

Financialization and the Challenges of Sustainable Structural Transformation

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1. Introduction

The rise of finance and its ability to permeate and direct nearly every aspect of life - often summarized under the heading of ‘financialization’ - has been one of the defining developments in the global economy over recent decades. Financialization as a concept attempts to capture a range of different transformations - including the increased involvement of economic actors with financial markets, the rising generation of profits via financial rather than non-financial channels, and key structural transformations in financial systems to more market-based, financially liberalized, and internationally integrated forms. Key to the notion of financialization however is the proposition that finance - rather than acting purely as an enabler to the non-financial economy and broader socio-economic goals - might work to the detriment thereof, weighing on investment, widening inequality, and increasing economic and social vulnerability. These detrimental implications are particularly of concern for developing economies where the need for sustainable structural transformations (SST) which can generate the value creation necessary to drive human development is all the more imperative; a task which has been made all the more challenging by the disproportionate impact of the climate crisis on the world’s more vulnerable populations.

Initial research on financialization has focused on market-based Anglo-Saxon economies, characterized by deep capital markets and the dominance of shareholder value orientation (SVO). This literature has shown that the existence of SVO and the increased complexity of financial markets can lead to declining capital accumulation and innovation, weighing on the industrial potential of these economies. An emerging literature asks whether and how such detrimental implications of financialization for investment, innovation, and structural transformation to higher value-added production, are happening in developing economies.

In the next section, the landscape of the metrics which attempt to pin down financialization is explored, and theoretical explanations of the drivers of these observed transformations are laid out. The metrics fall broadly into four categories: financial sector liberalization, sectoral balance sheet transformation, financial profitability and volatility. According to such metrics, the picture of financialization at the level of the nation-state in developing countries is ‘variegated’, with some regions, such as Central & Eastern Europe and Latin America, more highly financialized than others, begging the question of what is driving the observed changes and why its manifestations differ across geographic spaces. Early work highlighted the impact, both domestically and across borders, of financial sector liberalization in developed, especially Anglo-Saxon, economies; subsequently, researchers have posited causal links with a number of factors: rising levels of monopoly feeding financial rather than productive investment; increasing inequality driving demand for financial assets and levels of indebtedness, at the top and bottom ends of the income distribution respectively; and a shift towards intangibles which afford opportunities for the extraction of financial rents. More comprehensive are arguments that the emergence of a more financialized form of capitalism is based on the transformations of and interaction between the *global* systems of production and finance.

In the third section, research exploring the impact of financialization on growth, inequality and sustainability is presented. A consensus is emerging that financial deepening can have detrimental impacts on growth potential, becoming more pronounced at higher levels of financial development. Financialization is linked with both a falling wage share and declining levels of union density, as well as rising dispersion within the wage distribution itself. This is consistent with those studies across developed and developing economies which link financialization with an overall increase in income inequality. Rising income inequality, along with inflation in asset markets, lies behind the connection between financialization and rising wealth inequality. The expansion of financial sector activity also appears to drive spatial inequality both within countries and across regions. Finally, the social sustainability of financialization is brought under scrutiny by studies which link financialization with cuts to welfare expenditures and increases in – especially women’s – precarious employment.

Section four delves deeper into the relationship between financialization and investment, innovation and structural transformation. Concerns have been raised by research suggesting that financialization is associated with falling levels of investment, ‘crowded out’ by higher levels of profitability in financial markets, adversely impacted by increased payouts to shareholders and creditors, or scaled back as firms build financial buffers against rising levels of volatility. The degree of innovation of firm investment can be adversely affected by these same processes associated with financialization; additionally, innovation may be adversely affected by managerial short-termism which focuses on ‘value extraction’ over ‘value creation’. After undergoing public offerings, firms appear to focus on the quantity of patent applications in the short-run, with the number of patent applications and degree of technical innovation falling subsequently. Such adverse impacts on investment and innovation have obvious impacts on the ability of firms to contribute to broader economic structural transformation. Amplifying such constraints are the speculative gains in commodity markets resulting from their financialization, which incentivize an orientation towards primary commodity production; and the financialization of the exchange rate in the form of speculative carry trade operations, which mitigate against the development of high-value added export-oriented manufacturing sectors. The financialization of the global funding system is characterized by an increased reliance on short-term liquidity; the volatility of the resulting ‘international financial cycle’ drives both more short-termist institutional investors but has also adversely affected the environment in which traditionally ‘patient’ investment institutions operate.

