4 Grupo Sura	11	Colombia	Bank Holding Company	
5 Grupo Security	11	Chile	Bank Holding Company	
6 Empresas Juan Yarur	9	Chile	Financial Company	
7 Grupo Bolivar	9	Colombia	Investment Bank	
8 Ripley Corp. S.A.	9	Chile	Corporate, Retail	
9 BCI	9	Chile	Commercial Bank	
10 Banco de Chile*	6	Chile	Commercial Bank	Citigroup Inc (US) LQ Inversiones Financieras (CL)
11 Banmedica S.A.**	6	Chile	Insurance Company	UnitedHealth Group (US)
12 Bicecorp S.A.	6	Chile		
13 Principal International South America**	6	Chile	Insurance Company	Principal Financial Group (US)
14 Consorcio Financiero S.A.	6	Chile	Financial Company	
15 Inversiones Angelini y Compania	5	Chile	Financial Company	
16 Inversiones La Construccion	5	Chile	Insurance Company	
17 BTG Pactual Chile**	4	Chile	Corporate	BTG Pactual (BR)
18 Itau Corpbanca	4	Chile	Commercial Bank	
19 Scotia Peru Holdings**	4	Peru	Other Financial Intermediation Company	Bank of Nova Scotia (CA)
20 Scotiabank Chile**	4	Chile	Commercial Bank	Bank of Nova Scotia (CA)
21 Administradora de Fondos de Inversiones	3	Chile	Fund Management	
22 AES Andes S.A.**	3	Chile	Corporate, Utilities	AES Corporation (US)
23 Clinica Davila y Servicios Medicos**	3	Chile	Health Social Services	UnitedHealth Group (US)
24 Empresas La Polar S.A.	3	Chile	Corporate, Retail	
25 Fundacion BBVA para las Microfinanzas	3	Chile	Foundation	BBVA (ES)
26 Grupo BUPA Sanitas Chile**	3	Chile	Financial Company	The British United Provident Association (GB)
27 Intercorp Peru	3	Peru	Other Financial Intermediation Company	
28 Inversiones Cachagua	3	Chile	Financial Company	
29 Inversiones Funque	3	Chile	Financial Company	
30 Inversiones Grupo Saesa**	3	Chile	Financial Company	Ontario Teachers' Pension Plan (CA)
31 Inversiones Otonal	3	Chile	Financial Company	
32 Inversiones ZS America**	3	Chile	Financial Company	Zurich Insurance Group (CH)
33 Salfacorp S.A.	3	Chile	Real Estate	
34 Administradora de Fondos de Pensiones Pr	2	Chile	Pension Funding	MetLife Inc (US)
35 Andescan SpA	2	Chile	Financial Company	Ontario Teachers' Pension Plan (CA)
36 Asesorias e Inversiones Benjamin	2	Chile	Financial Company	
37 Grupo ACP Corp.	2	Peru	Financial Company	
38 Enel Americas S.A.	1	Colombia	Corporate, Utilities	
39 Grupo Credito S.A.	1	Peru	Bank Holding Company	
40 Grupo Nutresa S.A.	1	Colombia	Corporate, Food & Tobacco Manufacturing	
41 Habitat Andina S.A.	1	Chile	Financial Company	

Note: * Jointly Owned by Foreign and Domestic Shareholder
Note: ** Owed by Foreign Shareholder

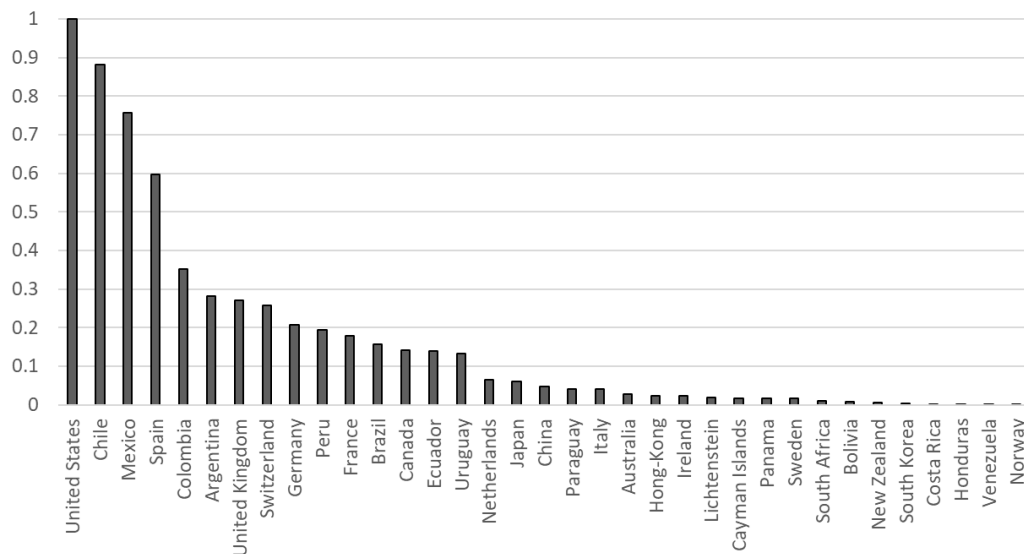
Note: The outdegree values equal to zero were omitted from this table.

Source: Prepared by the author

This market-based and organisational structure in foreign-owned financial firms has seen its core features permeate into domestic-owned financial firms. For this, Table 5-8 shows the domestic-owned financial firms in the Latin American countries that showed the highest outdegree values (that is, the countries in which domestic-owners were the largest) to understand whether this institutional structure is a feature intrinsic to foreign-owned financial firms, or whether it has also been expanding into domestic markets. The countries with the largest outdegree values in Figure 5-6 were Chile, Colombia and Peru. Table 5-8 also displays all these countries' financial companies, including their specialisation. It is possible to infer from there that 'bank holding companies' also dominate the institutional structure of domestic-owned financial firms, which suggests

the influence of key foreign actors in transferring an institutional structure that predominates mainly in advanced economies, especially in the United States (Hardie and Howarth, 2013). This structure is composed of similar financial firms as described for foreign-owned financial firms. In addition, a small number of non-financial firms also seem to be crucial agents in these markets: retail companies. This reflects that non-financial companies are largely dabbling in the financial sector, reflecting the financialisation of non-financial firms in Chile and Colombia.

Figure 5-7: Eigenvalues for Foreign Shareholders

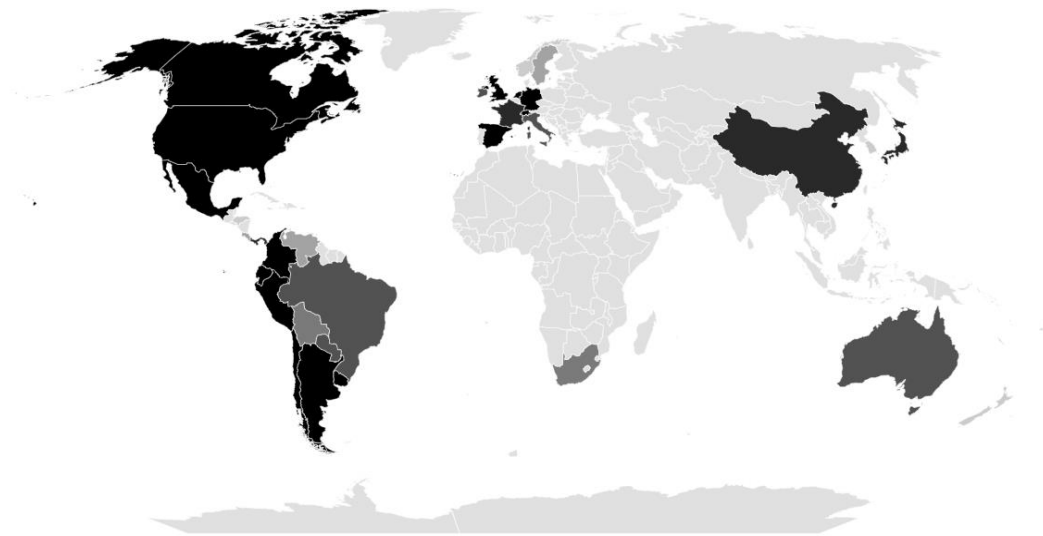


Source: Prepared by the author

A different approach is to analyse a country's degree of connectedness with the most influential actors in the network, which is captured by eigenvector centrality values, to analyse whether US, Spanish, British and Swiss financial institutions are critical actors in Latin American financial markets. The closer a node is connected to other important nodes, the higher its eigenvector centrality; therefore, this value is helpful to analyse the importance of these financial firms in transmitting 'information' (practices, institutional structures) to their neighbours. Figure 5-7 reflects that the United States and Chile, followed by Mexico and Spain, are the countries with the highest eigenvector centrality in the network. An important place also occupies Colombia, Argentina, the UK and Switzerland. This entails that the US, Chilean, Mexican, Spanish, Colombian, Argentinian, UK, and Swiss financial firms are particularly influential actors in the Latin American financial sector, which can disseminate information, practices and structures over nodes with lower eigenvalues (Cronin, 2016), as countries with higher eigenvalues reflect how well connected are these countries to other important nodes.

Overall, US financial firms show the highest eigenvalue for the sample of countries, meaning that these firms are closely connected to all financial firms in the Latin American sample. This reflects the ability of US firms to transmit ‘information’ to nodes closer to them, such as Chile, Mexico and Colombia. In this way, these countries should reflect a similar institutional structure as that of the United States. Indeed, as Table 5-8 shows for Chilean and Colombian financial firms, this institutional structure is repeated among domestic financial firms. This result also coincides with the Latin American financial firms, which showed the largest in-degree values in Figure 5-6 (Chile, Colombia and Mexico), which reflects that these financial markets are also the most surrounded by foreign financial firms.

Figure 5-8: Dominant (Core) and Distant (Peripheric) Countries in Latin American Financial Systems



Source: Prepared by the author

Finally, Figure 5-8 shows the k-core values calculated for the sample of 35 countries analysed (26 foreign shareholders’ countries and 9 Latin American economies). This value reflects the group of countries that seem to dominate the network structure in Latin American financial systems and around which the other countries revolve. The darker areas in Figure 5-8 reflect the ‘core’ of the network; that is, the countries with a larger geographical presence in Latin American financial systems are connected. These include Argentina, Canada, Switzerland, Chile, Colombia, Germany, Ecuador, Spain, United Kingdom, Mexico, Netherlands, Peru, United States and Uruguay. It is crucial to notice that this value does not reflect whether Latin American economies are the most internationally expanded. It only denotes the maximal group of countries that are

connected to some number of other countries of the group. So this means that the ‘core’ group are countries connected to each other, are internationally integrated, and thus, dominate this network.

The lighter areas reflect the most distant countries, forming the ‘peripheral group’ of countries in the network structure. For the sample of Latin American countries, Bolivia and Paraguay seem to be the most peripheric in terms of connections with international shareholders. However, Paraguay is inside the ‘core’ group of countries when this value is calculated, including domestic shareholders¹³, while Bolivia remains peripheric. This reflects that Paraguay is an important agent within Latin America as it is connected to the dominant countries in the network. However, when analysed in terms of foreign shareholders, Paraguay becomes peripheric. This reflects the importance of analysing core agents in different institutional settings, as particular structural hierarchies underlie Latin American financial markets.

5.4 Conclusion

This chapter examined ownership data of 1,258 financial firms established in Argentina, Bolivia, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, and Uruguay using SNA. The main aim was to use SNA to empirically assess how the liberalisation of cross-border investment in the financial sector, the deregulation of banking, and the adoption of private pension systems have shaped the institutional structure of Latin American financial markets. In particular, this chapter found that the liberalisation of cross-border investment in the financial sector led to an institutional structure in the Latin American financial sector that is highly foreign-owned. This structure is evident in the banking sector and the asset management industry as well, as most of the key Latin American AFPs are owned by leading US financial firms.

In addition, the liberalisation of cross-border investment in the financial sector also led to an institutional structure in the Latin American financial sector that is highly market-based. The expansion of non-bank financial firms into Latin American economies can be explained as a consequence of the tightened regulations that were enforced in the US and European Union, which may have resulted in a geographical expansion of these financial firms into Latin American economies (Saza, 2018; San Martin, 2018; Marshall Rivera, 2020). This is observable as the institutional structure of the financial sector has been significantly transformed since the 1990s (when foreign banks dominated the financial landscape), making way for novel financial actors, as in the case of Chile with Swiss financial institutions, Peru with Chinese financial firms, and Latin America in general with the expansion of US insurance companies.

¹³ This graph is available in Appendix C.

However, even though it appears that banking institutions have decreased their dominant position in Latin American financial markets with the appearance of market-based actors, this is not the case. As demonstrated, these market-based institutions are mostly bank-owned. This is the case for foreign and domestic-owned financial firms. The fact that banking institutions own a significant proportion of market-based institutions is due to a particular organisational structure of domestic and foreign-owned financial firms: banking firms are increasingly being organised as financial conglomerates. This entails that there is a holding group, which is usually owned by a commercial bank, which in turn, controls a bunch of other financial firms. These firms include fund management firms, insurance companies, leasing institutions, brokers, and non-depository credit institutions. This shift toward this organisational structure was facilitated by removing market barriers between commercial banking, investment banking, and insurance, allowing commercial banks to participate in a wide range of businesses and access financial markets (de Carvalho et al., 2009). In addition, it allowed commercial banks to incorporate subsidiaries that engage in various non-traditional banking activities, as demonstrated throughout this chapter.

Remarkably, the countries in which this institutional structure is evident are Chile, Colombia, Mexico and Peru. These countries showed the largest in and outdegree values, eigenvector values, and k-core values. This means that foreign financial institutions tend to concentrate mainly in Chile, Mexico and Colombia, as shown by their large in-degree centrality values. These economies are also more likely to exhibit non-traditional banking systems, as evidenced by their high eigenvalues, which show the closeness of Chilean, Mexican and Colombian financial firms to US, Spanish, UK and Swiss financial firms, which can translate into a closer integration to the uneven global monetary and financial system. The high degree of interconnection of US, Spanish, UK and Swiss financial firms to other agents in Latin American financial markets makes them key institutions for spreading their practices into these economies. The Peruvian financial system also appears to exhibit some of these features, albeit to a lesser extent, which might be explained due to its smaller scale.

In sum, the liberalisation of cross-border investment in the financial sector, the deregulation of banking, and the adoption of private pension systems have determined a particular institutional structure in Latin American financial markets that is foreign-owned, market-based, and one in which financial institutions are organised as financial conglomerates. Usually, a banking holding group controls a bunch of other financial firms or a holding firm that manages the domestic insurance business in Latin America. Furthermore, this institutional structure reflects a banking system that is inextricably interwoven with other financial system agents, as the same holding company frequently controls these financial firms. In other words, the ‘Americanisation’ of national financial systems has involved an institutional ‘Americanisation’ of these systems. That is,

analysing these drivers in the context of financialised capitalism reflects three transformations at the meso-level in Latin American financial markets. This structure allows US financial firms to increase their profits by extending the scale and scope of globalised financial markets into Latin American economies and to sell dollar debt (Konings, 2007; Cerpa Vielma et al., 2019). The following chapter (Chapter 6) demonstrates how this transformation of the institutional structure in Latin American financial markets has allowed the transformation of the financial practices, in particular, banks' liquidity practices, towards the use of market-based liabilities to support their asset allocations.

Chapter 6

The Chilean Financial Structure: A Qualitative Study

Introduction

This chapter presents the results from the 23 semi-structured interviews conducted with financial market participants using the case of Chile. As this thesis has argued, the financial structure of Latin American economies has been transformed in the past 40 years. The key drivers of this structural shift are identified and discussed in Chapter 4. These include the liberalisation of cross-border financial flows, the deregulation of banking, and the adoption of private pension systems in the context of financialised capitalism. Chapters 4 and 5 have assessed these drivers empirically, using quantitative methods. In line with the ontological position and retroductive strategy of this thesis, this chapter uses a qualitative method to explore how these drivers have shaped the structure of financial intermediation, as well as the structures and underlying mechanisms involved in this transformation, using Chile as a case study.

This chapter highlights three crucial features of the Chilean banking sector and its financial structure. The first feature involves the extent to which market-based credit is being used by Chilean banks to rectify mismatches between retail loans and deposits and increase credit flows. In other words, bank loans exceed customer deposits on banks' balance sheets. A second characteristic involves the extent to which bank lending decisions are driven by the cost of these innovative funding sources and the cost of hedging interest rate, inflation, and currency risks. That is, Chilean banks' lending decisions are not reserve-constrained but rather are affected by the price of their funding sources and expected returns. The final feature concerns the extent to which banks' behaviour is geared toward greater involvement in trading and market-making activities to arrange loans and debt instruments for raising market-based credit and creating markets for these instruments.

Following what post-Keynesian banking theory has put forward in terms of banks' behaviour, the objective of this chapter is to analyse how the use of market-based credit as a platform for increased credit flow of Chilean banking firms can affect Chilean banks' liquidity preference. That is, banks' practices for producing liquidity. In this view, banks' assets determine their liabilities, rather than the other way round as in neoclassical theory. As presented in Chapter 3, the analytical focus here lies on Minsky's (1975) interpretation of a monetary economy as the fragile interconnection between financial agents' balance sheets. However, this interconnection is assumed here to be hierarchical in nature.

By scrutinising Chilean financial markets, this chapter contributes to the literature on post-Keynesian monetary theory at the empirical level in three ways. First, by providing an account of banks' practices for producing liquidity using a Minskyan balance sheet

approach, this chapter shows that Chilean banks' liquidity preference is not only influenced by their assessment of borrower's and lender's risk as most post-Keynesian models of banking have suggested (Dow and Earl, 1982; Dow, 1986; Dymski, 1988; Chick, 1986; Wolfson, 1996; Dow, 1996a; de Carvalho, 1999; Chick and Dow, 2002) but also by the nature of their liability structures. This makes liquidity preference institutionally specific (Bonizzi and Kaltenbrunner, 2020) as it depends on the nature of agents' liabilities. Second, it shows that Chilean banks' lending decisions are not reserve-constrained (as in mainstream theory) but rather are affected by the price of their funding sources and expected returns. Third, it shows how banks' increasing reliance on market-based credit has transformed Chilean banks' behaviour toward greater involvement in trading and market-making activities.

In addition, this chapter contributes empirically to the literature on subordinate financialisation in three ways. First, it shows how the financialisation process in Chile is driven by hierarchical institutional and structural factors, which further deepen domestic financialisation. Second, this chapter demonstrates how the subordinate character of Chilean banks generates hierarchies at the micro-level: efforts to 'modernise' Latin American financial markets and instruments to participate and maintain access to global finance have led Latin American financial institutions to import key financialised practices and behaviours that have evolved in ACEs, mainly from the United States.

Specifically, the distinct form of market-based finance identified here includes Chilean banks use of market-based credit or wholesale funding, which implies that Chilean banks' liability structures are more market-based, Chilean banks greater involvement in trading and market-making activities, and the rise of private pension funds that enhanced the role of Latin American institutional investors. As bank borrowing in market-based finance occurs via financial markets—specifically wholesale markets—it entails that access to these markets is determined by macroeconomic and bank-specific factors, which translates into investors' perceptions of banks' liquidity and credit risk. These factors are expressed in terms of the costs banks pay for accessing these funding sources, which means that domestic banks are subordinated to foreign-owned as their reputation is determining their access to these funds.

Third, this chapter shows how this particular financial structure creates hierarchical levels in the global financial architecture at the macro-level: operationalising globalised financial practices in nations with uniformly inferior positions in the currency hierarchy introduces new financial vulnerabilities and might have detrimental effects on economic growth. Latin American economies' subordinate position in global finance (particularly concerning money and capital markets) at the macro-level means that capital inflows are mainly short-term, seeking financial returns rather than assuming productive risk. This results in persistent volatility, external fragility and subordination to the currencies of ACEs (Bonizzi et al., 2020). The adoption of the market-based credit approach requires

access to wholesale funds and cross-border capital flows, which locks in the asymmetric structure of global financial power, as these global capital flows depend on surges of confidence and fear among domestic and global investors—rather than domestic cycle fluctuations (Cerpa Vielma and Dymski, 2022). These could result in significant wild swings in financial-market sentiment and money flows across global borders, exposing these economies to the possibility that the core institutions of global finance will again, as in 2008, generate a catastrophic crisis. Therefore, Latin American banks' liability structures are subordinated to the power of cross-border creditors and flows. These pressures would depend on the nature of the obligations of these institutions.

This chapter is composed of four sections. It begins in section 6.1 by giving an account of the methodology employed in this Chapter in terms of research methods and motivation, research design, data collection, data analysis and possible limitations of this study. Section 6.2 contextualises the transformations to the financial structure of the Chilean economy by providing a historical overview of the deregulation policies applied to the financial sector in Chile since the 1970s. The results of the 23 semi-structured interviews conducted with Chilean financial market experts are presented in Section 6.3. The analysis is segmented into three main areas. First, subsection 6.3.1 presents the main motivations of banking firms to engage with wholesale funding. This analysis is followed in subsection 6.3.2 by the mechanisms and structures underlying banks' lending decisions, i.e., decomposition of the determinants of banks' funding costs and their link to banks' lending decisions. The assessment concludes with subsection 6.3.3, which examines participants' operations in wholesale markets, emphasising the practices and instruments used. Section 6.4 concludes.