The final section of the paper asks what policies are needed to support sustainable structural transformations. Under the heading of financial sector development and regulation, a range of measures are discussed to manage the volatility that can accompany capital market development and international financial integration. Domestic measures need to be supported by reforms to the international financial architecture. Key roles are envisioned for National Development Banks (NDBs), pension funds and central banks in generating the funding for SST and contributing to a stable macroeconomic environment. Importantly however, financial sector reforms can not ensure SST on their own. Fiscal, industrial and labor market policies have a key role to play in addressing the identified drivers of financialization, namely the rise of inequality, monopoly and rent-dominated sectors.

2. Financialization: Definitions, Metrics, Trends and Drivers

Financialization is typically defined as an increasing ‘weight’ of finance, that is, the financial sector not just getting bigger, but getting bigger relative to the non-financial sector and overall value-added, and/or an increase in financial logics permeating the decision-making processes of non-financial corporations, governments and even households (Mader, Mertens, and van der Zwan 2020). Most authors address the question of what financialization is, but less often address the question of why or how it is happening. There is some overlap of the financialization literature with both that on ‘financial deepening’ and the ‘finance curse’, though the latter literatures focus on the empirical question of the optimal size of financial institutions and markets to maximize growth potential, but leave aside the harder-to-quantify ‘financial logics’ and their broader socio-economic impact.

In attempts to quantify the phenomenon, researchers have devised an array of metrics which are posited as proxies of the spread of financialization (for example, Lapavitsas and Soydan 2022; Karwowski, Shabani, and Stockhammer 2019). Initially such work was focused on developed economies, but over the last decade researchers have attempted to assess whether and how similar changes might be occurring in developing economies. These metrics can be grouped into four categories: financial sector liberalization, sectoral balance sheet transformation, financial profitability and volatility.

Category of financialization metrics	Specific metrics captured	Nature of what is being captured
Financial sector liberalization	<p><i>De jure</i> regulatory measures of financial openness</p> <p><i>De facto</i> measures of financial openness (gross capital flows, aggregate assets/liabilities, stock/bond market capitalization, foreign FI entry & participation in domestic markets)</p>	<p>Policy measures capturing rhetorical political commitment to openness</p> <p><i>Significant gap may be observed between de jure and de facto openness</i></p> <p>Outcome measures highlighting relative role of financial sector to economic output</p> <p><i>May mask changes in nature, role and distribution of different financial flows over time (overdetermined); mode and regulatory oversight of foreign participation key to outcomes</i></p>
Sectoral balance sheet transformation	Change in overall size and composition of balance sheets of financial & non-financial firms, households and governments	<p>National accounts and/or aggregated (listed) firm data capturing changes in funding and investment behavior</p> <p><i>May suffer from problems of aggregation, and interpretation of what is motivating observed changes especially following periods of global economic re-structuring</i></p>

Financial profitability	Total / relative profitability of bank and non-bank FIs and its activity base Profits and/or income/expenses of NFCs related to financial operations	Relative share of the gains from economic growth which are captured by the financial sector, and change in the nature of activities which are generating those profits <i>Challenges posed by accounting affordances and cross-country differences in reporting requirements</i> Focus of NFCs on financial vs core productive activities with assumed negative implications for long-term productivity <i>Questions about whether this is reflecting global geographic restructuring of production and/or changes in relative role of services vs non-services, tangibles vs intangibles, etc.</i>
Volatility	Volatility of capital inflows/outflows, exchange rates, interest rates, asset and commodity prices	Degree of uncertainty in funding and key prices with assumed negative impacts on the confidence and capacity to make long-term investment plans <i>Causal mechanisms often left unspecified and risk that we are capturing the symptoms of a broader set of both internal and external dynamics</i>

Financial liberalization metrics capture rising, if regionally differentiated, financial openness, and increasing levels of foreign entry and/or participation in domestic financial markets (as well as the obverse of greater domestic participation in foreign financial markets). Liberalization can therefore be seen in the growing cross-border liabilities, both FDI and non-FDI: this is particularly evident in developed economies and SIDS which include some important off-shore financial centers (Figures 1 and 2).