6.1 Methodology

6.1.1 Research Methods and Motivation

This chapter adopts a qualitative methodology, in particular, semi-structured interviews with participants of the Chilean financial sector. The nature of semi-structured interviews conveys the ontological and epistemological positions followed in this thesis. As indicated in Chapter 1, this thesis employs a critical realist ontology, retrodution as a research strategy, and a mixed-methods approach (Dow, 2001; Downward and Mearman, 2007; Dow, 2013). Given its open-system ontology, several authors have called for a combination of methods as the appropriate empirical strategy for heterodox economics¹ (Dow, 2001; Downward and Mearman, 2002; Downward et al., 2002; Downward and Mearman, 2007; Dow, 2013).

¹ Chapter 1 covers the different applications of mixed-methods in economics.

The use of mixed-methods research under the heading of triangulation supports the goal of retrodution by implying that quantitative and qualitative methods are regarded as several tools for uncovering different features of the same layered and structured reality (Downward and Mearman, 2007). On the one hand, quantitative methods can reveal demi-regularities in the empirical domain. They can identify, quantify, and compare underlying processes and structures' potential empirical surface phenomena. However, these observations are to be seen as exhaustive rather than conclusive (Dow, 1996b; Lawson, 1997; Arestis et al., 1999).

In turn, as argued by critical realists, qualitative methods are crucial to uncovering the underlying processes and structures that condition human agency beyond their specific context and temporality (Lawson, 1997; Lawson, 2003; Downward and Mearman, 2007). Chapters 4 and 5 rely on quantitative methods to empirically assess the role of the key drivers identified in this thesis in reshaping the financial structure of Latin American economies. However, these results are to be seen as partial and multifaceted, nor predictable or universal (Arestis, 1996; Lawson, 1997; Arestis et al., 1999). Consequently, using qualitative methods here is crucial to elucidate how and to what extent these mechanisms and underlying structures (drivers) have shaped this structure in Chilean financial markets.

In addition, a second objective of this qualitative research is to triangulate the results obtained here with quantitative methods in Chapters 4 and 5 to increase the 'validity' of constructs and inquiry results by benefiting from the intrinsic strength of the methods employed (Greene et al., 1989; Downward and Mearman, 2007). In particular, the quantitative findings were used here to develop the qualitative method (Greene et al., 1989), specifically to identify key participants and their sectors, as well as the development of the interview questions designed to uncover the structures and underlying mechanisms of this phenomenon. This allowed this thesis to draw conclusions on the process of financialisation in Chile.

This thesis, in particular, uses semi-structured interviews as a research method. One benefit of using semi-structured interviews is that they allow the researcher to collect rich and detailed data because they provide insights into participants' perceptions and social interactions, which are intrinsically subjective (Silverman, 2015). These qualitative data are fundamentally well suited for locating the meanings people place on their lives events, processes, and structures and for connecting these meanings to the social world around them (Bryman, 2016). The researcher can concentrate on each interviewee's area of expertise and obtain 'thick descriptions' that are vivid and nested in a real context (Miles and Huberman, 1994) by asking follow-up questions that are not in the questionnaire and clarifying questions concerning particular topics.

The interview questions were designed to foster a conversation and allow participants to share their own accounts of the mechanisms through which they operate, which is essential for revealing complexity. Qualitative data obtained using semi-structured interviews may even assess causation as it actually plays out in a particular setting (underlying reality). Furthermore, qualitative data has been advocated as the best strategy for developing hypotheses and testing those, which are fundamentally important when one needs to supplement, validate, or illuminate quantitative data gathered from the same phenomenon (Greene et al., 1989).

Another advantage of semi-structured interviews is that they allow the conversation to be flexible, moving in the direction the interviewees take it and possibly adapting the emphases in the research to relevant matters that arise in the interview (Bryman, 2016). Consequently, the researcher has complete control over the path of enquiry (Creswell and Creswell, 2003). Moreover, participants' answers can contribute historical data (Creswell and Creswell, 2003), which is a fundamental feature in this thesis since interview results can shed light on the historical transition of the traditional model of Chilean banking firms in the past 40 years. Finally, semi-structured interviews serve to define, categorise, theorise, explain and understand concepts; internal structures; the range, nature and dynamics of phenomena; the different types of behaviours and motivations; and associations between experiences and attitudes, attitudes and behaviours, and circumstances and motivations (Ritchie and Spencer, 2002).

The use of semi-structured interviews is not a novel methodology in the financialisation literature in ECEs. Kaltenbrunner (2018) applied semi-structured interviews to analyse the international aspect of financialisation in ECEs. Hardie and Rethel (2019) base their analysis of the development of domestic bond markets in emerging economies on 155 semi-structured interviews conducted with policy and market actors. Though this chapter uses the same methodology, it uncovers and sheds light on the process of financialisation in Chile by providing evidence on the role of the key drivers identified in this thesis in reshaping the traditional model of Chilean banking firms (in practices and behaviours), and thus, the financial structure of the Chilean financial system.

The primary motivation for applying semi-structured interviews lies in the distinct nature of financialisation processes. As the literature on (variegated) financialisation in ECEs has pointed out, this phenomenon is not a linear process and assumes different forms in ECEs vis-à-vis advanced economies, as well as country-specific forms. The adoption of semi-structured interviews permits to uncover of how this process works in a Latin American economy such as Chile². In this way, this qualitative study aims at exploring how banking firms operate in this emerging market. Based on the critical discussion of banking theories presented in Chapters 2 and 3, emphasis was placed on interviewees'

² The main motivation for using Chile as a case study is discussed in Chapter 1.

perceptions and understandings of different market-based funding sources and, ultimately, the mechanisms and structures underlying their lending decisions and, thus, financial markets' dynamics. This also included discovering heterogeneities among interviewees and the crucial role of institutional and structural factors in shaping banks' practices, decisions and behaviours.

For this, the questions aimed to explore three main areas. First, to gain a better understanding of the structure of the Chilean financial market, participants were asked about their role in their institution, their client structure, their financial services, and their motivation to participate in wholesale markets (for funding or investing). The second section focused on the mechanisms and structures underlying banks' lending decisions and liabilities structures, i.e., the perception of banking participants of the determinants of banks' funding costs and their link with banks' lending decisions. The third section explored participants' operations in wholesale markets, focusing on the practices and instruments used.

6.1.2 Research Design

This chapter uses insights from 23 semi-structured interviews with experts in the Chilean financial sector, which were conducted online in two stages from December 2020 until March 2021. During the first stage, 16 semi-structured interviews with banking experts were conducted. After this point, it was decided that further participants were needed from non-bank financial institutions, as participants' answers pointed to certain financial institutions as key actors in conducting their businesses. In this way, the second stage of interviews included nine additional semi-structured interviews with asset managers, stock brokers and insurance companies' experts. To account for the different institutional features, interview sheets varied slightly amongst market participants. Appendix D and E contain the exact interview sheets. In addition, pilot interviews with financial market representatives were initially performed as part of this thesis's retroductive strategy (Downward and Mearman, 2007) and to refine the interview questions.

Interviews were conducted in a semi-structured manner, meaning that a structured list of questions was followed; however, questions may not always follow the same order. Follow-up questions not in the questionnaire were also allowed to pick up some topics mentioned by interviewees to be discussed in-depth depending on their experience, to get rich and detailed answers. This allows the interview process to be flexible and focused on what the interviewee views as important and necessary in explaining and understanding issues, patterns, behaviours and events (Bryman, 2016). The questions' design was open-ended, focusing on the participants' experiences and perceptions (Charmaz, 2014). These were designed in general before being conducted, although some were refined and adapted during the fieldwork.

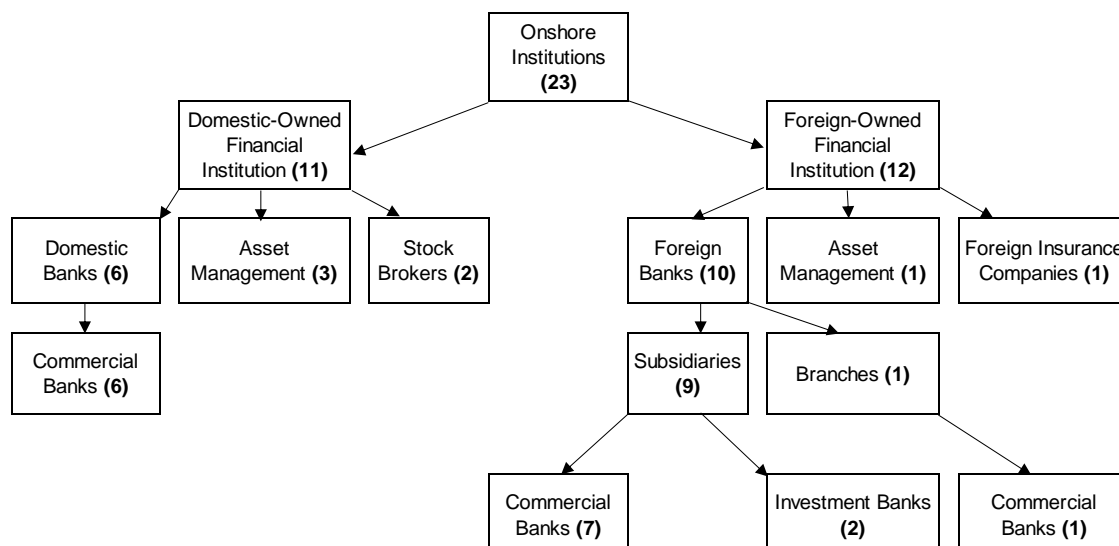
Participants were interviewed once and for a maximum of one hour. The interviews took place via Teams or Zoom due to the contingent COVID-19 restrictions. All interviews were conducted in Spanish, audio-recorded with the participants' prior consent, and transcribed by the researcher using a software programme to minimise hearing and spelling mistakes (Miles and Huberman, 1994). Participants were reminded about consent and their right to withdraw at the beginning of the interview. Participants could withdraw from the interview without giving a reason and withdraw their data three weeks after the interview. The informed consent and participant information sheet were given in written form and were accessible via email five days before the interview began. Consent was agreed upon and electronically signed before the interview took place.

6.1.3 Data Collection

6.1.3.1 Participants and Sampling

A total of 23 experts from 16 different institutions in the Chilean financial sector were recruited. Table 6-1 depicts the main institutions (participants) that were interviewed, with the numbers in parentheses reflecting the overall number of participants interviewed per institution. For analytical purposes, the main criterion for classifying participants was domestic and foreign-owned financial institutions, as illustrated in Table 6-1. This classification was motivated by the findings of Chapter 5 regarding the significance of foreign financial institutions in transforming the institutional structure of financial intermediation in Latin American economies over the past four decades. The classification of 'foreign banks' is intended to highlight the geographical expansion of these institutions into these economies. Therefore, 'foreign banks' include subsidiaries of US, Spanish, and UK banks established in Chile or US, Spanish and UK banks' equity participation in Chilean banking firms due to M&As. Since these banks are established in Chile, the term 'Chilean banks' is used throughout the text. However, when analysing the respondents' answers, distinctions between domestic and foreign banking participants are made. In total, eleven participants were interviewed from domestically owned financial firms, twelve from foreign-owned financial institutions, and only one participant was recruited from a branch of a foreign bank.

Table 6-1: Type and Number of Institutions (Participants) Interviewed



The domestic-owned financial institution category was divided into three groups: domestic banks, asset management companies and stock brokers. Following a progressive theoretical sampling technique (Bryman, 2016), participants from the last two sectors were recruited in a second phase, as several bankers saw these entities as crucial actors in the performance of their operations, as asset managers and brokers deal with institutional investors' funds. In addition, as Chapter 5 shows, these institutions are usually subsidiaries of a banking holding group and hence contribute to banking profits and the operation of banking businesses. The last categorisation within this group is 'commercial banks', to emphasise that participants in the banking sector were selected exclusively from commercial banks³.

Similarly, the foreign-owned financial institution category was divided into three broad groups: foreign banks, foreign asset management firms, and foreign insurance companies. Given that several responses of domestic-owned banking participants emphasised the crucial role of asset management and insurance companies in conducting their businesses, two participants from these sectors were included as well. Due to the similarity of their responses, it was determined that no further participants from these institutions were required, as theoretical saturation was reached⁴ (Strauss and Corbin, 1998). This may be

³The majority of domestic banks operating in the Chilean financial market are classified as universal banks. Most of these banks combine investment banking activities and other financial services into a single entity, yet remain classified by the Chilean authorities as commercial banks. Therefore, no further classification was required. However, for foreign banks the categorisation differs, mainly because parent entities determine the lines of business of their subsidiaries or branches. As a result, the division between foreign commercial and investment banks is made accordingly. These categories were validated by the participants' responses as well.

⁴ For Strauss and Corbin (1998) theoretical saturation is a criterion for determining when to stop collecting new data on a specific theoretical idea. They refer to theoretical saturation as when (1998, p.212): '(a) no new or relevant data on a category appears to be emerging, (b) the

since these firms' engagement with the Chilean banking sector is generally motivated by similar factors.

In addition, according to banking participants' responses, domestic and foreign banks have subsidiaries that engage with similar operations in financial markets. Therefore, banking participants also discussed similar issues to those raised by asset managers and insurance companies. It is important to emphasise here, as Chapter 5 does, that asset managers usually handle privatised pension and insurance funds in Chile, with these firms being predominantly foreign-owned. As a result, these investors represent a sizable 'wall of money' (Fernandez and Aalbers, 2016) for the Chilean financial market. The final classification of foreign-owned financial institutions is commercial and investment banks. This division was motivated since, in most cases, these institutions' parent entities determine the line of business of their subsidiaries (or branches) in international markets without this being the main line of their business in Chile. Consequently, the Chilean authorities classify these banks accordingly.

Given the degree of expertise required for this project, individuals recruited from the banking sector worked in three main areas: Asset and Liability Management Committee (ALCO), Money Trading and Distribution, and Corporate Banking. The ALCO is accountable for establishing and managing a bank's credit, interest-rate and liquidity risk in relation to its balance sheet (Fabozzi, 2015). That is, the financial risks arising from mismatches between a bank's assets and liabilities. The Money Trading and Distribution area is responsible for providing different financial services, such as temporary solvency solutions and hedge risks that arise in transactions to financial institutions—asset managers, pension and insurance funds—including the bank itself. Money brokers arrange short-term loans and debt instruments between bidders and applicants for money on the money market, but they do not participate in the transaction (Law and Smullen, 2008). Money brokers do not lend or borrow money directly; they arrange short-term loans for a commission. In addition, traders in this area commit to creating markets for their clients' financial obligations, in which market makers build buying and selling prices for counterparties.

The Corporate Banking division deals with large corporate customers and provides them with banking solutions like business funding, decision making and mergers and acquisitions (Law and Smullen, 2008). This area is usually unique to investment banking. However, as seen in Chapters 3 and 5, these businesses are also part of commercial banking. Finally, all recruited participants from asset management companies, stock brokers and insurance companies were working in the investment area of their organisations. That is, they were either in charge of managing financial assets to maximise

category is fully developed in terms of its features and dimensions displaying variation, and (c) the linkages across categories are well established and validated'.

the return on the investments or act as agents who buy and sell securities on behalf of customers, receiving a commission for this service.

Sampling Strategy

Given the qualitative nature of this study, this research's sampling was conducted on a purposive and snowball basis (Miles and Huberman, 1994; Bryman, 2016). Purposive sampling is a non-probability sampling technique where the sample of research participants is not randomly selected and aims to strategically select participants based on their knowledge to ensure that those sampled are relevant to the research questions (Bryman, 2016). At the same time, further participants were included using a snowball sampling approach. This means that the initial participants (from Chilean Banking firms) were inside of the professional or personal network of the researcher, and this network was then used to contact (via email or telephone) further prospective participants (Miles and Huberman, 1994). In terms of the number of participants needed, many articles suggest that purposive sample sizes can be determined by theoretical saturation (Morse, 1994; Sandelowski, 1995; Bluff, 1997; Byrne, 2001; Fossey et al., 2002; Patton, 2002). To reach theoretical saturation, some researchers have suggested that between 10-15 interviews should be enough, as information begins to duplicate after reaching this threshold (Bruine de Bruin and Bostrom, 2013).

6.1.4 Data Analysis

Interview transcripts were analysed using thematic analysis, where the aim is to identify the recurring key themes and subthemes within participants' responses (Bryman, 2016). 'Framework' usually provides a broad strategy in thematic analysis that supports data organisation and synthesis, in which cases and themes are displayed in a matrix form (Ritchie et al., 2003). The themes and subthemes might be referred to as codes as they may also be used to assign symbolic meaning to the collected descriptive or inferential data (Miles and Huberman, 1994). Codes are frequently attached to data 'chunks' of varied sizes and can be as simple as a descriptive label or as evocative as a more complicated one. Codes here were either given by economic theory or emerged through the interviewees' responses.

This type of data analysis entails five key interrelated steps: familiarisation, establishing a thematic framework, indexing, charting, mapping and interpreting (Ritchie and Spencer, 2002). During the first and second stages, the themes and subthemes were the product of thorough reading and rereading of the interview transcripts to obtain a substantial understanding of the recurring themes and issues that respondents deem significant. In other words, a thematic framework was provided within which the content may be

categorised and filtered. In the third stage, this framework was systematically applied to the data in their textual form and organised into core themes or codes. In a fourth step, the data were laid out by key themes in different matrixes, with entries for several respondents on each matrix.

The ordering and grouping of the individual cases were based on categories that might have a substantial impact on patterns of experiences or behaviour (Bryman, 2016). The dimensions considered here were the type of institution participants came from, as presented in Table 6-1, such as foreign or domestic institutions, commercial or investment banks, etc., and the area where participants worked. Finally, when all the data had been sorted and plotted into matrixes according to the main themes or codes, it was possible to analyse the dataset as a whole, identify underlying motivations, patterns and explanations, and bring together essential data features as shown in the next section (Ritchie and Spencer, 2002).

6.1.5 Potential Limitations of Qualitative Research

Some limitations could be raised against this study. The critiques addressed in this section focus on the specific design and assumptions of the qualitative study. That is, on the particular use of semi-structured interviews. One general criticism of qualitative research made by quantitative advocates has been focused on its subjective nature, which could lead to biases in terms of sampling techniques and findings (Bryman, 2016). As to the former, the particular sampling techniques used here could lead to two possible biases. First, in terms of snowball sampling, participants could tend to recommend like-minded participants and/or participants from a similar institutional background, which could lead to an overrepresentation of a particular group in the sample. However, attempts to reduce this bias were set on the diversity of the researcher's network. Given the researcher's former employment history, initial participants came from a diversity of institutions with different socio-cultural backgrounds regarding gender, age and position in their firm. As a result, gaining access to a diverse financial market participants' network was not difficult. A second bias that might arise in terms of theoretical sampling is that some participants might have a biased view of the relative importance of other market participants due to their business structure, client structure or market position. However, interviews with participants from diverse financial institutions and areas were conducted to avoid these biases. Still, eventual biases have been considered when conducting data analysis.

In terms of the biases related to results, these can be divided into interviewer and interviewee biases. As to the former, qualitative findings might rely too much on the interviewer's view about what is significant. However, the open-ended nature of the interview's questions requires that participants answer in their own words (Bryman,

2016). In addition, thematic analysis was used to avoid this bias. Data analysis focused on the recurrent topics that participants brought up, which were considered important to this research's findings. In a similar vein, a second critique that arises with semi-structured interviews is that the interviewer might deliberately or unintentionally shape the participants' answers. For example, follow-up questions can focus on areas of interest of the interviewer, which shapes participants' responses toward what the interviewer believes to be essential. However, most of the results presented in this chapter have been corroborated by many participants in an attempt to reduce such biases. On the other hand, there might also be biases stemming from the interviewees themselves. Interviewees might try to impress the interviewer and give responses even if they do not know the answer or have difficulties recalling specific issues. An attempt was made to reduce these biases to a minimum through follow-up questions, verifications and consistency with other responses.

Finally, a general weakness of qualitative studies is the problem of generalisation of results. While providing rich contextual information, a case study approach might lack generality and applicability to other countries. Two points are important to make here, though. Firstly, this dissertation has explicitly adopted an open system approach which advocates the context-specific nature of economic phenomena and questions the possibility of broad generalisations a priori. Secondly, given the historical, geographical and hierarchical nature of institutions and power between countries, it is impossible to expect a uniform transformation of the structure of financial intermediation playing out across time and space. That is, this phenomenon needs to be analysed with reference to a variegated financialisation process rather than a general case context. However, there are common tendencies of financialisation that can be recognised while still recognising the diversity of its forms (Lapavitsas and Powell, 2013; Van der Zwan, 2014).

6.2 Fifty Years of Financial Deregulation: The Chilean Financial Structure from the 1970s until the 2020s

The 1970s-1980s

To contextualise the transformations to the financial structure of the Chilean economy, it is essential to comprehend the historical circumstances and deregulations that gave rise to this structure. Financial liberalisation policies based on radical neoliberal macroeconomic approaches were implemented in Chile since 1973, initially encouraged by US mainstream academics, followed by development strategies pushed by the IMF and the World Bank after the 1982 debt crisis. This process was followed in 1975 by the privatisation of domestic banks, the removal of barriers to foreign banking entry in 1977⁵, and the restructuring of the banking industry between 1974 and 1981, moving away from specialised banks with a specific loan and repayment conditions toward a form of commercial ‘multi-bank’ (Held and Jiménez, 1999). This multibank system was built on the expansion and standardisation of financial institutions’ activities. Further deregulations in the early 1980s⁶ eliminated the barriers between commercial, development and mortgage banks, culminating the process of banking standardisation. Financial companies ultimately distinguished themselves from banks mainly by being unable to accept deposits or finance foreign trade transactions.

In tandem with these measures, quantitative controls regulating banks’ lending were removed, leading to an explosive increase in banks’ placements in the early 1980s. The growth dynamics of loan placements were followed by a significant change in the composition of liabilities due to the deregulation of banks’ funding sources⁷. Initially, deposits provided most of the banks’ financing. With constraints removed, these funds were increasingly replaced by external sources, encouraging Chilean banks to rely on foreign credit to finance their assets (loans). The primary source of Chilean banks’ funding originated from US money-centre banks. By the end of 1978, these banks, which specialised in handling large syndicated Eurodollar loans, owned nearly \$36 billion in outstanding loans to Latin America (FDIC, 1997b). Increased exposure of the loan portfolio of Chilean banks to foreign currency risk⁸, combined with rising credit risk owing to the exponential growth of bank lending and high-interest rates, led to the 1981-1986 debt crisis in Chile.

Due to the debt crisis, sixteen financial institutions were liquidated, mostly to foreign institutions, representing twenty per cent of the financial system’s placements in September 1981 (Held and Jiménez, 1999). In addition, a banking reform was enacted in

⁵ For details on the effects of this policy, see Chapter 5.

⁶ Decree Law 3,345 and Law N. 18,022.

⁷ Decree Law No. 944, March 1975

⁸ This risk became evident with the devaluation of the Chilean peso in 1982.

1986⁹, which suggested additional modifications to the financial deregulatory measures that had been in effect since 1973. The respective changes were mainly aimed to increase risk transparency by rigorously identifying natural and legal individuals ‘linked’ to the ownership and management of financial institutions and to strengthen their solvency and liquidity situation. However, the banking reform of 1986 did not restrict the limits of credits that a financial institution could provide.

The shift toward an individualist (neoliberal) philosophy in the banking sector was followed by a transformation in pension arrangements in 1981. In particular, the privatisation of pension systems via the creation of the AFPs¹⁰, which favoured individual capitalisation over intergenerational solidarity and state support in retirement provisioning (Bonizzi and Guevara, 2019). As a result of Chile’s 1981 pension reforms, other countries in Latin America, including Peru (1993), Argentina and Colombia (1994), Uruguay (1996), Bolivia and Mexico (1997), El Salvador (1998), and Costa Rica and Panama (2000) adopted individual capitalisation systems. Pension funds were initially only allowed to invest in a relatively small number of eligible securities, mainly public and private debt and fixed-income instruments, such as time deposits, mortgage bills, corporate bonds, and government instruments. Later in 1985¹¹, these funds were authorised to invest in shares of open corporations, and in 1990, in investment fund quotas and foreign fixed income. In 1994 the Capital Markets Act¹² was created, which allowed pension funds to invest in shares, mutual fund quotas and foreign equity (Superintendencia de Pensiones, 2009).

The 1990s-2000s

In 1989, the US Treasury subsidised ‘Brady Bonds’, a strategy devised by Nicholas Brady, the then-treasury secretary under the Bush administration. The plan attempted to remove Latin American debt from private lenders while tacitly recapitalising the banks holding this debt (FDIC, 1997a). Significant funding was obtained from the IMF, the World Bank, and other sources to aid with debt reduction. Debtor countries utilised these funds to execute options, including debt-equity swaps, buybacks, exit bonds, and other solutions¹³. To qualify for borrowing privileges, debtor-Latin American countries ‘had to agree to introduce economic reforms within their domestic economies in order... to

⁹ Law Number 18,576

¹⁰ Decree Law No. 3,500 was promulgated on November 4, 1980 and entered into force on May 1, 1981.

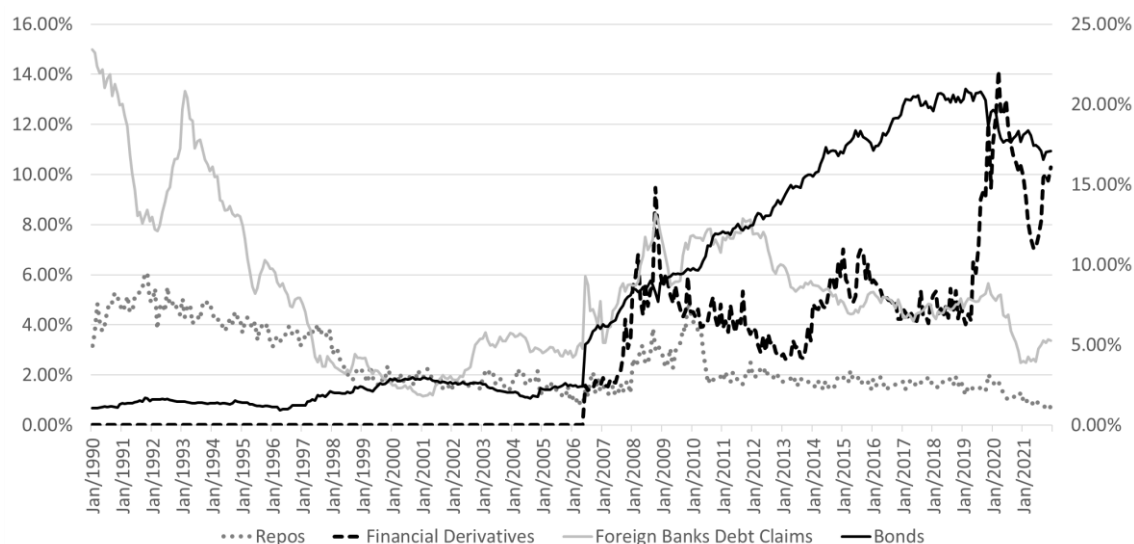
¹¹ Law Number 18,964

¹² Law Number 19,301

¹³ Chiong et al. (2014) demonstrate that the form adopted for subprime securities was modelled precisely after that used for Brady bonds, with the objective of guaranteeing that those holding debt obligations bought as part of securitisation processes would be made whole regardless of the impact on borrowers who were parties to the original loan contracts.

enhance debt-servicing capacity’ (FDIC, 1997b, p.202). Some of those policies included the adoption of the capital regulations of the Basel Committee.

Table 6-2: Alternative Funding Sources of Chilean Banks as a Percentage of Total Assets, January 1990 to December 2021



Note: Bonds are on the right-side axis. Customer deposits are omitted.

Source: Prepared by the author with data obtained from the CMF (Commission for the Financial Market, see www.cmf.cl)

Between 1990 and 1999, the banking industry’s assets grew by 92 per cent. The driving force behind this expansion was banking loans, which increased by 134 per cent and accounted for 69 per cent of the GDP in 1999, with consumer loans growing by more than 500 per cent (Marshall Rivera, 2020). The increase in liabilities was just as substantial. Along with the Brady Bonds programme, rising capital inflows into the Chilean economy widened Chilean banks’ liquidity options once more and strengthened Chilean banks’ reliance on external financing (Calvo et al., 1993; Ffrench-Davis and Griffith-Jones, 1995).

The ‘success’ of the post-1986 period is often referred to as the ‘Chilean miracle’—a term coined by Milton Friedman—which encouraged many Latin American economies to implement similar neoliberal economic reforms. Nevertheless, the Asian financial crisis stained Chile’s economic ‘success’, as it had a significant impact on the liquidity and external funding sources of Chilean banks, along with heightened currency and interest rate volatility (Ffrench-Davis, 2018). As seen in Table 6-2, foreign banks’ claims fell sharply by the end of 1994 and remained low until January 2003.

This neoliberal process was followed by the implementation of the 1997 General Banking Act. The adoption of the Basel Committee policies facilitated the convergence of Chilean banks toward globally accepted solvency standards. This Act also allowed universal banks to broaden their funding sources by including the authorisation to issue bonds or debentures, letters of credit, and performance bonds on both domestic and international financial markets in an effort to reduce their dependency on foreign loans. It also permitted universal banks to engage in activities that go beyond the traditional banking businesses, such as money brokerage, intermediation or brokerage of trading and debt instruments; entry into derivative transactions; trading money market instruments, foreign exchange, financial futures and options, exchange and interest instruments; acquisition, sale, and trading of debt or fixed income instruments; provide underwriting services; and serve as a placement agent and underwriter in connection with the issuance of newly issued shares of public corporations' stocks¹⁴. This Act also enabled Chilean banks to internationalise their operations.

Additionally, this Act authorised universal banks to incorporate subsidiaries to engage in a variety of non-traditional banking activities, including securities brokerage services; management of mutual, investment, and foreign capital investment funds; securitisation; insurance brokerage; leasing; financial advice; real estate business; and management of housing funds¹⁵. This permitted banks to place first-issue shares of open firms on financial markets through their securities firms or stockbrokers. In addition, banks were granted to own stocks or participate in banking support companies. These corporations aim to enable compliance with bank purposes and carry out banking activities other than fund-raising (Moro and Lasagna, 2021). The authorisation of these activities triggered a transformation in the institutional structure of the Chilean financial system, as shown in Chapter 5.

The General Banking Act of 1997 removed market barriers between commercial banking, investment banking, and insurance, allowing multi-banks (or universal banks) to participate in a wide range of businesses. It also allowed banks to operate mainly as financial conglomerates, posing severe challenges to banking and financial regulation, particularly when a consolidated picture of their activities and risks is required. If oversight exclusively focuses on banking operations, the perspective is limited. On the other hand, if all operations are to be analysed, the regulators will have difficulties in aggregating and consolidating assets and risks, as they are of a very different nature (Marshall Rivera, 2020). The existence of non-financial economic groups also has a significant role. These 'economic groups' sometimes venture into financial activities,

¹⁴ Article 69 of the General Banking Act 1997.

¹⁵ Article 70 of the General Banking Act 1997.

which complement the various non-financial activities they maintain in other sectors. In this regard, the borders of their businesses extend beyond the strictly financial.

Furthermore, this Act broadened banks' liquidity sources by allowing them to issue debt on domestic and international bond markets. However, due to the contagion from the shocks of the Asian crisis in 1998-1999, the Chilean economy was placed in a position of extreme vulnerability. To stabilise the economy, the Chilean government and Central Bank proposed a new macroeconomic policy with four components: (i) a fiscal policy governed by a fiscal rule; (ii) a monetary policy aimed at achieving an inflation target; (iii) complete exchange rate flexibility; and (iv) an extremely open capital account (Ffrench-Davis, 2018). Consequently, most of the remaining regulations were eliminated. This neoliberal process culminated in April 2001 with the suspension of the reserve requirements on financial flows (which were already at zero per cent) (BCCh, 2001). With this, the complete financial opening of the Chilean economy was achieved.

In addition to the liberalisation of the banking industry, the implementation of the multi-fund system in 2002 extended the investment options of Chilean pension funds¹⁶. This system authorised AFPs to manage five different funds, which differ in the proportion of their portfolios allocated in equities. In other words, the fundamental difference between these portfolio allocations is the existence of greater or lesser risk. Except for pensioners, contributors may freely choose their portfolio allocations. However, due to the great majority of affiliates' lack of knowledge in asset management, it is undoubtedly unwise to entrust them with their own portfolio allocation decisions. This implies that the portfolio selection is ultimately affected by the commercial strategies of AFPs or by short-term fluctuations in the profitability of the funds—with riskier funds being noticeably more attractive—without taking a longer investment horizon into account (Berstein et al., 2011; Berstein and Ruiz, 2005).

In addition to these financial deregulations, in 2001, a program of a series of deregulations aimed to modernise financial markets by introducing several financial innovations. The law number 19,769, promulgated in October 2001, authorised flexible investments of mutual funds and insurance companies, the creation of general fund managers and the internationalisation of banking. This process continued in 2007, when a further reform¹⁷ introduced institutional changes for the development of the venture capital industry, along with the allowance of public and investment funds to invest in small and medium firms (SMEs) bonds, continuing in this way the objective of 'modernising' the Chilean financial market.

¹⁶ Law Number 19,795

¹⁷ Law Number 20,190

The 2000s-2010s

The Chilean economy did not begin to recover from the Asian crisis until 2004 when a favourable external shock in export prices persisted until 2008. This indicated that the economic reactivation was strongly driven by the improvement in the terms of trade (mostly owing to the price of copper), rather than by the macroeconomic measures. The rise in commodity prices made interest rates and spreads charged to Chilean banks for foreign debt attractive again. However, rising dependence on cross-border banking flows facilitated the spread of global capital market shocks to the domestic banking sector (Ffrench-Davis, 2018). Access to funding from international banks deteriorated dramatically for Chilean banks during the GFC, as base rates (such as Libor and Eurolibor) and spreads rose significantly (Alegría et al., 2018; Biron et al., 2019).

In the period following the GFC, liquidity and cross-border loans declined considerably, as Table 6-2 shows. The Chilean central bank used foreign currency swaps, repos in Chilean pesos, and expansion of acceptable collateral to enhance liquidity. However, due to the monetary expansion measures (such as quantitative easing) of the most advanced economies to reactivate their markets, a portion of these funds flowed through to some ECEs (Ffrench-Davis, 2018). Figure 1-2 illustrates that external financing peaked in 2009, with a rise of the same magnitude in financial derivatives. This implies that Chilean banks had relatively easy access to foreign capital from 2009 to 2011.

The neoliberal process continued in 2011, even after the GFC, with the adoption of a novel reform¹⁸ that aimed at ‘modernising’ and promoting competition in the Chilean financial sector. This law authorised international insurance companies to sell all types of insurance in Chile, including life and health insurance, and to invest the proceeds in Chilean financial markets. Furthermore, this (de)regulation permitted national and international financial institutions and funds to ‘compete’ in financial markets. A closer examination of Table 6-2 reveals that towards the end of 2011, bond placements by Chilean banks on financial markets have been increasing dramatically, surpassing even foreign bank loans. This figure also shows how market-based funding has become the most important source of bank funding among alternative sources. In other words, this law culminated the neoliberal process by sponsoring the establishment of the Chilean wholesale market.

This shift towards a higher reliance on bond financing was accompanied by an amendment to the General Banking Act of 1997 in January 2019¹⁹, which introduced several innovations in supervision, as well as adjusting banks’ capital requirements and other obligations to the standards set out in Basel III (Moro and Lasagna, 2021). The aim was to modernise the banking system by aligning it with international standards and

¹⁸ Law Number 20,552

¹⁹ Law Number 21,130

practices so that these institutions can compete in global financial systems and face the risks inherent to their activities. In addition, the commission that supervises the banking system was eliminated with this reform, centralising its regulation in the commission for the financial market.

Likewise, this regulation requires banks to implement risk management systems, which forces banks to identify and analyse the potential risks in the banking business, and then to develop and execute an action plan to deal with these risks—that is, accept or mitigate these risks in banks' balance sheets. It also creates criteria for dealing with 'systemic banks', i.e., those whose eventual financial problems could have a domino effect on the rest of the institutions, forcing the authorities to prevent their bankruptcy and harming the economy as a whole. In other words, systemic banks are now qualified for TBTF guarantees.

The portrayal of these measures is intended to reflect the considerable transformations to the Chilean banking system and financial sector that have occurred since the 1970s. In addition to these measures, the global growth of financialisation has permitted foreign global banks and institutional investors' funds to seek out excessive profits and yields by expanding the scale and scope of globalised financial markets. The following sections elaborate on the main features of the Chilean banking sector described by the participants.

6.3 The Chilean Financial Structure

The interviews highlighted three crucial features of the Chilean banking sector and its financial structure. The first and second characteristics describe the interrelation of banks' liability structures—that is, banks' liquidity practices—and their lending decisions. Specifically, the first crucial feature of the Chilean banking system involves the extent to which market-based credit is used to rectify mismatches between retail loans and deposits, and to increase credit flows, a phenomenon that participants highlighted to be a common practice in Chilean commercial banks. In other words, bank loans exceed customer deposits on banks' balance sheets. A second characteristic involves the extent to which bank lending decisions are driven by the cost of these novel funding sources and the cost of hedging interest rate, inflation and currency risks. The final feature concerns the extent to which banks' behaviour is geared toward greater involvement in trading and market-making activities to arrange loans and debt instruments for raising market-based funding and creating markets for these instruments. As argued in this thesis and previous chapters, increased deregulation, competition (entry of foreign financial firms and capital flows), and financial innovation (adoption of financial techniques of advanced economies) have contributed to this particular financial structure.

6.3.1 Wholesale Funding

Competition by Innovation

One crucial feature of Chilean commercial²⁰ banks is the use of wholesale funding or market-based credit as a platform to increase bank loans. Participants emphasised that the primary reason banks turn to wholesale funding is increased competition in the financial sector, mostly due to the entry of foreign financial firms that have shared or total foreign ownership of Chilean banks, and increasing M&As. As participants mentioned, this has led Chilean-owned banks to adopt ‘*aggressive credit strategies to capture market share*’ and financial innovation. To comply with their asset targets, Chilean banks are engaging in ‘asset-liability management’, a practice in which they establish asset (credit) growth targets—a ‘*financial plan*’—and meet them by borrowing in wholesale funding markets²¹. Asset growth targets, however, depend particularly on the ‘risk appetite’ that the bank’s shareholders have at a given moment. Liability management is an innovative financial practice that has allowed commercial banks to dramatically leverage their operations and expand their balance sheets (Knafo, 2022). It was developed in the 1960s as an aggressive strategy by US money-centred banks to avoid losing customers due to the rise of money markets (Cerpa-Vielma et al., 2019).

Participants highlighted the importance of institutional investors as crucial agents in the rise of wholesale funding. Some participants referred to the relevance of domestic institutional investors, such as pension funds. Pension funds’ investments have expanded in recent decades as a result of Chile’s implementation of a private pension system as showed in Chapter 4. In addition, there is plenty of empirical evidence documenting the rise of institutional investors in the region since the 2000s (Bonizzi, 2016; Bonizzi, 2017a; Bonizzi, 2017b; Bonizzi and Guevara, 2019; Bonizzi and Kaltenbrunner, 2019; Bonizzi et al., 2021; Bonizzi et al., 2023).

As one participant mentioned: ‘*my bank is a commercial bank; therefore, a large part of its funding comes directly from customers’ savings (deposits). However, there is a portion that is not. This is due to a unique characteristic of the Chilean market, as Chileans save primarily through the pension system and mutual funds, as opposed to deposits. Consequently, to comply with the bank’s financial plan, we must finance ourselves via capital markets*’. Another participant added, ‘*as pension and mutual funds do not necessarily invest in deposits, but can invest in equities, etc., the Chilean financial system*

²⁰ Usually, investment banks are more likely to raise funds from wholesale funding markets, as they do not typically accept retail deposits.

²¹ This does not imply that banks are merely acting as financial intermediaries in the financial system. As was outlined in Chapter 3, the process of creating credit results in the creation of new liabilities, and this is unrelated to a bank’s reserve position. This only reflects a bank’s concern to being able to respond to its financial obligations when debts mature, as Minsky (1975) propounded.

loan-to-deposits ratio is around 135 per cent, requiring banks to seek market-funding constantly'.

Others also emphasised the value of having insurance companies as subsidiaries, as this has allowed banks to access to better prices in the market. As the next section (6.4.2) shows, this may be explained given that a significant component of the price paid by banks in the market (as Chilean banks typically raise unsecured funding), depends on the overall creditworthiness of the bank; that is, on the credit risk perceived by institutional investors. Others have also mentioned the significance of international institutional investors in Chilean financial markets. However, as one participant stated: *'when we issue debt, for example, a bond, this bond goes to an auction in the stock exchange. The market sets a price for that bond, and the highest bidders get it. You do not know if there was a money market or not. We have genuinely no idea in what form or where the funds come from'*. In this regard, what banks do know is that a significant portion of their liabilities are shorter-term than their assets, requiring them to constantly refinance their position whenever a short debt matures. And to do so, they have turned into wholesale funding.