Sectoral balance sheet transformation metrics capture changes in the relative size as well as composition of assets and liabilities. Non-financial corporations (NFCs) are shown to be investing more heavily in financial assets, and funding themselves increasingly through market-based international finance (Lapavitsas and Powell 2013). This can be seen in the growth of stock markets (Figure 3) and bond markets (Figure 4): this has a longer history across developed economies, but developing economies have begun to catch up, especially in Asia. Some authors question whether this is capturing the financialization of advanced economy firms, or instead symptomatic of a geographic transfer of activities which are more intensive in non-financial assets (outsourcing or offshoring) (Christophers 2012), or a more general shift towards a greater role for intangibles in the contemporary global economy (Rabinovich 2019). For NFCs in developing economies, research has pointed to the increased importance

of financial investments, both for hedging and speculative purposes (Hwan Joo Seo, Han Sung Kim, and Yoo Chan Kim 2012; Araujo, Bruno, and Pimentel 2012; Levy-Orlik 2012; Powell 2013), including increased holdings of cash and very liquid short-term financial assets, such as those on local derivatives markets (Rabinovich and Pérez Artica 2022; Karwowski 2015; Correa, Vidal, and Marshall 2012; Kalinowski and Cho 2009), and portfolios of public securities. On the funding side, large firms from developing countries have started to substitute market funding for bank borrowing, frequently offshore and mostly in foreign currency (McCauley, McGuire, and Shusko 2015; IMF 2014).

Financial corporations have proliferated both in terms of their institutional form and in the diversity and complexity of instruments which they trade in. Bank lending to firms has stagnated in many countries, while lending to households for consumption and to other financial corporations, both domestic and international, has grown: private credit to GDP has increased across all country groups (Figure 5) - though non-linearly in developed countries - but a decreasing share is allocated to NFCs (Figure 6). An increasing share of bank activity is devoted to commission- and fee-based services, though this is less pronounced in developing countries (Gibadullina 2022).

There is some evidence of rising profitability of the financial sector as a whole relative to the non-financial sector, with profits linked increasingly to commission- and fees-based activity rather than credit intermediation (Lapavitsas and Mendieta-Muñoz 2019). Non-financial corporations have seen a rise in financial profits, though it appears limited to a number of developed economies. Soener (2022) documents an inverse relationship between financial accumulation (financial assets as a share of total assets) and NFC profits in 31 developing countries.

The household balance sheet has grown relative to total value-added with increased engagement with market-based finance and increased levels of indebtedness, and hence rising debt-servicing ratios (Karwowski, Shabani, and Stockhammer 2019; Barba and Pivetti 2009). Household debt levels in developing countries as a whole are considerably lower than those in developed countries, related to both lower financial sector development and wealth per capita. Countries as diverse as Malaysia and South Africa have levels of household debt which are approaching those of developed economies, while the countries of Eastern Europe, as well as Brazil and China have witnessed rapid growth in household debt in recent years (Karwowski and Stockhammer 2017).

Financialization is also argued to have transformed state balance sheets (for example, Karwowski 2019; Fastenrath, Schwan, and Trampusch 2017). On the asset side, social and physical infrastructure have been turned into actively traded financial assets generating revenue streams, while on the liability side, the emergence of debt management offices (DMOs) and bond auctions, has seen public debt turned into a traded financial asset, with an associated deepening of secondary markets. DMOs have become financial market players, seeking returns from financial assets and aiming to reduce the cost of the debt portfolio through the use of an increasingly complex array of derivative instruments. A broader array of financial institutions have entered these markets, and foreign investors play an increasing role with associated exchange rate risks and capital flow volatility. The use of 'innovative financial instruments' has proliferated, such as social impact bonds, tax revenue securitization, and the deployment of off-balance-sheet operations generating contingent liabilities. Central banks have first overseen a secular decline in interest rates facilitating an unprecedented global

expansion of debt and subsequently an equally unprecedented expansion of their balance sheets through unconventional monetary policy driving capital market inflation

Finally, financialization is linked with increasing volatility in a range of macroeconomic and financial indicators including capital flows, exchange rates and interest rates, stocks of reserves, securities markets, and commodity markets. House price volatility in numerous developing countries, such as Brazil, India, Poland and Turkey, was higher in the period 2008-15 than that seen in developed economies (Karwowski and Stockhammer 2017). This concurs with an increasing consensus that small, open economies are vulnerable to the changing needs of international investors and the international financial cycle (Bertaut, Bruno, and Shin 2021; Rey 2015). This results in increasing financial risk linked to currency and maturity mismatches on the balance sheets of both non-financial and financial corporations in developing countries.