Adoption of Practices

Asset growth targets have promoted and 'early adoption' and 'imitative innovation' strategies in terms of financial practices. Foreign-owned banking participants (established in Chile) emphasised the importance of the 'early adoption' of these innovative financial practices from their parent entities (in the US, Spain or UK) for raising bank revenues and capturing market share. Likewise, these strategies are analysed by their competitors (mostly foreign-owned financial firms) and, if applicable, imitated. As one banking participant from a foreign-owned bank mentioned: *'we analyse what activities and practices our similar competitors [large foreign banks] are doing to determine whether it makes sense for us to pursue them as well'*. In addition, domestic bankers also mentioned pursuing 'imitative innovation' strategies, especially from large foreign banks. As one domestic-owned banking participant stated: *'we are always following what our peers do; you especially look at [large foreign banks] in terms of the markets they access, strategies, and prices. We will always attempt to improve upon what they are doing, or at the very least to adopt similar strategies and practices. In general, we are driven by that'*.

These strategies also include following a specific structure of loans, which participants described as highly active in mortgage and corporate loans, and for financing substantial loans for *'an important client'*. This has led banks to assume *'additional risks'*. As one participant mentioned, *'attracting customers today is not easy. Banks are incredibly consolidated, and almost all customers have more than one account open at a bank. So, the bank is willing to some extent, to capture more market share to become more*

important in the market. This implies assuming additional risks. I have always heard that banks have never made money with mortgage loans. However, banks are granting mortgages more than ever. Sometimes, banks finance anything to build customer loyalty’.

Moreover, participants suggested that banks could involve their non-banking subsidiaries in pursuing these objectives by removing a portion of the credit risk from their balance sheets. As one participant from an asset manager subsidiary explained, *‘we launched a new investment fund because the bank had an important client, to whom it could lend money, but it did not want to lend the full amount. So, we supported the bank and financed a portion of that client’s loan through this investment fund. Since we are not a bank, we do not need to take additional safeguards more than a few collaterals. So, we are willing to assume that bank risk, which is not ours. This is simply because the funds are not ours, they belong to our clients, and of course, you have to honour them later. But if it carries a higher return, we can take a such risk’.*

Another asset manager participant added, *‘there are liquidity needs and a risk appetite for some non-financial companies that sometimes banks cannot attend due to regulations and risk policies. So, we [asset managers] are an emerging but very attractive actor, as we can assume more risks than the bank can. We can invest in alternative funds. We started with real estate investments, and these funds have worked quite well. However, this type of business is relatively novel, no more than two years’.* This implies that the financial sector is its increasing risks through banking subsidiaries so that banking holding companies can increase their profits.

6.3.2 Banks’ Funding Costs

The cost of funding for a bank is the price it must pay to restore its liabilities. It is helpful to differentiate between the marginal cost—the cost of an additional unit of funding—and the average cost of funding—the cost of the current funding stock (for example, past flows of funding that have not yet matured). The funding cost is often the bank’s starting point in determining the interest rate to charge on particular types of loans²². The profitability of a traditional bank’s decision to extend a loan can be determined by the difference between the average price of lending and average funding costs (Hardie and Howarth, 2013). This measurement is known as the ‘net interest margin’.

This implies that if the price for new funding increases, the bank’s net interest margin and, consequently, its profitability will decrease (assuming it maintains its lending rates at the same level). The magnitude of the price rise will be determined by both how much the marginal cost of funding increases and how large the flow of new funding is relative

²² Banks add any necessary compensation required to account for the risk that not all firms or households will repay their loans in full to set the interest rate provided to their customers.

to the stock of existing funding, as this defines how much the marginal cost of funding impacts the average cost (Beau et al., 2014). Therefore, understanding funding costs is crucial as they represent a significant factor in a bank's profitability.

Table 6-3: Components of Bank Funding Costs

Other costs
Credit risk premium - Macroeconomic factors - Bank-specific factors
Liquidity risk premium - Macroeconomic factors - Bank-specific factors
Risk-free rate

Source: Prepared by the author based on Beau et al. (2014)

When a bank issues a bond, for instance, the bond represents an asset from an investor's perspective, and the interest rate is the return (q) on the investment. From a Minskyan perspective, it is the rate of cash inflows, or the quasi-rents generated by this asset. For banks (the unit issuing liabilities), the compensation investors and depositors expect in exchange for funding banks' activities, represents a portion of banks' funding costs, that is, a portion of (c). In wholesale funding, the funding costs (c) can be decomposed into a risk-free component, a combination of credit risk and liquidity risk premia, and other costs (Beau et al., 2014), as Table 6-3 illustrates. Participants described that the risk premia are affected by both 'macro' factors (such as the overall economic outlook or a rise in the riskiness of the banking sector) and factors that are idiosyncratic to each bank (their creditworthiness or reputation, for example). The breakdown of the bank's funding costs to raise funds in wholesale markets according to participants is examined in detail in the following section. This section is divided into direct and indirect costs, with the main distinction being whether the cost is directly included in the price banks pay for their funding sources or not. In the case it is not, it implies that a bank is incurring in additional costs to secure this funding, which are not reflected in the market price.

Direct Costs

6.3.2.1 Risk-free Rates

Chile's central bank follows an inflation-targeting regime, in which monetary policy is implemented by setting an interest rate: the *Tasa de Política Monetaria* (TPM) (monetary policy interest rate). In normal times, short-term interest rates follow the evolution of the interbank rate very closely, and the latter is very close to the target rate set by the central bank (Lavoie, 2014). Therefore, this short-term interest rate can be viewed as the 'risk-free' rate, given that the risk of the central bank defaulting is generally considered to be the lowest of any economic agent. Risk-free rates also encompass rates at a longer time horizon; in this case, the risk-free rate reflects market participants' expectations of future policy rates.

Because risk-free rates are a common component of funding costs for all types of bank funding, it is common to refer to bank funding as 'spreads'—the difference between funding costs and an appropriate risk-free rate (also referred to by participants as the base rate). As one participant noted *'if the bank decides to issue a bond, the money and trading area examines if the interest rate offered on the market is sufficient. If it is, the bond is issued. This interest rate comparison is often conducted on a spread over the base cost. And the base is a proxy for some risk-free or low-risk rate, such as central bank papers or the swap curve. Typically, all Chilean banks use the swap cost curve to compare since it is a fairly close proxy for the monetary policy interest rate'*. In this case, the short-term interest rate or the risk-free component of banks' funding cost is determined by the interest rate on central bank bonds or swap instruments.

6.3.2.2 Credit and Liquidity Risk Premia

Credit and liquidity risk premia reflects the proportion of a bank's funding costs that institutional investors expect in exchange for funding banks' activities. The credit risk premium is the compensation investors demand when buying bank debt for bearing the risk that a bank will default on its debt over and above the risk-free rate of return. Changes in the macroeconomic environment might lead investors to believe that a particular bank has become riskier relative to its peers; or that the banking industry as a whole has become riskier, which may lead to a general increase in banks' credit risk premia. In general, unsecured funding is backed by the overall creditworthiness of the bank; therefore, if institutional investors believe this might change, then the credit risk premium of a bank will increase. Alternatively, this premium might also increase due to bank-specific factors: if investors believe that a bank's use of its funds has become riskier in relation to the amount of capital the bank has, this premium will increase as institutional investors' risk increases when a bank's exposure increases.

On the other hand, liquidity risk in wholesale funding entails the risk that an asset cannot be quickly converted to cash if its price is substantially reduced. The maturity and currency of an asset are crucial determinants of the liquidity risk premium. Therefore, short-term assets will demand a lower liquidity risk premium, whereas long-term assets will require a higher premium to compensate for the inconvenience of not having access to these funds for a more extended period. Similarly, the currency in which an asset is denominated also affects the liquidity risk premia. As the Post-Keynesian literature on currency hierarchy has highlighted, ECEs' need to offer higher returns in the form of higher interest rates to compensate for the lower liquidity premium of their currencies (Andrade and Prates, 2013; Kaltenbrunner, 2015; Bonizzi, 2017a; De Paula et al., 2017). Liquidity risk is influenced by both macroeconomic and bank-specific factors. Changes in the macroeconomic landscape translates into institutional investors' fear and confidence surges, which in turn translates into domestic banks' funding costs. These fears and confidence surges can result in significant wild swings in financial-market sentiment and money flows across global borders, which could destabilise domestic asset prices, and thus, banks' funding costs.

Bank-specific factors influencing liquidity premia can also be related to the reputation that a bank has in financial markets. This is because fewer investors are likely to hold a debt instrument issued by small bank, as this asset (from an investor's point of view) might be challenging to sell later in the domestic market. This implies that investors will demand a higher liquidity risk premium when investing in a debt instrument issued by a small institution compared to investing in a debt instrument issued by a large and foreign-owned institution. Following is a discussion, according to participants, of the macroeconomic and bank-specific determinants of credit and liquidity risk premia for Chilean banks.

Macroeconomic Determinants of Credit and Liquidity Risk Premia

The macroeconomic component suggests that liquidity risk premia might increase across the banking industry if investors lose confidence that the bank funding instrument they invest in will maintain its value. Institutional investors often place a higher liquidity risk premium during economic downturns or financial or political crises. As indicated by interviewees, this risk escalated in October 2019 due to a political and social crisis in Chile and in March 2020 due to the COVID pandemic health crisis. To prevent a drying up of the financial market and a significant increase in the liquidity risk premium, the Chilean central bank offered different liquidity tools to increase and manage the liquidity in local and foreign currency. The Chilean government also authorised four withdrawals²³ of pension fund accounts by their contributors, costing the private pension system US\$50

²³ Law Number 21,248.

billion (Thomson and Fuentes, 2022). This policy intended to increase the money circulating in the real economy to tackle the economic effects of the political and social crisis and the pandemic crisis in Chile. It is critical to emphasise that Chile does not have a public pension system, which means that the workers themselves financed this increased liquidity out of their own pockets.

However, banking participants stressed that these withdrawals had a contrary effect on banks' funding costs, as a large part of the banking system relies on Chilean pension funds to finance long-term assets. These withdrawals, in turn, increased liquidity risk premia for the banking sector, increasing banks' funding costs. One participant mentioned, *'you asked me these questions two years ago, and my answers would have been completely different. Before, the debt market was deep. I could issue a bond for 200MM dollars, and one AFP was able to provide it. Today, they offer only 10-15% of the total'*.

Similarly, another participant added that this reduction in liquidity in wholesale markets had been translated into an increase in credit spreads: *'the riskier you are [bank], the more credit spread investors are going to ask you because the amount of liquidity in the primary and secondary markets is lower now. There is even a huge difference between bank and corporate bonds. Because you [bank] with bank bonds, you have the possibility of doing a repo with the central bank. However, you do not have the same option with a corporate bond. Therefore, there is a penalty now in terms of corporate versus bank spreads'*.

This has shifted participants' perceptions of international markets' importance in obtaining wholesale funds, specifically US financial markets. According to participants, offshore markets have acquired increased importance due to the reduction of liquidity in local markets and to diversify risks. According to one participant mentioned: *'offshore markets are becoming increasingly attractive. Today, the AFP system has 20 per cent less money than in 2019, meaning that the AFP system cannot accommodate all transaction requests. This makes offshore markets even more significant'*. In addition, participants appeared very eager to raise funds on US financial markets, as this market gives banks access to funding in US dollars. As one interviewee remarked: *'without access to the dollar, you are doomed'*.

These withdrawals could increase Chile's dependency on offshore liquidity sources and push away foreign investors: *'individual capitalisation promotes the generation of an internal financial market so that it makes you less dependent on international markets. However, if this liquidity position decreases, you are at a disadvantage because the amounts traded begin to drop, and the freedom of capital flows mobility is lost. If you lose the freedom of flows, foreign investors do not come to Chile either because you do not have the flows to back them up when they want to liquidate their position when they need it'*. Participants see the significance of the AFP system in that it provides domestic

liquidity that attracts institutional investors to Chile because they are confident that they may leave at any moment.

As highlighted by participants, another crucial macroeconomic factor that shapes domestic credit and liquidity risk premia is the international markets' landscape. The liberalisation of the capital account in Chile allowed capital to move freely across borders. As the literature on financialisation in ECEs has shown, large pools of wealth created by international institutional investors have resulted in increasing capital flows to ECEs (Aron et al., 2010; Bonizzi, 2016; Bonizzi, 2017b; Bonizzi, 2017a; Bonizzi and Kaltenbrunner, 2019), including a broad spectrum of new players such as a pension, mutual, and insurance funds (Kaltenbrunner and Paineira, 2018). Capital is desperately seeking returns globally within a context of low global yields.

In an economy where global finance is represented by interconnected balance sheets, any surges of confidence and fear among global investors could constraint institutional investors' liability structures, which entails that their perception of liquidity can change at any moment. Therefore, in conditions of uncertainty, investors would ask for higher yields that are proportional to their exposure to liquidity risks. As currencies in Latin American economies are not considered liquid, it entails that Latin American banks' funding costs will increase as a result of institutional investors' fear and confidence surges. This could also involve a situation in which institutional investors do not have the funds to respond to their cash commitments, and they would have to sell their less liquid assets to obtain more liquid assets. This could result in capitals leaving the country, which will affect interest rates as well.

Changes in banks' funding costs and the availability of reserves, entails that a bank (depending on their balance sheet position) could decide to decrease its loan extensions if it feels that it will be not able to fulfil its obligations. This entails that changes in the availability of liquidity and credit in ECEs are determined, in part, by surges of confidence and fear among global investors—rather than by domestic cycle fluctuations (Cerpa Vielma and Dymski, 2022). As these global flows of funds and credit depend on a global financial cycle (Borio, 2012), they produce wild swings in financial-market sentiment and money flows across global borders. This financial-investor logic feeds the global financial cycles and affects credit and liquidity risk premia (banks' funding costs) of ECEs' banks that engage in these practices.

Participants discussed how factors external to the Chilean economy can destabilise domestic financial markets regarding liquidity and prices. As one participant mentioned: *'On the one hand, for example, a commodity cycle may have a positive impact in Chile, and we will start to see more interest from off-shore investors in bringing cash flows to Chile and participate in Chilean markets, which causes our interest rates to fall. On the other hand, Trump may tweet something unrelated to Chile, but that harms us, and*

investors leave, increasing banks' liquidity risk premia. Furthermore, the price of assets in Chile are not immune to what happens overseas'. Therefore, external factors or shocks are converted into swings in the availability of funds and price (banks' risk premia) for the Chilean economy.

Participants also emphasised that the liquidity policies the FED applied in the United States to tackle the COVID crisis in this country have prompted an increase in cross-border capital inflows to the Chilean market. As one participant mentioned: *'with all that is happening today, we are amid a pandemic. The possibility that bank provisions will increase in Chile is 100 per cent. The likelihood that companies begin to bankrupt is also high. And yet, spreads today are lower than before the social and political crisis, even before the pandemic. And it has a lot to do with the amount of liquidity entering the market from the United States because the FED injected so much money. And these people have to put this money to work. So, I believe the risk assessment today is not the most adequate in Chile, mainly because liquidity is leading'*.

This entails that increased capital flows into the Chilean economy are, thus, a crucial factor in the profitability of Chilean banks because they affect the liquidity of the Chilean financial market. In turn, this impacts banks' risk premia, impacting their funding costs and, consequently, their lending decisions and profitability. This reflects Chile's subordinate position in relation to global money and capital markets as capital inflows are predominantly short-term, seeking financial yields rather than assuming risks. Meaning that these flows not only cause continued volatility, external vulnerability, and subordination to the currencies of the ACEs (Bonizzi et al., 2020) but also undermine the profitability of domestic banks and pose serious risks to financial stability, which in turn contribute to deepening domestic financialisation further.

Bank-specific Determinants of Credit and Risk Premia

The bank-specific determinants of credit risk premia involves an investors' analysis of a bank's use of its funds. As one asset manager mentioned, *'we look at everything to set a credit risk premium. For example, what are the bank's risk policies, processes, track record, etc.'*. Therefore, it is crucially important for banks' funding costs, the overall creditworthiness or the reputation a bank has in financial markets. This has significant implications in terms of accessing these markets, as there are differences in terms of the issuers. If a large and foreign-owned bank is issuing debt, as one participant mentioned, *'its creditworthiness derives from its parent entity'*. This means that local banks have more restricted access to these markets. This implicit restriction for domestic banks is reflected in the price (the funding costs) they pay, which is higher than a foreign-owned bank. As one participant stated: *'the price you pay for being [a large foreign bank] is not the same as what a small local bank pays to obtain funds on the market'*. Similarly,

another participant explained that *‘one issue is how much it costs the bank to finance itself because it is [a large bank], and another is how much it costs due to the current level of interest rates’*.

Similarly, an asset manager stated: *‘a bank will pay you more if it is an unattractive bank, which translates into a greater credit risk premium’*. Likewise, another asset manager mentioned that banks’ credit risk premia is classified according to their asset class: *‘our risk premia are based on asset classifications. The first asset class consists of [large foreign banks, names omitted], followed by large national banks. Finally, there are the small local banks with the poorest asset class’*. This reflects that domestic-owned banks’ constraints in their liability structures are greater than foreign-owned banks. This difference in access and price between domestic and foreign-owned banks reflects the hierarchical nature of the global financial system. It also reflects that hierarchical relations in contemporary finance are not only reflected in monetary or productive realms, but also, at a meso-level within domestic economies, as the presence of foreign-owned banks in domestic markets creates additional hierarchical levels within these economies, which are reflected in domestic banks’ restricted access to domestic wholesale markets and increased prices.

On the other hand, the idiosyncratic component of the liquidity risk premium depends on factors such as how frequently the bank’s debt is traded in secondary markets. This suggests that institutional investors are likely to demand a higher liquidity risk premium when investing in debt instruments issued in currencies with uniformly inferior positions in the currency hierarchy compared to debt instruments issued in currencies with higher positions in this hierarchy. This also implies that investors demand a higher liquidity risk premium when investing in a debt instrument issued by a small institution compared to investing in a debt instrument issued by a large institution. This is because fewer investors are likely to wish to hold this instrument as it might be challenging to sell later. This suggests that global banks—which are, by default, large—established geographically in nations with uniformly inferior positions in the currency hierarchy have access to lower liquidity risk premia compared to small local banks, reflecting a micro-level layer of subordination in domestic economies.

This phenomenon reflects two ways nations with lower currency positions in the currency hierarchy encounter financialisation from a subordinate location (Bonizzi et al., 2020). First, as the most liquid capital markets are denominated in the currency of advanced economies, especially the US dollar, Latin American economies encounter with financialisation is from a structurally subordinated position, as institutional investors will always demand higher liquidity risk premia for investing in debt instruments issued in ‘inferior’ currencies in the currency hierarchy. Second, this phenomenon also shows how global banks operating in this financialised financial structure create new hierarchical levels within domestic economies, as access to wholesale funding is determined by

investors' perceptions of banks' liquidity and credit risk, which locks in the asymmetric structure of global financial power.

Indirect Costs

6.3.2.3 Costs of Hedging

A bank will usually pay a slightly higher cost than implied in the interest rate of the debt instrument due to hedging costs. For example, a Chilean bank may issue a bond denominated in US dollars, which pays a fixed interest rate. However, if the Chilean bank's assets are mostly denominated in Chilean pesos, it will generally prefer to have its funding in Chilean pesos too, to avoid a currency 'mismatch'. A bank would typically hedge the currency risk associated by finding a financial market participant willing to swap the dollars the bank receives from its investors for the equivalent amount in Chilean pesos. Alternatively, banks can lock in an exchange rate value by a forward contract. In addition, banks generally prefer to pay out floating-rate interest payments on their funding instruments to reduce interest rate risk. In this sense, banks usually hedge the risk incurred when issuing a fixed-rate bond, for example, by entering into an interest rate swap to switch the proceeds of the bonds from fixed-rate to floating-rate cash flows. These costs, however, are not reflected in the price banks pay for their funding sources.

One participant emphasised the importance of hedging these risks because it removes the risk from the bank's balance sheet and also enables the bank to raise short-term funds: *'As there is mainly a swap and government bond market, I may close the base risk on these markets if I so wish. For example, if the bank wants to issue a seven-year bond and I anticipate that interest rates will decrease further, I can close this risk (since my liabilities are at a higher rate) on the market via the swap curve and switch the bond payments to a floating-rate, taking that risk off from the bank. The bank is just left with the spread it paid to finance itself. In addition, because the swap is an instrument that does not require initial cash flows, it allows the bank to raise cash. Therefore, hedging this risk involves the bank is raising cash and is no longer exposed to interest rate fluctuations'*.

The indirect costs of hedging usually involve hedging against interest rates, currency, and, in the case of Chile, inflation rate risks. The latter is particularly significant because Chile uses a unit of account in addition to the Chilean peso, the *Unidad de Fomento* (UF)²⁴. The exchange rate between the UF and the Chilean peso is used to adjust for inflation. Its original purpose was the revaluation of savings according to variations in inflation, allowing money saved in banks to maintain its purchasing power. Later, in 1990,

²⁴ Ministry of Finance, Law N. 16,253 enacted in January 1967, Decree N. 40, which regulates adjustable operations of development banks.

its use was extended to the credit system. The UF is commonly used in Chile to report prices, particularly the value of houses. According to one participant, this means that *‘every mortgage loan is in UFs’*, meaning that banks that are active in mortgage loans must raise funds in UFs to avoid an increase in inflation risk. Notably, participants stated that banks’ balance sheets in Chile include liabilities in three different currencies: *‘Chilean Pesos, UFs and dollars’*.