Across countries and regions, the watchword for the degree of financialization is ‘variegated’. In a recent paper looking at six financialization metrics across 27 developing economies for the period 2008 to 2017, Karwowski (2022) finds that the most financialized regions, strongly driven by external forces, are Central & Eastern Europe and Latin America, with a key role in the latter for large domestic firms. Financialization is mainly in the private sector in Emerging Asia, where state authorities have taken some measures to insulate public policy from financialization pressures. The private sector in the Middle East and North Africa is not financialised despite financial openness and active equity markets, possibly, Karwowski argues, because of the economic and political power of regional conglomerates. In Sub-Saharan Africa evidence of financialization according to these metrics is concentrated in a few, if intensely affected, centers, such as South Africa. Karwowski concludes that financialization “... is driven by a mix of external factors and domestically influential capitalist elites pursuing financial interests.”(2022, 933)

Karwowski’s metrics illustrate some of the shortcomings of any such exercise to quantify financialization and compare across countries. The metrics themselves mix together policy measures (such as financial openness), national account data (such as household debt levels) and measures that are themselves the outcome of complex causal processes (such as exchange rate volatility). But perhaps more importantly, they show the limitation of the nation-state as a ‘geographic container’ through which to understand financialization. The MENA region, for example, is characterized as not financialised, however Hanieh (2020; 2016) argues that the rents extracted from the region’s fossil fuel industry feed financialization dynamics elsewhere in the global economy. This points to the need for a discussion of *why* the size and role of finance has become so dominant in the late twentieth and early twenty-first century.

[Insert figures 1 - 6 here]

What is driving financialization?

The traditional view since the work of McKinnon (1973) and Shaw (1973), has been that financial deepening increases the efficiency of processes of capital allocation with beneficial impacts for growth and development . As such, there was little need to question why finance had grown so spectacularly through the last decades of the twentieth century (for example, Mishkin 2009). In recent years, the benefits of the growth of finance have begun to be

questioned (prominent examples include Sahay 2015; Kose et al. 2006); this has taken the form of empirical study which suggests a non-linear relationship between finance and growth. Other researchers have taken a more critical stance towards the growth of finance from the outset, leading to questions about why finance has grown in this way and at this time. The hypothesis typically advanced is that the phenomenon emerged out of the conditions of the nation-state, predominantly in the developed, especially Anglo-Saxon, countries. This emergence is linked causally either to policy decisions to liberalize or deregulate the financial sector, or a rise in a corporate culture of shareholder value orientation. Other authors, as elaborated below, point to the rise in monopoly, rising inequality or the role of intangibles as driving factors, while we have argued for an understanding of the emergence of financialized capitalism based on an analysis of the transformations of and interaction between the *global* systems of production and finance over the past half century (Bonizzi, Kaltenbrunner, and Powell 2022).

Studies linking financialization with deregulation and financial liberalization emphasize decisive policy shifts in global financial centers, such as the US Tax Reform Act of 1986 that led to an explosion in junk bond issuance and leveraged buyouts, or the UK's Big Bang of the same year which was followed by a sharp rise in mergers and acquisitions in the financial sector (Schenk 2020). Oatley & Petrova (2022) make the insightful point that the deregulation does not have to be domestic, arguing that it was European deregulation that played a decisive role in US financialization. Similarly, deregulation in global financial centers may drive domestic financialization in small open economies. For developing economies, pressure to liberalize the financial sector has come from both external and internal pressures. In the wake of recurrent financial crises, conditions attached to concessional lending have required greater financial liberalization (Cerpa Vielma and Dymski 2022; Carroll and Jarvis 2014); both capacity building and investment projects of the international development institutions have focused on maximizing private sector finance through the creation of new investment opportunities (Funke, 2022). Care must be taken in balancing external pressures with domestic political agency; numerous studies document domestic pressures for financial liberalization which have often interacted with external ones (for example Ganguly and Vasudevan 2022 on India).