As another participant pointed out, this is especially true for *‘long-term or large-scale credit placements, such as mortgages or creating a loan for an important company’*. This participant also added: *‘when commercial areas want to make these loans, they request the price of issuing this debt in financial markets from the money and trading area. This department then provides the ‘pass-through’ of the cost of funding raised externally. This price is represented by a ‘transfer cost curve’ that provides market prices for any term. The money and trading area then distributes it to the various departments in charge of granting loans. This transfer price determines the terms by which loans will be given’*.

In this regard, to reduce inflation risks, banks generate liabilities in the same currency as their mortgage loans; that is, UFs. As a result, participants remarked that banks manage this risk by issuing bonds in UFs, which covers the inflation risk produced by mortgage loans on their balance sheets. Still, the particular risk a bank will take—interest rate, currency or inflation—will depend on its market outlook. According to participants, these risks can be swapped and/or eliminated from banks’ balance sheets based on the bank’s perspective. Participants emphasised the importance of offshore markets for these transactions, with one participant stating that *‘90 per cent of the swap contracts we make are with international banks and financial institutions’*. In this way, banks ‘manage’ exposures to any risk they do not wish to include on their balance sheets by shifting them to other market agents willing to take the contrary position in this transaction.

6.3.3 Wholesale Funding Instruments

Debt Instruments

Chilean banks can choose domestic and foreign financial markets to raise wholesale funds. Participants emphasised that they usually issue debt instruments on domestic markets. That is, debt is usually issued in domestic currency. Consequently, this section focuses exclusively on the debt instruments used in domestic markets. There are, however, certain moments in which banks raise funds in international wholesale markets as participants mentioned, in which debt is denominated (generally) in US dollars. Another way for acquiring US dollars in domestic markets is through the interbank market, secondary markets or directly in OTC contracts. In this way, when an institution

has a surplus position in dollars and there is a bank who needs dollars, they can exchange them directly, without the need to issue debt in a foreign currency.

Table 6-4: Wholesale Funding Instruments Used by Chilean Banks

Maturity	Secured	Unsecured
Short-term	Repos	Deposits from large financial institutions Certificates of Deposit Interbank Borrowing Treasury Bills Commercial Paper Notes
Long-term	n/a	Bonds Debentures

Source: Prepared by the author

Table 6-4 categorises the various funding instruments issued by Chilean banks that were mentioned by interviewees. According to the participants, Chilean banks typically raise unsecured wholesale funds. Chilean banks' most common unsecured debt instruments used in order of participants' perceived importance include bonds, certificates of deposit (CDs), deposits from large corporations and institutional investors, and interbank borrowing. The money trading and distribution area of the bank is responsible for raising these funds. As participants described, money brokers (working in the money and trading area of a bank) arrange loans and debt instruments between banks and investors (as the counterparty), usually in the money market, for a commission. They are also dedicated to creating markets for these debt instruments. In other words, they serve as market makers by building buying and selling prices for banks and counterparties to liquidate positions. In addition, money brokers are also essential for hedging banks' risks as described in the previous section. Money brokers seek a counterparty in financial markets who wishes to hold a contrary position to that of the bank or any bank client. This practice removes the risk from a bank's balance sheet by transferring it to a counterparty, while increases the profits a bank can make when it is used for speculation. However, when transferring risk, the risk is not eliminated from the system as a whole, it only involves a transfer of risk to another financial agent. That is, financial crises could arise when these practices can no longer be supported by the financial system.

Funding Costs of Bonds and Short-term Funding

The fact that Chilean banks issue unsecured debt and sometimes in different currencies, (particularly US dollar as participants mentioned) entails that their funding costs are higher and more volatile than banks that issue secured and short-term debt. When issuing unsecured debt, institutional investors demand a higher credit risk premium as this type of debt is backed by the bank's overall creditworthiness rather than collateral in secured debt. This means that if institutional investors believe that a bank's credit risk will rise (due to macroeconomic or bank-specific factors), this premium will also increase. Issuing long-term debt also affects credit risk premium because investors typically require greater compensation the longer the maturity of an investment as there is a higher chance of a counterparty defaulting over a long time horizon (Fragalé et al., 2013). Because credit risk premium determinants are not held accountable by banks, this cost is also highly fluctuating.

In addition, to compensate for the inconvenience of not having access to these funds for extended periods, institutional investors also demand that banks pay a more significant liquidity risk premium. In this regard, participants emphasised the crucial role of insurance companies in providing long-term funding, as their liabilities have longer maturities than their assets (investments). As one participant mentions, '*insurance companies have constant maturities for 30-50 years, as they commit to a constant flow of funds with a person for more or less 30 years. In this way, insurance companies prefer 30-year investments to match people's flows with a bond that pays more or less the same amount to avoid a mismatch in their portfolios*'. Similarly, another participant pointed out in this context that '*AFPs have shorter, but more liquid obligations. The longer the obligation, the riskier it is. Therefore, there are fewer institutions interested in investing in something very long. So, there are only insurance companies there*'.

Interbank Borrowing

Interbank borrowing is another type of unsecured funding. There are significant differences in participants' answers according to the type of bank they work for when using interbank loans. Participants from large foreign banks referred to raising funds in money markets when asked which short-term funding source they preferred. However, when the same question was posed to a domestic—riskier—bank, participants stated their banks preferred raising funds in the interbank market as '*the money market, by definition, has a spread. So, I would rather tell a [large] (name omitted) bank, hey, I need to borrow 11 million Chilean pesos for one day. It is much cheaper*'.

In addition, a representative from a large international bank mentioned that the interbank market has limits on lines of credit, which prevents large banks from actively participating in this market. As they explain: '*although the interbank market offers a low-risk activity—*

overnight lending between authorised entities in the banking system—the lending limits are highly tight. As a result, it restricts your ability to be highly active, especially when transferring funds from a large to a small bank’.

Similarly, participants mentioned that the Chilean central bank offered different liquidity measures to increase and manage the liquidity in local and foreign currency in the financial sector, mainly due to the political and social crisis that started in Chile in October 2019 and the economic crisis that has been unfolding since March 2020 due to the COVID pandemic health crisis. The measures that participants saw as important were: repos with the central bank, permanent deposit and liquidity deposit facilities, liquidity credit lines with collateral and currency swap contracts. However, while participants from foreign banks and large institutions admitted to being aware of the availability of these measures, they did not employ them. Increased liquidity in financial markets—due to these measures and other factors—have pushed these banks’ funding costs further down, making market-based funding even more attractive.

This suggests that hierarchies exist not only at the global level in financial markets but also at the domestic level. The same global banks that have a significant geographical presence in Latin America are also importing similar hierarchies into domestic markets, establishing a meso-level hierarchy in the global financial architecture, with small domestic banks at the bottom. Global banks pay a significantly smaller risk premium than local banks, allowing them to borrow more freely on wholesale markets. In contrast, domestic banks have restricted access to these markets due to higher risk premia. This also entails that global banks may increase the systemic risk of Chilean financial markets, as these banks are the primary ‘consumers’ of wholesale funding.

Other Debt Instruments

Finally, there was a consensus among participants that repos and securitisation are not widely used practices in Chilean financial markets. However, participants mentioned that while securitisation is not a usual practice, these activities were central to investment banks in Chile, just as they were pre-2008 crisis in the United States (Gorton and Metrick, 2012). They sometimes play a small role at commercial banks, as a supplement to traditional banking activities, particularly within the areas of corporate finance and in institutions related to banks, such as consumer finance companies.

6.4 Conclusion

This chapter has presented the results from 23 semi-structured interviews conducted with financial market participants in Chile. The objective of this study was to analyse the use of market-based credit as a platform for increase credit flow of Chilean banking firms. For this, the focus of the interviews was set on three areas. Firstly, on interviewees' motivation to participate in wholesale markets. This, to understand the structure of Chilean banks' liabilities, banks' liquidity practices and the structure of the financial market as a whole. The second section focused on the mechanisms and structures underlying banks' lending decisions and banks' liabilities structures, i.e., the perception of banking participants of market-based funding instruments available and these instruments' link with actual determinants of their lending decisions. The third section explored participants' operations in wholesale markets, focusing on the practices and decisions they carry out.

The main argument of this chapter is that deregulations in the financial system, increased competition (entry of foreign financial firms), and the adoption of private pension systems, have transformed the practices and behaviour of Chilean banks, and with it, the financial structure of the Chilean economy. The study highlighted three crucial features of the Chilean banking sector and its financial structure. The first feature involves the extent to which market-based credit is used to rectify mismatches between retail loans and deposits, and to increase credit flows. In other words, bank loans exceed customer deposits on banks' balance sheets. A second characteristic involves the extent to which bank lending decisions are driven by the cost of these novel funding sources and the cost of hedging interest rate, inflation and currency risks. That is, Chilean banks' lending decisions are not reserve-constrained but rather are affected by the price of their funding sources and expected returns. The final feature concerns the extent to which banks' behaviour is geared toward greater involvement in trading and market-making activities to arrange loans and debt instruments for raising market-based funding and creating markets for these instruments. As argued in this thesis and previous chapters, increased deregulation, competition (entry of foreign financial firms and capital flows), and financial innovation (adoption of financial techniques of advanced economies) have contributed to this particular financial structure.

The findings of this study align with those of Carreño and Cifuentes Santander (2016), Chilean Central Bank experts who identified wholesale funding as a key and indispensable source of bank financing. They constructed a daily database that reflected all wholesale bilateral positions for all banks in the Chilean financial system, including eight types of exposures defined by the Chilean regulators. These included interbank loans, current accounts, repo, derivatives, deposits, bank bonds, interbank loans with collateral, and operations with settlements in progress. Their research revealed that

between 2009 and 2015, the interbank market, derivatives, bonds, and mutual funds were the principal sources of bank liquidity. Comparable studies to that of Carreño and Cifuentes Santander (2016), have also demonstrated the intensified financial interconnectivity between institutions within Chilean financial market (Boss et al., 2004; Martinez-Jaramillo et al., 2014; Molina-Borboa et al., 2015; Bargigli et al., 2013).

Banks' use of wholesale funding (and banks' lending decisions reliant on funding costs) can affect the prospects for financial stability, economic growth and inflation in Chile. This was evident in the aftermath of the 2008 financial crisis, when banks' funding costs grew significantly relative to risk-free interest rates, exerting upward pressure on lending rates. Moreover, reliance on wholesale funding was a significant indicator of bank vulnerability during the crisis for advanced economies (Cihak and Poghosyan, 2009; Huang and Ratnovski, 2011; Ratnovski and Huang, 2009), especially for the United States and the United Kingdom (Hardie and Howarth, 2013; Hardie and Maxfield, 2013). This is not only true at the individual level, as demonstrated by these studies, but wholesale funding has also been identified in the United States as a substantial factor contributing to rising systemic instability (Pozsar, 2015).

Effects on Financial Stability and Economic Growth

A rise in funding costs may have severe implications for financial stability, economic growth, and inflation when it affects a large systemically important bank. For instance, if a bank chooses to maintain the price of new loans at the same level—that is, it absorbs the rise in costs—this would reduce the bank's profitability, as new loans are loss-making, eroding its capital base. If this condition persists for an extended period, the bank may suffer solvency issues, destabilising the financial system and posing threats to financial stability. Alternatively, the bank could attempt to pass on a portion of the rise in funding costs to its clients by charging higher interest rates on any new loans. Assuming that borrowers keep on demanding the same amount of lending from the bank at a higher rate, the higher cost of credit will reduce households' incomes and firms' profits, resulting in a decrease in economic activity and implications for economic growth (Beau et al., 2014).

Furthermore, the higher cost of credit could result in a future increase in the number of borrowers unable to repay their loans. The bank would be subject to credit losses, eroding its capital and posing threats to financial stability. Even if the bank passes on the increasing marginal costs to its clients, its average funding cost will increase more rapidly than its average lending price, reducing its total profitability. In a final simplified hypothetical situation²⁵, the bank may attempt to pass on higher costs to its customers, only to discover that there is no demand for further lending at a greater interest rate. The

²⁵ These scenarios, of course, show simplified assumptions.

bank's balance sheet begins to contract, which will progressively decrease the bank's profits. Moreover, this credit crunch will reduce economic activity (through lower consumption, investment and overall economic activity) and decrease household incomes and firms' profits. This situation makes it difficult for borrowers to repay their principal and results in bank losses, leading to the bank's capital erosion, reduced profitability and posing risks to financial stability.

On the other hand, although decreased funding costs may be beneficial for banks' asset growth targets, lower funding costs could also lead banks to excessive risk-taking, as it may induce banks to extend loans at unsustainable low rates, fuelling excessive credit growth. Short-term wholesale funding, for example, is one of the riskiest yet cheapest sources of funds. However, these sources are highly 'skittish', meaning they are susceptible to 'dry up' and become inaccessible during times of stress (Pérignon et al., 2018), forcing a contraction in lending or a credit crunch (Hardie and Howarth, 2013). In a broader sense, extremely low funding costs may indicate that risk in the banking sector is being under-priced (Beau et al., 2014).

In conditions of uncertainty, a rise in funding costs could have a further impact on economic growth and financial stability. When uncertainty increases, banks' liquidity preference will increase and asset demands will be biased toward more liquid but less profitable assets. That is, if banks do not have the funds for settling their liabilities (or if funding sources become suddenly more expensive), this entails that banks would have to trade profitability for liquidity. As loans are banks' least liquid but most profitable asset, this means that credit extensions should decrease, forcing a contraction in lending or a credit crunch, which will reduce economic activity.

Given the degree of interconnection between global balance sheets and the increased amount of cross-border flows to ECEs, this has also effects on domestic economies' financial stability. Banks who are financed by global investors will see more unstable funding bases as the global financial cycle channels funds in and out of economies. This means that since banks have an active and special role in determining credit conditions, and these conditions depend on surges of confidence and fear among global investors, it would entail that a domestic economy's financial stability depends on external conditions. As Kaminsky, Graciela Laura and Vega-Garcia (2016) have showed, financial crises can emanate from the global core, not from problems on the periphery, and these conditions affect the domestic dynamics of the 'real' economy.

Inflation Effects

Inflation (monetary stability) can also be negatively impacted by an increase in funding costs, in addition to financial stability. The central bank of Chile aims to achieve monetary stability through monetary policy to meet its inflation-targeting objectives. This is usually

done by defining the policy interest rate of the central bank—TPM in Chile. In normal circumstances, commercial bank lending rates follow the TPM. Banks' transition to wholesale funding entails funding costs being the most significant determinant of loan rates. This means that a bank's funding cost may change even if the TPM remains unchanged.

As a result, when funding costs increase, if the bank is capable of passing on a portion of the rise to its clients by charging higher interest rates, households and firms taking out new loans will have to spend a more significant portion of their disposable income on debt, leaving them with less money to spend on other items (Beau et al., 2014). Alternatively, if the bank cannot obtain sufficient demand for loans when charging higher rates, higher credit rates might result in a credit crunch, with the bank ceasing new lending, which would restrict consumption and investment. This, again, will cause banks solvency issues, pose risks to financial stability, and affect economic growth and inflation, rendering monetary policy less effective. The recent financial crisis showed the severe implications that financial instability may have on the economy, in part, but not only, through rising funding costs.

Banks' Funding Costs in the Context of Latin American Economies

This chapter has shown that funding costs can rise due to macroeconomic and bank-specific factors. The subordinated integration of Latin America into a spatially uneven international monetary and financial system entails that these factors adopt country-specific forms, or at least distinct forms in these economies vis-à-vis advanced economies, reflecting the variegated nature of financialisation processes. One macroeconomic factor affecting Chilean financial banks' funding costs is their reliance on domestic pension funds as a source of long-term wholesale funding and for providing a liquid market for offshore institutional investors to liquidate their positions in Chile at any point.

The implementation of privatised pension systems in Chile in the 1980s resulted in the creation of the so-called AFP system, which aimed at developing domestic capital markets. From a supply-side perspective, this system generates a pool of liquid assets (as shown in Chapter 4), a phenomenon which has been characterised in advanced economies as 'pension fund capitalism' (Blackburn, 2002; Clark, 2000, 2003; Drucker, 1976) or 'money manager capitalism' (Minsky, 1996), that seeks constant investment opportunities (Fernandez and Aalbers, 2016). However, empirical studies outside the financialisation literature suggest that institutional investors have failed to develop long-term domestic capital markets in ECEs, despite prior predictions that this would be one consequence of pension reform (Opazo et al., 2015). Similarly, as discussed in Chapter 2, pension funds and the notion of pension fund capitalism are recognised features of

market-based economies. This would exclude pension funds from playing any role in other institutional contexts, particularly in bank-based systems. Indeed, pension and insurance funds play no substantial role in the Latin American VoC literature (Schneider, 2009). However, such views risk downplaying their dynamic role in a changing economic and financial landscape. In particular, they may underestimate institutional investors' role in shaping new developments in financial markets, such as their role in providing a source of long-term funds for banks and a liquid market for off-shore institutional investors to liquidate their positions in Chile at any point.

Withdrawals of pension funds increased liquidity and credit premia for the banking sector due to the reduced liquidity in financial markets. If funding costs rise, offshore institutional investors may be concerned about a bank's solvency or liquidity position, and they may be compelled to withdraw their funds regardless of the cost, meaning that they are susceptible to dry up and become inaccessible during times of stress, which could force a credit crunch. In addition, a rise in banks' funding costs due to increased liquidity and credit risk fears might initiate the chain of effects previously described for financial stability and economic growth.

Furthermore, as global flows of funds and credit depend on a global financial cycle (Borio, 2012), factors outside the Chilean economy can also affect banks' funding costs. A further lesson of the subprime crisis is that financial crises can emanate from the global core, not from problems on the periphery (Kaminsky, Graciela Laura and Vega-Garcia, 2016). Meaning that Latin American economies encounter financialisation from a subordinated position in the global architecture of finance, as factors affecting core economies determine surges of confidence and fear among global investors. This, in turn, restricts Latin America's availability of liquidity and credit, determines Latin American banks' funding costs and, thus, their ability to lend, pose risks for financial stability and determine economic outcomes (in the case of a credit crunch). This reflects Latin American subordinate position in relation to global money and capital markets as capital inflows are predominantly short-term, seeking financial yields rather than assuming risks. These flows not only cause continued volatility, external vulnerability, and subordination to the currencies of the ACEs (Bonizzi et al., 2020) but also undermine the profitability of domestic banks and pose serious risks to financial stability, which in turn contribute to deepening domestic financialisation further.

Furthermore, bank-specific factors can also determine the price of a bank's costs for its funding sources, which are also driven by hierarchical structural factors. This means that institutional investors are likely to demand a higher liquidity risk premium when investing in debt instruments issued in currencies with uniformly inferior positions in the currency hierarchy compared to debt instruments issued in currencies with higher positions in this hierarchy. This also implies that investors demand a higher liquidity risk premium when investing in a debt instrument issued by a small institution compared to investing in a

debt instrument issued by a large institution. This is because fewer investors are likely to wish to hold this instrument as it might be challenging to sell later. This suggests that global banks—which are, by default, large—established geographically in nations with uniformly inferior positions in the currency hierarchy have access to lower liquidity risk premia compared to small local banks.

In addition, when banks issue unsecured debt, institutional investors demand a higher credit risk premium as this type of debt is backed by the bank's overall creditworthiness rather than collateral in secured debt. This means that if institutional investors believe that a bank's credit risk will rise (due to macroeconomic or bank-specific factors), this premium will also increase. Issuing long-term debt also affects credit risk premium because investors typically require more significant compensation the longer the maturity of an investment as there is a greater chance of a counterparty defaulting over a long time horizon (Farag et al., 2013). Because credit risk premium determinants are not held accountable by banks, this cost is also highly fluctuating.

This suggests that this particular financial structure creates hierarchical levels in the global financial architecture at the macro and micro-level. At the macro-level: operationalising globalised financial practices in nations with uniformly inferior positions in the currency hierarchy introduces new financial vulnerabilities and might have detrimental effects on economic growth. This means that capital inflows are mainly short-term, seeking financial returns rather than assuming productive risk. This results in persistent volatility, external fragility and subordination to the currencies of ACEs (Bonizzi et al., 2020). The adoption of the market-based credit approach requires access to wholesale funds and cross-border capital flows, which locks in the asymmetric structure of global financial power, as these global capital flows depend on surges of confidence and fear among domestic and global investors—rather than domestic cycle fluctuations (Cerpa Vielma and Dymski, 2022). These could result in significant wild swings in financial-market sentiment and money flows across global borders, exposing these economies to the possibility that the core institutions of global finance will again, as in 2008, generate a catastrophic crisis. Therefore, Latin American banks' liability structures are subordinated to the power of cross-border creditors and flows. These pressures would depend on the nature of the obligations of these institutions.

Second, to maintain access to global finance, Latin American financial institutions had to import key financialised practices and behaviours that have evolved in ACEs. As bank borrowing in market-based finance occurs via financial markets, it entails that access to these markets is determined by macroeconomic and bank-specific factors, which translates into investors' perceptions of banks' liquidity and credit risk. Institutional investors will always demand higher liquidity risk premia, for example, for investing in debt instruments issued in 'inferior' currencies in the currency hierarchy. These factors are expressed in terms of the costs banks' pay for accessing these funding sources, which

means that domestic banks are subordinated to foreign-owned as their reputation is determining their access to these funds.

In addition, this phenomenon reinforces what has been argued in Chapter 5, that global banks that have expanded geographically to Chile and are operating within this financialised financial structure create meso-level hierarchies within domestic economies, with small domestic banks at the bottom, as access to wholesale funding is determined by investors' perceptions of banks' liquidity and credit risk. Global banks pay a significantly smaller risk premium than local banks, allowing them to borrow more freely on wholesale markets, which restricts access to domestic banks due to higher risk premia.

This also entails that global banks increase the systemic risk of Chilean financial markets, as these banks are the primary 'consumers' of wholesale funding. This might reflect that banks facing higher funding costs tend to be those banks with weaker capital positions. Although the observed empirical relationship is likely to reflect causality in the other direction as well: that is, banks with weak capital positions were forced to pay up more for their funding. In addition, wholesale funding implies banks' increasing use of financial derivatives to hedge interest rate, currency and inflation risks. When derivatives are employed wisely, they make the world more straightforward because they give their buyers the ability to manage and transfer risk. However, in the hands of speculators, they are a powerful leveraged mechanism for creating risk.

All these factors reflect how the financialisation process in Chile has been driven by hierarchical institutional and structural factors, as well as its subordinate position in global finance, which contributes to further deepen domestic financialisation.

Chapter 7

Conclusion

Introduction

This research provided a theoretical and empirical study of the financial structure of Latin American economies in the context of financialised capitalism, using Chile as a case study. It argued that the financial structure in Latin American economies has been transformed in the past 40 years. The key drivers of this structural shift are identified as the liberalisation of cross-border credit and investment flows, banking deregulation, and the adoption of private pension systems.

This thesis has been divided into seven chapters. Chapter 2 presented a critical review of ‘mainstream’ theoretical approaches on the role of money, banking and finance in determining economic dynamics. It revealed that more traditional approaches to money, banking and finance rely on equilibrium frameworks and the ‘rational’ expectations paradigm to represent how the allocation of resources maximises utility for each economic unit. This entails that outcomes are efficient, financial structures are irrelevant, and risks are ‘known’ or controlled. More ‘Keynesian’ and evolving views on the role of banking firms, money and finance, explore ways in which market systems are allowed to ‘malfunction’, by explicitly incorporating market ‘imperfections’ into their models and theories, such as transaction or informational costs. Still, the ‘rational expectations’ paradigm underlies most of these attempts, in which agents’ decisions and outcomes are reduced to a range of possibilities that are certain, ‘known’ and calculable. This chapter concludes by highlighting that the rational expectations paradigm offers an inadequate guidance on agents’ behaviour in real economies, as it disregards a more unpredictable and tumultuous environment. In other words, although more Keynesian theories aim to provide a perspective in which banks and financial structures ‘matter’, they fail to account for the inherent instability and uncertainty of future events.

Chapter 3 provided an alternative framework for analysing the transformation of the financial structure in Latin American economies. It moved from post-Keynesian premises that characterise capitalist economies as monetary economies; particularly its emphasis on fundamental uncertainty, liquidity preference, and the endogeneity of money, to elaborate a theory of liquidity preference of bank behaviour for ECEs’ banks in the context of financialised capitalism. This chapter suggested that the post-Keynesian liquidity preference theory of bank behaviour would benefit from explicitly defining banks’ liquidity preference not only in terms of a bank’s decision between assets with varying degrees of liquidity under conditions of uncertainty but also by considering the pressures of their current liability structure that finance their asset positions. Particularly important is the work of Hyman Minsky (1975), who conceptualises a monetary capitalist

economy as the fragile interconnection of financial agents' balance sheets whose behaviour depends on the nature of their liability structures that finance those assets. In addition, it indicated that the empirical manifestations of the variegated financialisation of Latin American economies should be analysed as unfolding from a subordinate position in the global system of financialised capitalism. That is, the analysis needs to be rooted in time and space. By recognising the importance of space, it is feasible to recognise that power resides in specific locations, but not others. Therefore, the transformation of the financial structure in Latin American economies can be analysed in a context in which financial relations in a global monetary and financial system are hierarchical. This chapter concludes by stating that real-time and real-space approach should be historically informed, institutionally rooted, and aware of power distribution.

Chapter 4 followed this point and provided descriptive empirical evidence on the transformation of the financial structure of Latin American economies in the past 40 years for Argentina, Bolivia, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru and Uruguay. It argued that the liberalisation of cross-border capital and investment flows, the deregulation of banking and the adoption of private pension systems have shaped the financial structure of Latin American economies and have further integrated Latin American financial markets into a hierarchical global financial structure. However, the degree of integration is far more extensive in the era of global finance. Particularly, it showed that the financialisation process in Latin America has been driven by hierarchical institutional and structural factors shaped by US structural power in global finance, which has determined the experiences of financialisation in these economies and has further deepened domestic financialisation. The empirical manifestation of these drivers included the increase in cross-border capital flows, the rise of institutional investors, the entry of foreign banks, particularly US TBTF megabanks, the changing funding practices of Latin American banks, and the rise of private domestic pension funds, which has enhanced the role of domestic institutional investors.

Chapter 5 examined in detail how the liberalisation of cross-border investment in the financial sector, the deregulation of banking, and the adoption of private pension systems, have shaped the institutional structure of Latin American financial markets. To do so, it examined ownership data of 1,258 financial firms established in Argentina, Bolivia, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, and Uruguay SNA. The main conclusions of this chapter are that the liberalisation of cross-border investment led initially to an increase in the entry of leading foreign US banks into Latin American financial markets, followed by the entry of US-owned non-bank financial institutions, which determined a particular institutional structure of Latin American financial markets as highly foreign-owned and market-based. This highly-foreign-owned institutional structure is also clearly evident in the asset management industry in Latin America, as most of the key Latin American AFPs are owned by leading US financial firms.

In addition, it illustrated how the removal of market barriers between commercial banking, investment banking, and insurance, led to a particular institutional structure: it allowed commercial banks to venture into non-banking-related businesses and to use some of these channels to conduct their core banking businesses. It also led to organisational shifts: domestic and foreign-owned commercial banks operate mainly as financial conglomerates, as this structure facilitates commercial banks to participate in a wide range of businesses and access financial markets by operating in conjunction with non-banking subsidiaries. This chapter concluded by stressing that this particular institutional structure generates hierarchies within domestic markets as domestic-owned financial institutions are structurally subordinated to foreign-owned financial institutions, especially US-owned, as domestic-owned institutions are less able to access and participate in global finance (money and capital markets). Even further, it argued that domestic-owned banks are less able to access domestic capital markets, given the different 'restrictions' in the form of prices these banks have vis-à-vis foreign-owned banks.

Chapter 6 presented the results from the 23 semi-structured interviews conducted with financial market participants using the case of Chile. It demonstrated that efforts to 'modernise' Latin American financial markets and instruments to participate and maintain access to global finance, has led Latin American financial institutions to import key financialised practices and behaviours that have evolved in ACEs, mainly from the United States. In particular, this chapter showed three crucial features of the Chilean banking sector and its financial structure. The first feature involves the extent to which market-based credit is being used by Chilean banks to rectify mismatches between retail loans and deposits and increase credit flows. In other words, bank loans exceed customer deposits on banks' balance sheets. A second characteristic involves the extent to which bank lending decisions are driven by the cost of these innovative funding sources and the cost of hedging interest rate, inflation, and currency risks. That is, Chilean banks' lending decisions are not reserve-constrained but rather are affected by the price of their funding sources and expected returns. The final feature concerns the extent to which banks' behaviour is geared toward greater involvement in trading and market-making activities to arrange loans and debt instruments for raising market-based credit and creating markets for these instruments.

This chapter pointed out that the particular adoption of these practices by domestic banks entails that access to these markets is determined by macroeconomic and bank-specific factors, which translates into investors' perceptions of banks' liquidity and credit risk. These factors are expressed in terms of the costs that banks have to pay for accessing these funding sources, which means that domestic banks are subordinated to foreign-owned as their reputation determines their access to these funds. In addition, it highlights that operationalising globalised financial practices in nation with uniformly inferior

positions in the currency hierarchy introduces new financial vulnerabilities and might have detrimental effects on economic growth. This chapter concludes by stressing that global banks increase the systemic risk of Chilean financial markets, as these banks are the primary ‘consumers’ of wholesale funding.

7.1 Implications

An Institutional Structure that is Highly Foreign-owned and Market-based

The implications of a foreign-owned and market-based institutional structure can affect the prospects for financial stability. As commercial banks are operating mainly as financial conglomerates, which facilitates banks to operate in conjunction with non-banking subsidiaries, to venture into non-banking-related businesses, and to use some of these channels to conduct their core banking businesses, this could pose severe challenges to banking and financial regulation, particularly when a consolidated picture of their activities and risks is required.

This institutional structure reflects a banking system that is inextricably interwoven with other financial system agents, as the same holding company frequently controls these financial firms. This could result in a huge growth in the complexity and size of these institutions, particularly as these institutions’ balance sheets encompass all the elements that were previously separated between commercial banks and non-banking subsidiaries. This increases the probability of engaging in more risk-taking activities. Risks and profits are magnified and complexified for financial firms with the scale and reach to compete in global financial markets. Liability structures have also become increasingly complex. However, as these structures are not well mapped by financial authorities, it means that financial institutions’ behaviour often reflect the actions of decentralised competing and disciplined subunits, ignoring the excessive risk-taking and liquidity practices of financial conglomerates as a whole.

In addition, this particular institutional structure generates hierarchies within domestic markets in which domestic-owned financial institutions are structurally subordinated to foreign-owned financial institutions, especially US-owned. This is mainly as domestic-owned institutions are less able to access and participate in global finance (money and capital markets). Even further, domestic-owned banks are less able to access domestic capital markets, given the different ‘restrictions’ in the form of prices these banks have vis-à-vis foreign-owned banks.

These hierarchies also reflect that foreign-owned banks established in Latin American economies, increase the systemic risk of their financial markets, as these banks are usually the primary ‘consumers’ of wholesale funding. As these banks have ‘more able’ to access

and participate in global finance, this also means that they can carry the financial vulnerabilities of global finance into domestic economies.

The Adoption of Market-based Practices by Domestic Banks

Banks' use of wholesale funding (and banks' lending decisions reliant on funding costs) can affect the prospects for financial stability, economic growth and inflation. As banks' loan extensions determine their liabilities, and since their liabilities are dependent on their funding costs, an increase in these costs may lead to reduce a bank's profitability, as new loans are loss-making eroding its capital base. If this condition persists for an extended period, the bank may suffer solvency issues, destabilising the financial system and posing threats to financial stability. Alternatively, the bank could attempt to pass on a portion of the rise in funding costs to its clients by charging higher interest rates on any new loans. Assuming that borrowers keep on demanding the same amount of lending from the bank at a higher rate, the higher cost of credit will reduce households' incomes and firms' profits, resulting in a decrease in economic activity and implications for economic growth (Beau et al., 2014).

Furthermore, the higher cost of credit could result in a future increase in the number of borrowers unable to repay their loans. The bank would be subject to credit losses, eroding its capital and posing threats to financial stability. If the bank may attempt to pass on higher costs to its customers, and there is no demand for further lending at a greater interest rate, the bank's balance sheet would begin to contract, which will progressively decrease the bank's profits. Moreover, this credit crunch will reduce economic activity (through lower consumption, investment and overall economic activity) and decrease household incomes and firms' profits. This situation makes it difficult for borrowers to repay their principal and results in bank losses, leading to the bank's capital erosion, reduced profitability and posing risks to financial stability.

In conditions of uncertainty, a change in funding costs could have significant effects on banks' liquidity preference. A rise in funding costs will increase banks' liquidity preference and asset demands will be biased toward more liquid but less profitable assets. That is, if banks do not have the funds for settling their liabilities (or if funding sources become suddenly more expensive), this entails that banks would have to trade profitability for liquidity. As loans are banks' least liquid but most profitable asset, this means that credit extensions should decrease, forcing a contraction in lending or a credit crunch, which will reduce economic activity.

A decrease in funding costs could be also detrimental for financial stability, even though it may be beneficial for banks' asset growth targets, as this could lead banks to excessive risk-taking, as it may induce banks to extend loans at unsustainable low rates, fuelling excessive credit growth. Short-term wholesale funding, for example, is one of the riskiest

yet cheapest sources of funds. However, these sources are highly ‘skittish’, meaning they are susceptible to ‘dry up’ and become inaccessible during times of stress (Pérignon et al., 2018), forcing a contraction in lending or a credit crunch (Hardie and Howarth, 2013). In a broader sense, extremely low funding costs may indicate that risk in the banking sector is being under-priced (Beau et al., 2014).

Inflation (monetary stability) can also be negatively impacted by an increase in funding costs, in addition to financial stability. The central bank of Chile aims to achieve monetary stability through monetary policy to meet its inflation-targeting objectives. In normal circumstances, commercial bank lending rates follow the TPM. Banks’ transition to wholesale funding entails funding costs being the most significant determinant of loan rates. This means that a bank’s funding cost may change even if the TPM remains unchanged. As a result, when funding costs increase, if the bank is capable of passing on a portion of the rise to its clients by charging higher interest rates, households and firms taking out new loans will have to spend a more significant portion of their disposable income on debt, leaving them with less money to spend on other items (Beau et al., 2014). Alternatively, if the bank cannot obtain sufficient demand for loans when charging higher rates, higher credit rates might result in a credit crunch, with the bank ceasing new lending, which would restrict consumption and investment. This, again, will cause banks solvency issues, pose risks to financial stability, and affect economic growth and inflation, rendering monetary policy less effective. The recent financial crisis showed the severe implications that financial instability may have on the economy, in part, but not only, through rising funding costs.

The effect of changing funding costs are even more significant when the subordinate position of Latin American economies is taken into consideration. As macroeconomic and bank-specific factors affect institutional investors’ perceived liquidity and credit risk (and these in turn, affect Latin American banks’ funding costs), changes in these perceptions can have significant implications for Latin American banks in terms of economic growth and financial stability. In terms of macroeconomic factors, these funding bases are very skittish as they depend on surges of confidence and fear among global investors. As these nations count with uniformly inferior positions in the currency hierarchy, capital inflows are mainly short-term, seeking financial returns rather than assuming productive risk. This means that global flows of funds and credit depend on a global financial cycle (Borio, 2012), which implies that factors outside of Latin American economies can also affect banks’ funding costs. This reflects that banks that are highly geared toward market-based funding sources could suffer extreme fluctuations in their funding costs as a result of this financial swing. This, in turn, restricts Latin America’s availability of liquidity and credit, and, thus, determines banks’ ability to lend (as it depends on funding costs). This, of course, poses risks for financial stability, as it could result in persistent volatility, external fragility and subordination to the currencies of

ACEs (Bonizzi et al., 2020), and determine economic outcomes (in the case of a credit crunch). Therefore, banks that are highly compromised with market-based practices could have their liability structures subordinated to the power of cross-border creditors and flows. However, these pressures would depend on the nature of the obligations of these institutions.

Bank-specific factors exhibit not only hierarchies at the global level, but at the domestic level as well. As bank-specific factors are mostly determined by a bank's reputation, the perception the market has of a particular bank will determine the price at which it can access market-based funds. Usually, foreign-owned and large banks in Latin American economies have better reputations than domestic-owned and small banks (mostly due to their parent entities or TBTF concessions) which translates into cheaper funding costs. This creates internal hierarchies between domestic-owned and small banks vis-à-vis foreign-owned and large banks. Multiple hierarchies can be found within the banking system, and these are reflected in the price that these banks' are charged for issue debt in wholesale markets that is dependent on their specific characteristics.

7.2 Future research

The topics covered in this thesis can be extended in many levels and areas. First of all, this thesis uses Chile as a case study. This means that this study could be extended to other emerging market economy to uncover underlying mechanisms and structures of the transformation of the financial structure. Given the open ontology followed, this thesis recognises that it may not be possible to generalise, but rather, to obtain rich and deep conclusions about the same phenomenon. Even further, by considering the structural and institutional structures shaping an economy's financial structure (that is, the historical and spatial factors), this study could be replicated in any economy. The point to have in mind is that the aim is not to provide a general account of financialisation, but to reflect the variegated forms in which financialisation takes place in national economies.

Second, this thesis also focuses particularly on the banking system. It analyses particularly, how the liability structures of banking firms have been transformed. However, it does not analyse further what determines domestic banks' demand for market-based funding. This study could also be extended to include other financial institutions to analyse how their liability structures that finance their asset positions have been transformed across time and space. Finally, this thesis has analysed the role of the financial structure in shaping economic growth and financial stability. An extended theoretical and empirical analysis could include the role of the financial structure in an inflation targeting regime in ECEs. The implications of the financial structure in this area are lightly touched.

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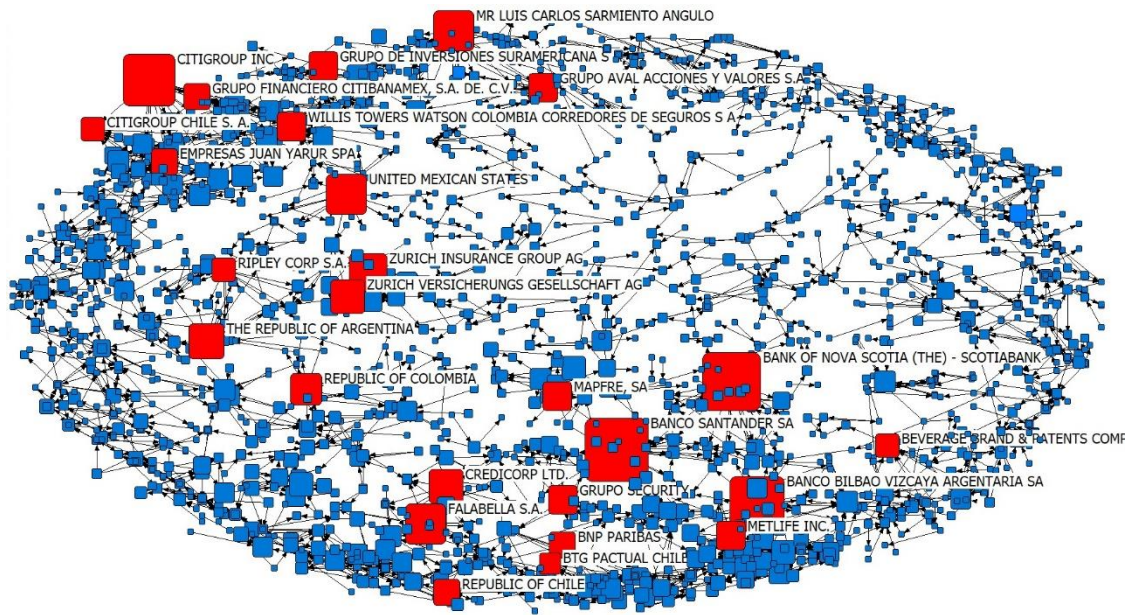
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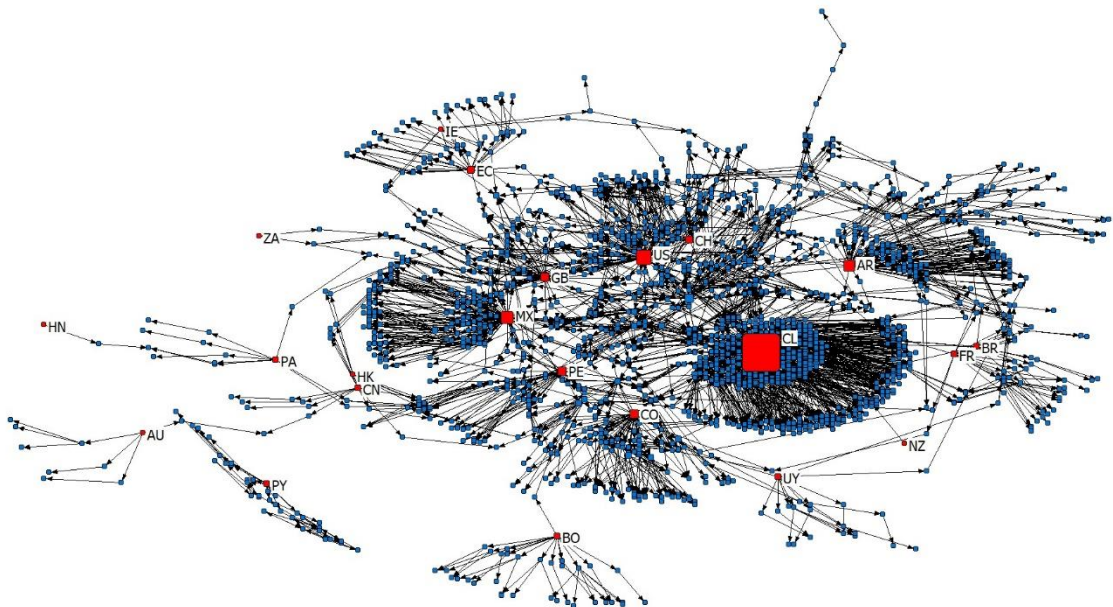
Appendix A

Latin American Financial Firms with Domestic and Foreign Shareholders and their Geographical Locations

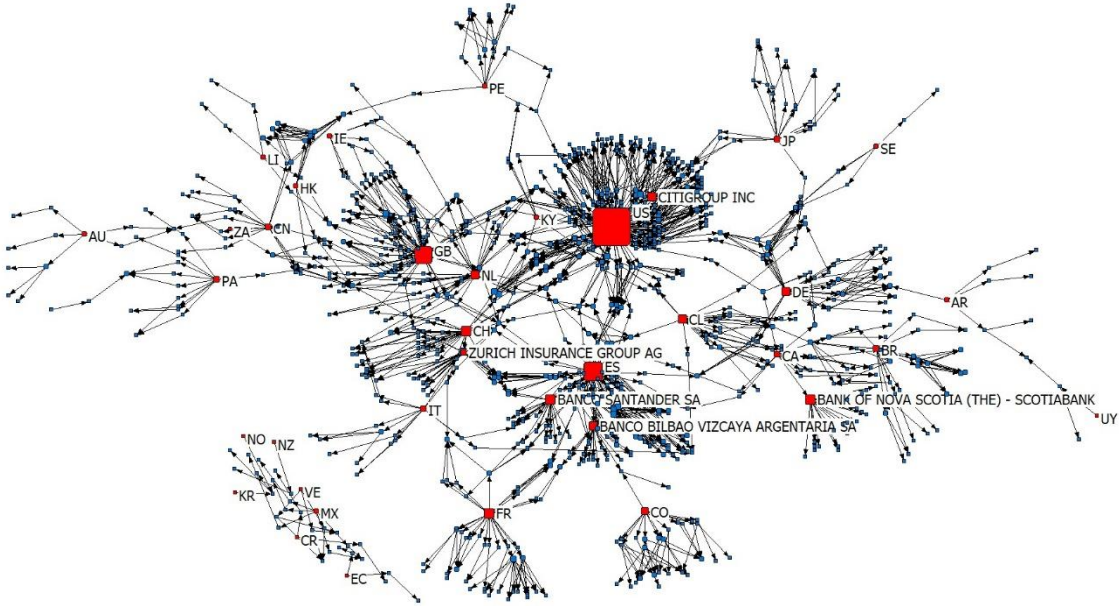


Overall Network

Importance of Domestic and Foreign Shareholders with their Geographical Locations and Latin American financial firms with their Geographical Locations

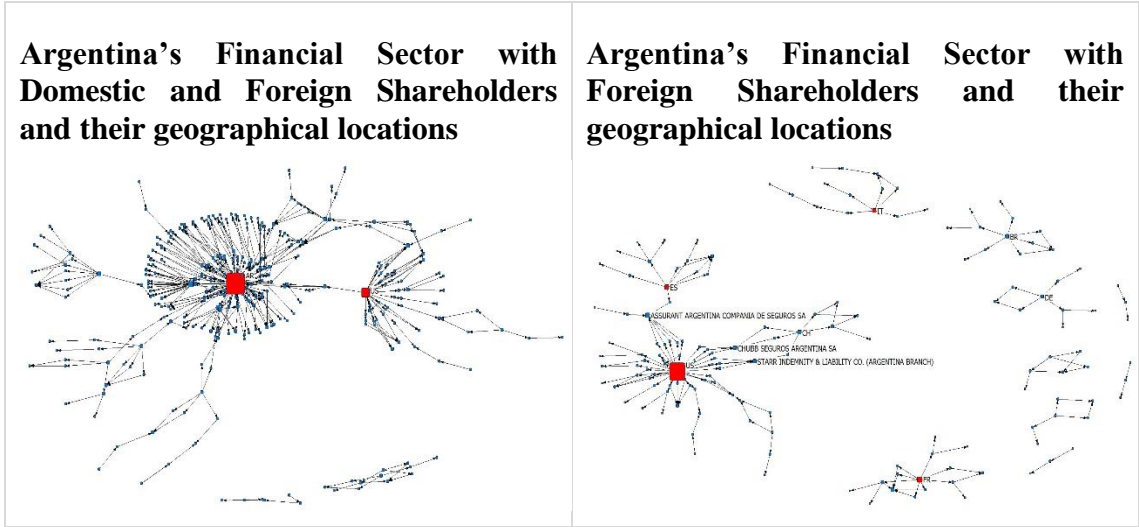


Importance of Foreign Shareholders with their Geographical Locations and Latin American Financial Firms with their Geographical Locations



Latin American Financial Sectors Network Visualisation

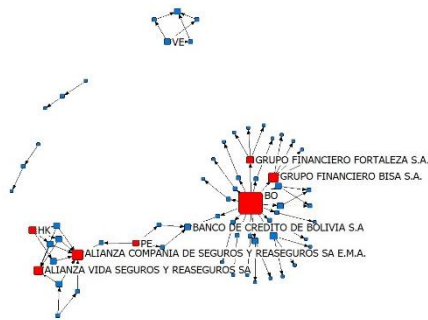
Argentina



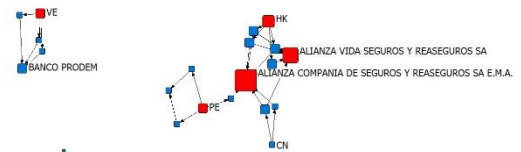
Source: Prepared by the author

Bolivia

Bolivia's Financial Firms with Domestic and Foreign Shareholders and their geographical locations

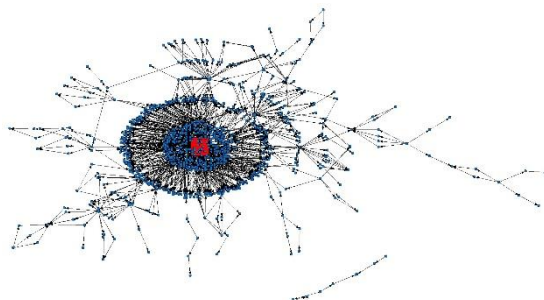


Bolivia's Financial Sector with Foreign Shareholders and their geographical locations

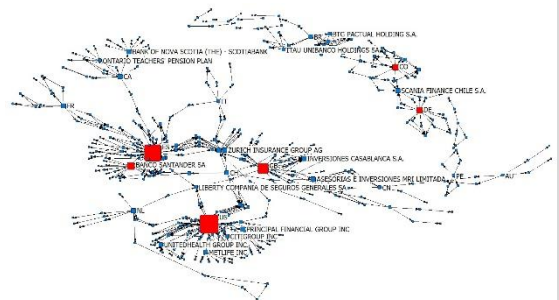


Chile

Chile's Financial Firms with Domestic and Foreign Shareholders and their Geographical Locations

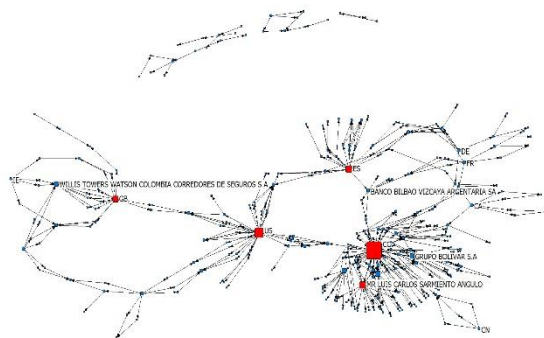


Chile's Financial Sector with Foreign Shareholders and their Geographical Locations

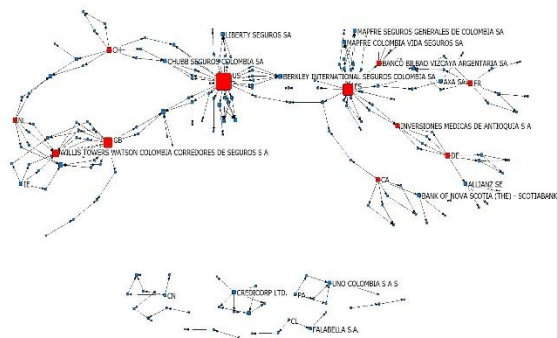


Colombia

Colombia's Financial Sector with Domestic and Foreign Shareholders and their geographical locations

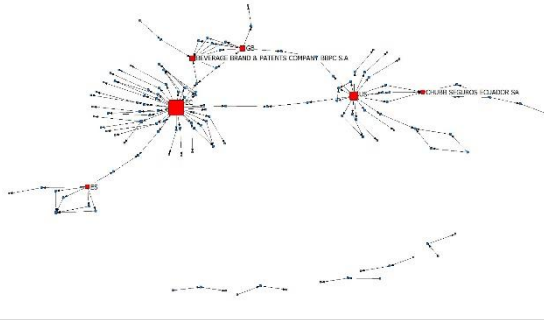


Colombia's Financial Sector with Foreign Shareholders and their Geographical Locations

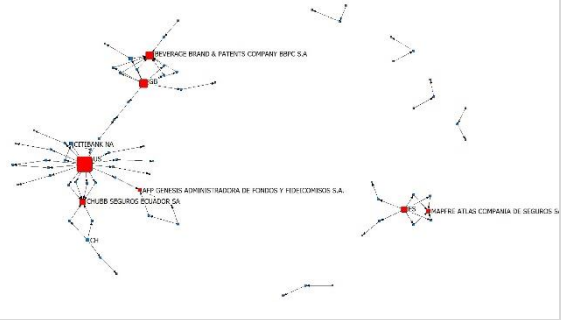


Ecuador

Ecuador's Financial Sector with Domestic and Foreign Shareholders and their geographical locations

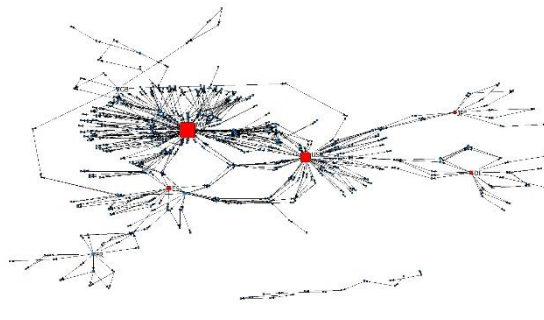


Ecuador's Financial Sector with Foreign Shareholders and their Geographical Locations

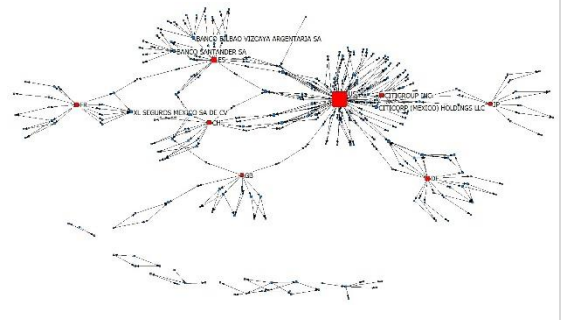


Mexico

Mexico's Financial Sector with Domestic and Foreign Shareholders and their geographical locations

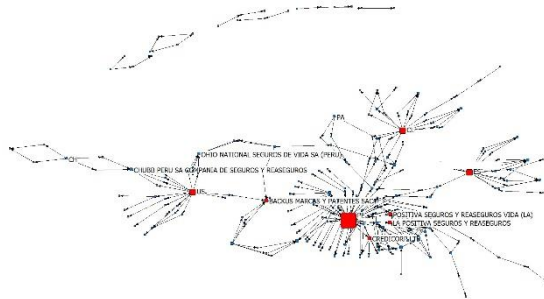


Mexico's Financial Sector with Foreign Shareholders and their Geographical Locations

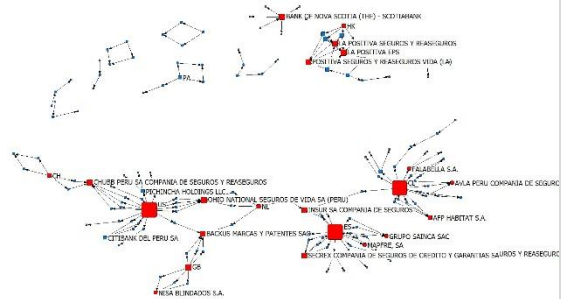


Peru

Peru's Financial Sector with Domestic and Foreign Shareholders and their geographical locations

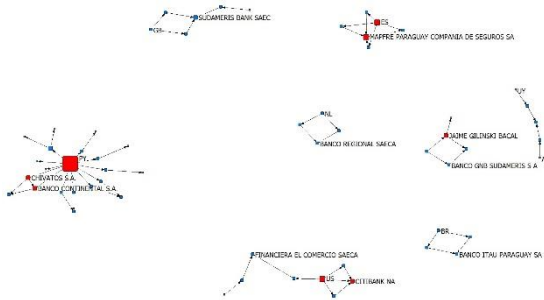


Peru's Financial Sector with Foreign Shareholders and their Geographical Locations

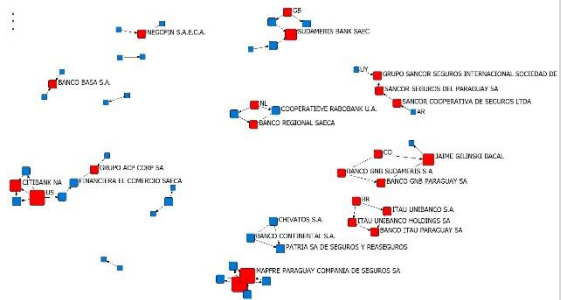


Paraguay

Paraguay's Financial Sector with Domestic and Foreign Shareholders and their geographical locations

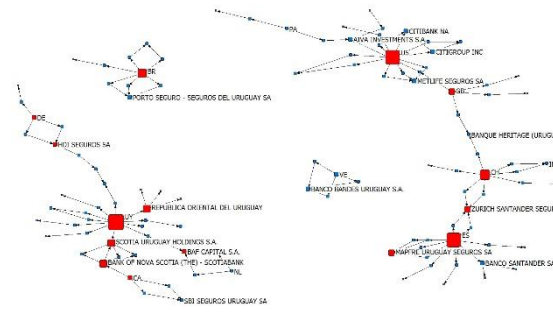


Paraguay's Financial Sector with Foreign Shareholders and their Geographical Locations

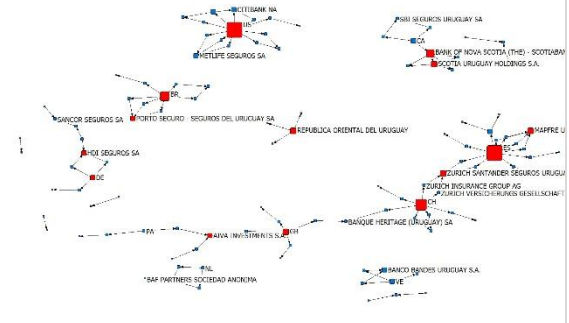


Uruguay

Uruguay's Financial Sector with Domestic and Foreign Shareholders and their geographical locations



Uruguay's Financial Sector with Foreign Shareholders and their Geographical Locations



Appendix B

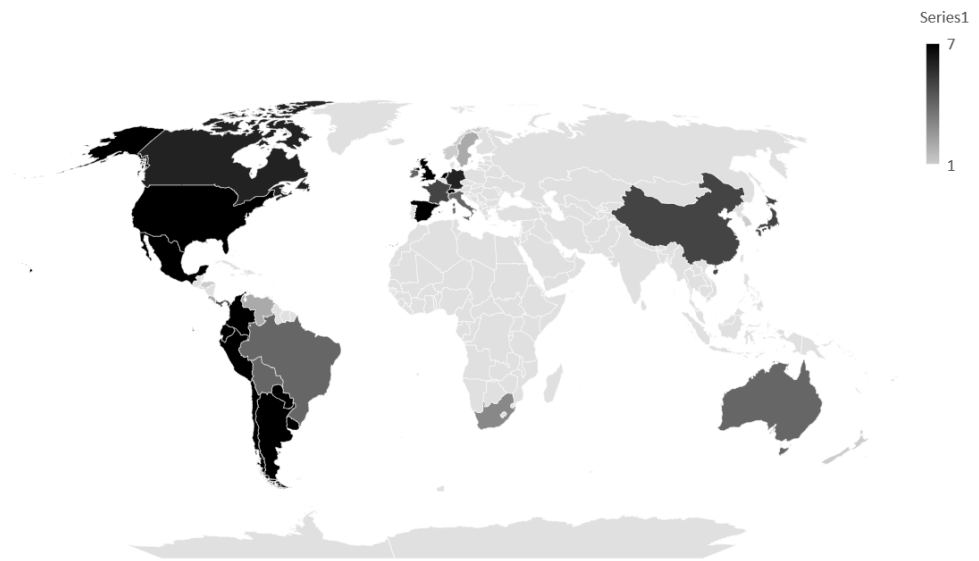
List of Financial Companies in Latin America controlled by Spanish, American, British and Swiss Firms

#	Company Name	Country	Type of Entity/Specialisation/Products	Owner	Country
1	Banco Santander Rio S.A.	Argentina	Commercial Bank	Banco Santander	Spain
2	Banco Santander Chile	Chile	Commercial Bank	Banco Santander	Spain
3	Santander Chile Holding S.A.	Chile	Holding Company	Banco Santander	Spain
4	Santander Consumer Finance Limitada	Chile	Automotive Loans	Banco Santander	Spain
5	Bansa Santander S A	Chile	Sale of Cars	Banco Santander	Spain
6	Comder Contraparte Central S.A.	Chile	Non-Depository Credit Intermediation	Banco Santander	Spain
7	Santander Asset Management SA Administradora General De Fondos	Chile	Fund Management Activities	Banco Santander	Spain
8	Santander Corredora De Seguros Ltda.	Chile	Insurance Broker	Banco Santander	Spain
9	Santander Corredores De Bolsa Limitada	Chile	Stockbroker	Banco Santander	Spain
10	Santander Gestion De Recaudacion Y Cobranzas Limitada	Chile	Credit Bureau	Banco Santander	Spain
11	Santander Global Technology And Operations Chile Limitada	Chile	Holding Company	Banco Santander	Spain
12	Santander Inversiones S.A.	Chile	Investment Firm	Banco Santander	Spain
13	Santander Investment Chile Limitada	Chile	Sale of Cars	Banco Santander	Spain
14	Teatinos Siglo XXI Inversiones S.A.	Chile	Other Financial Investment Activities	Banco Santander	Spain
15	Banco Santander De Negocios Colombia Sa	Colombia	Commercial bank	Banco Santander	Spain
16	Banco Santander (Mexico) S.A.	Mexico	Commercial Bank	Banco Santander	Spain
17	Grupo Financiero Santander De Mexico SA De CV	Mexico	Holding Company	Banco Santander	Spain
18	Grupo Financiero Ve Por Mas, S.A. De C.V	Mexico	Non-Depository Credit Intermediation	Banco Santander	Spain
19	Santander Consumo, S.A. De C.V., Sofom, E.R.	Mexico	Non-Depository Credit Intermediation	Banco Santander	Spain
20	Santander Vivienda, S.A. De C.V. Sofom	Mexico	Real estate & mortgage finance institution	Banco Santander	Spain
21	Banco S3	Mexico	Commercial bank	Banco Santander	Spain
22	Santander Inclusion Financiera, S. A. De C. V	Mexico	Real estate & mortgage finance institution	Banco Santander	Spain
23	Banco Santander Peru	Peru	Commercial bank	Banco Santander	Spain
24	Banco Santander Uruguay S.A.	Uruguay	Commercial bank	Banco Santander	Spain
25	Retop S.A.	Uruguay	Non-Depository Credit Intermediation	Banco Santander	Spain
26	Citibank Na	Argentina	Commercial bank	Citigroup Inc.	United States
27	Banco De Chile Sa	Chile	Commercial bank	Citigroup Inc.	United States
28	Citigroup Chile S. A.	Chile	Non-specialised wholesale trade	Citigroup Inc.	United States
29	Inversiones Citigroup Chile Limitada.	Chile	Investment Firm	Citigroup Inc.	United States
30	Sociedad Matriz Del Banco De Chile S.A.	Chile	Commercial Bank	Citigroup Inc.	United States
31	Citibank Colombia	Colombia	Commercial bank	Citigroup Inc.	United States
32	Cititrust Colombia S A Sociedad Fiduciaria	Colombia	Investment Firm	Citigroup Inc.	United States
33	Colrepin Ltda	Colombia	Non-Depository Credit Intermediation	Citigroup Inc.	United States
34	Citibank Na	Ecuador	Commercial bank	Citigroup Inc.	United States
35	Grupo Financiero Citibanamex, S.A. De. C.V.	Mexico	Bank holding company	Citigroup Inc.	United States
36	Cohm Overseas Mexico Holding S De RL De CV	Mexico	Holding Company	Citigroup Inc.	United States
37	Citigroup Capital Partners Mexico, S. De R.L. De C.V.	Mexico	Mutual and pension fund	Citigroup Inc.	United States
38	Namgk Mexico Holding Srl	Mexico	Corporate	Citigroup Inc.	United States
39	Citicorp (Mexico) Holdings LLC	Mexico	Holding Company	Citigroup Inc.	United States
40	Banco Nacional De Mexico, Sa - Citibanamex	Mexico	Commercial bank	Citigroup Inc.	United States
41	Citibanamex Seguros Sa De Cv	Mexico	Composite insurance	Citigroup Inc.	United States
42	Citibanamex Seguros	Mexico	Composite insurance	Citigroup Inc.	United States
43	Tarjetas Banamex	Mexico	Non-Depository Credit Intermediation	Citigroup Inc.	United States
44	Citibanamex Afore	Mexico	Mutual and pension fund	Citigroup Inc.	United States
45	Arrendadora Banamex, Sa De Cv Sofom Er	Mexico	Non-Depository Credit Intermediation	Citigroup Inc.	United States
46	Citibank Del Peru Sa	Peru	Commercial bank	Citigroup Inc.	United States
47	Citibank Na	Paraguay	Commercial bank	Citigroup Inc.	United States
48	Citibank Na	Uruguay	Commercial bank	Citigroup Inc.	United States
49	Giti Asesores De Inversion Uruguay S.A.	Uruguay	Accounting, auditing and bookkeeping services	Citigroup Inc.	United States
50	Banco Bbva Argentina S.A	Argentina	Commercial bank	BBVA	Spain
51	Volkswagen Financial Services Compania Financiera S.A	Argentina	Non-Depository Credit Intermediation	BBVA	Spain
52	PSA Finance Argentina Compania Financiera SA	Argentina	Credit and financial leasing	BBVA	Spain
53	Forum Servicios Financieros S.A.	Chile	Leasing services and car purchase financing	BBVA	Spain
54	Ecasa S A	Chile	Non-Depository Credit Intermediation	BBVA	Spain
55	BBVA Holding Chile S.A	Chile	Holding Company	BBVA	Spain
56	BBVA Colombia SA	Colombia	Commercial bank	BBVA	Spain
57	Rci Colombia S A Compania De Financiamiento	Colombia	Non-Depository Credit Intermediation	BBVA	Spain
58	BBVA Seguros De Vida Colombia Sa	Colombia	Life insurance	BBVA	Spain
59	BBVA Seguros Colombia Sa	Colombia	Non-life insurance	BBVA	Spain
60	BBVA Asset Management S A Sociedad Fiduciaria	Colombia	Asset Management	BBVA	Spain
61	Comercializadora De Servicios Financieros S A S	Colombia	Non-Depository Credit Intermediation	BBVA	Spain
62	Grupo Financiero Bbva Mexico	Mexico	Bank holding company	BBVA	Spain
63	Bbva Mexico S.A.	Mexico	Commercial bank	BBVA	Spain
64	Grupo Financiero Bbva Mexico	Mexico	Bank holding company	BBVA	Spain
65	Seguros Bbva Bancomer Sa De Cv	Mexico	Composite insurance	BBVA	Spain
66	Pensiones BBVA Bancomer Sa De Cv	Mexico	Mutual and pension fund	BBVA	Spain
67	BBVA Bancomer Seguros Salud Sa De Cv	Mexico	Life insurance	BBVA	Spain
68	BBVA Leasing Mexico Sa De Cv	Mexico	Leasing and Fleet administration	BBVA	Spain
69	Financiera Ayudamos	Mexico	Non-Depository Credit Intermediation	BBVA	Spain
70	Banco Bbva Peru	Peru	Commercial bank	BBVA	Spain
71	BBVA Peru Holding S.A.C.	Peru	Non-Depository Credit Intermediation	BBVA	Spain
72	Banco Bilbao Vizcaya Argentaria Uruguay Sa	Uruguay	Commercial bank	BBVA	Spain
73	Zurich International Life Ltd	Argentina	Life Insurance	Zurich Insurance Group	Switzerland
74	Zurich Argentina Compania De Seguros Sa	Argentina	Composite insurance	Zurich Insurance Group	Switzerland
75	Zurich Compania De Reaseguros Argentina Sa	Argentina	Composite insurance	Zurich Insurance Group	Switzerland
76	Chilena Consolidada Seguros De Vida Sa	Chile	Life insurance	Zurich Insurance Group	Switzerland
77	Chilena Consolidada Seguros Generales Sa	Chile	Non-life insurance	Zurich Insurance Group	Switzerland
78	Zurich Santander Seguros Generales Chile Sa	Chile	Non-life insurance	Zurich Insurance Group	Switzerland
79	Zurich Santander Seguros De Vida Chile Sa	Chile	Life insurance	Zurich Insurance Group	Switzerland
80	Inversiones Zs America Dos Limitada	Chile	Holding Company	Zurich Insurance Group	Switzerland
81	Inversiones Zs America Spa	Chile	Holding Company	Zurich Insurance Group	Switzerland
82	Zurich Chile Asset Management Administradora General De Fondos S.A.	Chile	Fund Management Activities	Zurich Insurance Group	Switzerland
83	Zurich Seguros Ecuador Sa	Ecuador	Composite insurance	Zurich Insurance Group	Switzerland
84	Zurich Santander Seguros Mexico Sa	Mexico	Composite insurance	Zurich Insurance Group	Switzerland
85	Zurich Compania De Seguros Sa	Mexico	Non-life insurance	Zurich Insurance Group	Switzerland
86	Zurich Vida, Compania De Seguros Sa	Mexico	Life insurance	Zurich Insurance Group	Switzerland
87	Zurich Santander Seguros Uruguay Sa	Uruguay	Life insurance	Zurich Insurance Group	Switzerland
88	MetLife Seguros Sa	Argentina	Composite insurance	MetLife Inc.	United States
89	Origenes Seguros Sa	Argentina	Composite insurance	MetLife Inc.	United States
90	MetLife Chile Seguros De Vida Sa	Chile	Life insurance	MetLife Inc.	United States
91	Administradora De Fondos De Pensiones Provida SA	Chile	Mutual and pension fund	MetLife Inc.	United States
92	Inversiones MetLife Holdco Dos Limitada	Chile	Investment Firm	MetLife Inc.	United States
93	Inversiones MetLife Holdco Tres Limitada	Chile	Investment Firm	MetLife Inc.	United States
94	Provida Internacional S.A.	Chile	Holding Company	MetLife Inc.	United States
95	MetLife Chile Inversiones Limitada	Chile	Investment Firm	MetLife Inc.	United States
96	MetLife Colombia Seguros De Vida Sa	Colombia	Life insurance	MetLife Inc.	United States
97	Afp Genesis Administradora De Fondos Y Fideicomisos S.A.	Ecuador	Mutual and pension fund	MetLife Inc.	United States
98	MetLife Mexico Sa	Mexico	Life insurance	MetLife Inc.	United States
99	MetLife Seguros Sa	Uruguay	Composite insurance	MetLife Inc.	United States
100	Mapfre Argentina Seguros Sa	Argentina	Non-life insurance	Mapfre	Spain

#	Company Name	Country	Type of Entity/Specialisation/Products	Owner	Country
101	Mapfre Re - Compania De Reaseguros Sa (Argentina Branch)	Argentina	Composite insurance	Mapfre	Spain
102	Mapfre Compania De Seguros Generales De Chile Sa	Chile	Non-life insurance	Mapfre	Spain
103	Mapfre Seguros Generales De Colombia Sa	Colombia	Non-life insurance	Mapfre	Spain
104	Mapfre Colombia Vida Seguros Sa	Colombia	Life insurance	Mapfre	Spain
105	Mapfre Atlas Compania De Seguros Sa	Ecuador	Composite insurance	Mapfre	Spain
106	Mapfre Mexico Sa	Mexico	Composite insurance	Mapfre	Spain
107	Mapfre Peru Vida Compania De Seguros Y Reaseguros Sa	Peru	Life insurance	Mapfre	Spain
108	Mapfre Peru Sa Eps	Peru	Life insurance	Mapfre	Spain
109	Mapfre Paraguay Compania De Seguros Sa	Paraguay	Composite insurance	Mapfre	Spain
110	Mapfre Uruguay Seguros Sa	Uruguay	Life insurance	Mapfre	Spain
111	Chubb Seguros Argentina Sa	Argentina	Composite insurance	Chubb Inc.	Switzerland
112	Chubb Seguros Chile Sa	Chile	Non-life insurance	Chubb Inc.	Switzerland
113	Chubb Seguros De Vida Chile Sa	Chile	Life insurance	Chubb Inc.	Switzerland
114	Inversiones Vita S A	Chile	Life Insurance	Chubb Inc.	Switzerland
115	Chubb Seguros Colombia Sa	Colombia	Non-life insurance	Chubb Inc.	Switzerland
116	Chubb Seguros Ecuador Sa	Ecuador	Composite insurance	Chubb Inc.	Switzerland
117	Chubb Seguros Mexico Sa	Mexico	Composite insurance	Chubb Inc.	Switzerland
118	Chubb Fianzas Monterrey Aseguradora De Caucion Sa	Mexico	Non-life insurance	Chubb Inc.	Switzerland
119	Chubb Peru Sa Compania De Seguros Y Reaseguros	Peru	Composite insurance	Chubb Inc.	Switzerland
120	Principal Compania De Seguros De Vida Chile Sa	Chile	Life insurance	Principal Financial Group	United States
121	Principal International South America II Ltd,Agencia En Chile	Chile	Investment Firm	Principal Financial Group	United States
122	Principal International De Chile S A	Chile	Investment Firm	Principal Financial Group	United States
123	Administradora De Fondos De Pensiones Cuprum S.A	Chile	Mutual and pension fund	Principal Financial Group	United States
124	Principal Holding Company Chile S.A.	Chile	Holding Company	Principal Financial Group	United States
125	Principal Administradora General De Fondos S A	Chile	Fund Management Activities	Principal Financial Group	United States
126	Principal Chile Limitada	Chile	Fund Management Activities	Principal Financial Group	United States
127	Principal Servicios Corporativos Chile Ltda	Chile	Holding Company	Principal Financial Group	United States
128	Jp Morgan Chase Bank	Argentina	Commercial bank	JP Morgan Chase & Co	United States
129	Jpmorgan Chase Bank	Chile	Commercial bank	JP Morgan Chase & Co	United States
130	Banco J.P. Morgan Colombia S.A.	Colombia	Investment bank	JP Morgan Chase & Co	United States
131	J.P. Morgan Grupo Financiero S.A. De C.V.	Mexico	Holding Company	JP Morgan Chase & Co	United States
132	Banco Jp Morgan Sa	Mexico	Commercial bank	JP Morgan Chase & Co	United States
133	Apoyo Economico Familiar S De RL De CV	Mexico	Non-Depository Credit Intermediation	JP Morgan Chase & Co	United States
134	J.P. Morgan Banco De Inversion	Peru	Commercial bank	JP Morgan Chase & Co	United States
135	Inversiones Clinicas Santa Maria Spa	Chile	Investment Firm	UnitedHealth Group	United States
136	Vida Tres S A	Chile	Health Care and Insurance	UnitedHealth Group	United States
137	Vida Integra Spa	Chile	Health Care and Insurance	UnitedHealth Group	United States
138	Honodav Spa	Chile	Credit Bureau	UnitedHealth Group	United States
139	Omesa Spa	Chile	Dental Care and Insurance	UnitedHealth Group	United States
140	Hsbc Bank Argentina S.A.	Argentina	Commercial bank	HSBC Holdings	United Kingdom
141	Hsbc Seguros De Vida (Argentina) Sa	Argentina	Life insurance	HSBC Holdings	United Kingdom
142	Hsbc Bank (Chile)	Chile	Commercial bank	HSBC Holdings	United Kingdom
143	Grupo Financiero Hsbc Sa De Cv	Mexico	Bank holding company	HSBC Holdings	United Kingdom
144	Hsbc Mexico, Sa	Mexico	Commercial bank	HSBC Holdings	United Kingdom
145	Hsbc Seguros Sa De Cv	Mexico	Composite insurance	HSBC Holdings	United Kingdom
146	Hsbc Bank (Uruguay) Sa	Uruguay	Commercial bank	HSBC Holdings	United Kingdom
147	Paccar Financiar Mexico, S.A. De C.V.; Sofom, Enr	Mexico	Finance company	PACCAR Inc	United States
148	Paclease Mexicana Sa De Cv	Mexico	Finance company	PACCAR Inc	United States
149	Paccar Capital De Mexico Sa De Cv	Mexico	Mutual and pension fund	PACCAR Inc	United States
150	Berkley International Seguros Sa	Argentina	Composite insurance	W. R. Berkley Corporation	United States
151	Berkley International Aseguradora De Riesgos Del Trabajo Sa	Argentina	Non-life insurance	W. R. Berkley Corporation	United States
152	Berkley International Seguros Colombia Sa	Colombia	Non-life insurance	W. R. Berkley Corporation	United States
153	Berkley International Fianzas Mexico Sa	Mexico	Non-life insurance	W. R. Berkley Corporation	United States
154	Berkley International Seguros Mexico Sa	Mexico	Non-life insurance	W. R. Berkley Corporation	United States
155	Bupa Chile S.A.	Chile	Insurance Company	The British United Provident Association	United Kingdom
156	Inversiones Clinicas Cbs S.A.	Chile	Investment Firm	The British United Provident Association	United Kingdom
157	Bupa Compania De Seguros De Vida Sa	Chile	Life insurance	The British United Provident Association	United Kingdom
158	Bupa Ecuador Sa, Compania De Seguros Y Reaseguros	Ecuador	Life insurance	The British United Provident Association	United Kingdom
159	Bupa Mexico, Compania De Seguros Sa De Cv	Mexico	Life insurance	The British United Provident Association	United Kingdom
160	Norgener Inversiones Spa	Chile	Investment Firm	AES Corporation	United States
161	Norgener Foreign Investment Spa	Chile	Investment Firm	AES Corporation	United States
162	Inversiones LK Spa	Chile	Investment Firm	AES Corporation	United States
163	Bci Seguros Generales Sa	Chile	Non-life insurance	Mutua Madrileña Automovilista	Spain
164	Bci Seguros Generales Sa	Chile	Non-life insurance	Mutua Madrileña Automovilista	Spain
165	Bci Seguros De Vida Sa	Chile	Life insurance	Mutua Madrileña Automovilista	Spain
166	Zenit Seguros Generales Sa	Chile	Non-life insurance	Mutua Madrileña Automovilista	Spain
167	Prudential Seguros Sa	Argentina	Life insurance	Prudential Financial Inc	United States
168	Prudential Chile II Spa	Chile	Investment Firm	Prudential Financial Inc	United States
169	Prudential Chile Spa	Chile	Investment Firm	Prudential Financial Inc	United States
170	Prudential Seguros Mexico Sa	Mexico	Life insurance	Prudential Financial Inc	United States
171	Liberty Compania De Seguros Generales Sa	Chile	Non-life insurance	Liberty Mutual Holding Co Inc	United States
172	Liberty Seguros Sa	Colombia	Non-life insurance	Liberty Mutual Holding Co Inc	United States
173	Liberty Fianzas Sa De Cv	Mexico	Non-life insurance	Liberty Mutual Holding Co Inc	United States
174	Ohio National Seguros de Vida SA	Chile	Life insurance	Ohio National Mutual Holdings Inc	United States
175	Ohio National Sudamerica SA	Chile	Life insurance	Ohio National Mutual Holdings Inc	United States
176	Ohio National Seguros de Vida SA (Peru)	Peru	Life insurance	Ohio National Mutual Holdings Inc	United States

Appendix C

Dominant (Core) and Distant (Peripheric) Countries in Latin American Financial Systems including Domestic Shareholders



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Appendix D

Interview Sheet : Banks

Introductory Questions

What is your position in the institution?

How long have you worked for the institution?

Can you describe me a little bit your role in the institution?

Structure

What categories of clients do you serve?

- Large domestic business?
- Foreign-owned firms or Chilean branches/affiliates?
- Smaller Businesses?
- Households?

What financial services do you offer them?

How do you fund these activities?

What risks does this portfolio of financial services entail?

Is there an active 'interbank market' in which banks might be borrowing/lending excess liquidity to one another?

- If so, is it large-bank to small bank, or vice versa?

Is there an active 'repo' market within Chile?

Note: whether there is any rehypothecation – that is, whether reserves or 'safe securities' that are used as collateral in short-term borrowing markets (money markets) are 're-lent' (lent again, that is, used as collateral in the second bank borrowing from a third bank, etc. – the so-called 'repo' market.

- If so, which players are involved, and in what roles?

What functions do fee-based income transactions fulfil in your institution?

How important are these functions in terms of revenue?

What risks is your institution willing to take in pursuit of profits?

Do you sell your loans off to be securitised in secondary markets?

- If so, which loans could you readily sell?
- How long does it take to sell one loan after you make it?

Do you borrow funds from money markets (short term)

- or capital markets (long term)?

- Why?

Does your institution use these funds to finance banking activities/itself?

What is the most important source for your bank (banks) for financing?

What do you do if the loans fail?

- Collateral as compensation?

Are there other companies associated with the bank that are in charge of accessing funds in the money / secondary markets?

- If so, what firms and how do they do it?
- Are these transactions recorded by the bank in its financial statements or is it done by the associated company or subsidiary?
- Where is it possible to locate these transactions in the financial statements?

Does your institution work for US-owned firms or others?

- If so, what is your institution's role(s) with these firms?

What determines the size of loans you make?

Endogenous money

How does your bank arrange credit contracts?

- Does it rely on deposits/savings?

Do you make loans first and find the funds to support this asset position later?

Do you arrange credit between borrowers and lenders, without having this credit on your balance sheet?

Off-shore markets

How important is the off-shore market for your institution?

- For the Chilean Market?
- What are the main reasons you operate in off-shore markets?

Is it sustainable for your institution to depend on access to US markets, given the drift of US geo-politics (toward isolation and less global power/presence)?

Does your institution intend to try to link up with Chinese investment options or lenders so as to prepare for the 'Chinese century' future?

How would you compare the Chilean financial market to other emerging market?

Do you think that Chilean firms, especially SMEs, are having problems in gaining access to finance, and thus having problems prospering, in the current situation?

Institutional Behaviour

What variables do you take into consideration when accessing/ borrowing from equity markets?

- Debt markets?
- Off-shore markets?

Does the behaviour of other institutions in the market effect your borrowing/funding decisions?

- Which institutions are particularly important for your borrowing decisions?

Is the behaviour of other markets/variables important for your borrowing decisions?

- And if so, which?

Appendix E

Interview Sheet: Financial Institutions

Introductory Questions

What is your position in the institution?

Can you describe a bit your role in the institution?

How long have you worked for the institution?

Structure

What categories of clients does your institution serve? What categories of customers does your area serve?

- Large national companies?
- Foreign-owned companies or Chilean branches/affiliates?
- Smaller companies?
- Households?

What financial services do you offer them?

How do you finance these activities?

What risks does this portfolio of financial services carry?

How does your institution operate? (Business description, corporate finance and fund management (match client that invests with company that needs financing?), in which markets (primary/secondary/OTC), with which actors does it interact, most important clients)?

Where (country, market, instrument) do you raise more funds? Why?

Is there an active 'interbank market' (in Chile)? If so, could you describe it to me (how many markets are there, actors, transactions, instruments)?

Is there an active 'repo' market in Chile? (repurchase agreements) If so, which actors are involved and in what roles?

Note: whether there is any rehypothecation – that is, whether reserves or 'safe securities' that are used as collateral in short-term borrowing markets (money markets) are 're-lent' (lent again, that is, used as collateral in the second bank borrowing from a third bank, etc. – the so-called 'repo' market.

What risks is your institution willing to take in pursuit of profits?

Does your institution sell its loans to securitise them in secondary markets? If so, what percentage and what loans could you easily sell (what profile)? How long does it take to sell a loan after granting it?

Do you borrow funds in money/currency markets (short term)? Do you invest in money/currency markets (short term)? Why?

- Or the (long-term) capital markets? Why?

What is the most important source for your institution for funding?

Do you use guarantee/collateral for any business?

- What % of collateral is needed? (credit or investment)

Is your institution foreign-owned?

- If so, what is the role of your institution in these companies?

Endogenous money

How do you decide how much to invest in total? Does it depend on customers, regulation?

How do you decide where to raise funds? Concrete examples.

How do you finance companies/banks?

International markets

How important is the international market for your institution?

- For the Chilean market?
- What are the main reasons why you operate in international markets?

Is it sustainable for your institution to depend on access to US markets, given the drift of US geo-politics (toward isolation and less global power/presence)?

Does your institution intend to try to link up with Chinese investment options, lenders, investors so as to prepare for the 'Chinese century' future?

How would you compare the Chilean financial market to other emerging markets?

Do you think that Chilean firms, especially SMEs, are having problems in gaining access to finance, and thus having problems prospering, in the current situation?

Institutional behaviour

What variables do you take into account when accessing equity markets? (How much risk, exposure, main variables: some specific example)

- Debt markets?
- International markets?

Does the behaviour of other institutions in the market affect your investment decisions?

- Which institutions are particularly important?