Early research on the shift of corporations from the principle of 'retain and re-invest' to one of 'downsize and distribute' focused on the impact of liberalization measures in the US in the rise of institutional investors and the emergence of a new market for corporate control (Lazonick & O'Sullivan, 2000). This shift to a corporate culture of shareholder value orientation is often linked to financialization in the literature. Valeeva et al. (2022) find that shareholder payouts (cash dividends and share buybacks) are differentiated by sector, geography and firm size. Financial corporations make greater payouts to shareholders than NFCs, while exceptions amongst the latter include corporations in the healthcare, high-tech and mining sectors. Share buybacks remain significant in North America, Israel and some Latin American countries, while the payment of cash dividends has risen in all regions over the past two decades. Dominating these trends towards rising shareholder payouts are the largest firms, however medium to large firms are catching up.

Another factor linked to financialization is rising monopoly, and, in turn, its relationship to the increasing importance of intangibles in the global economy. Sawyer (2022), citing empirical evidence of rising monopoly in key sectors across the global economy, argues that this has reduced pressure to invest and innovate, and shifted the distribution of income from wages to profits and rents (with the side effect of depressing domestic demand). Monopoly power is centered around those sectors whose business model is based on intangible assets (Durand and

Milberg 2020), from which rents are extracted which support shareholder payouts and mergers & acquisitions activity.

While there is a considerable literature arguing that financialization feeds rising income and wealth inequality (see below), there is also the suggestion that the causal relationship operates in both directions. Stagnating real wages and rising income inequality have meant that squeezed households, especially in the bottom 50 per cent of the income distribution, have become more indebted in order to maintain their relative living standards, rendering the macroeconomic growth regime of many developed countries dependent on debt-led consumption (Stockhammer 2015). At the other end of the income distribution scale, an increase in high net-worth individuals is argued to have driven both the demand for an increase in the quantity and complexity of financial instruments (Goda and Lysandrou 2014), as well as given weight to a political agenda supportive of further deregulation and tax cuts for the wealthy (Wisman 2013).

As this brief discussion illustrates, while the rising relative weight of the financial sector and increasing dominance of financial logics across a range of sectors and countries is well documented, the causal framework remains contested. Bonizzi et al. (2022) have argued that the variegated picture emerging from attempts to quantify financialization at the level of the nation-state assume greater clarity when viewed from a global perspective. The explicit signs of financialization may only manifest in certain countries, or only partially in others. Rather than focusing on which country is financialised or not, we need to think more about how different spaces in the global economy may play distinct roles in financialised capitalism. While the DRC, for example, would not be financialized according to the nation-state-centered metrics in the literature, rents extracted from the mining sector in the DRC by TNCs headquartered in developed economies may contribute to the explicit signs of financialization (rising stock market capitalisation, M&A activity, etc.) in other spaces. This points to the need to look at how production is organized and how it is both influenced by, and itself influences the emergence of, particular financial structures. The restructuring of global production into global value chains has put new demands upon and provided new opportunities for a globalized US dollar market-based financial system. Bonizzi et al. (2022) argue that developing countries occupy subordinate roles in financialised capitalism; subordination in production, that is the activities of developing country firms and their workers on the lower value-added rungs in global value chains, creates profits which subordination in finance allows for their extraction, transfer and storage as financial wealth.

3. Financialization Impacts: Growth, Inequality and Sustainability

We turn now to examine the evidence on the impact of financialization on growth, inequality and sustainability, before looking in the next section more specifically at the impact of financialization on firm investment, innovation and the possibilities for sustainable structural transformation (SST).

Excessive financialization, proxied by market capitalization as a share of GDP, is shown to have a negative impact on growth for developed countries between the period 1990-2016, via the channels of greater inequality, lower investment, and unstable debt-financed accumulation (Pariboni, Paternesi Meloni, and Tridico 2020); and, utilizing a number of proxies of financialization including credit growth, stock market capitalization and financial value-added, on the growth of EU countries for the same period, with Barradas (2022) citing eight reasons,

including through the increased volatility of consumption/investment and the increased fragility of the banking sector. Moosa (2018), using a sample of 111 countries for the period 2000-2014 finds a negative relationship between financialization, here proxied by credit growth, and GDP growth, with evidence for a U-shaped curve in developed countries. These selected results from the financialization literature reflect growing interest in economics more generally in the finance-growth nexus which comes to broadly similar conclusions about the non-monotonic relationship between financial depth and growth (Bucci, Marsiglio, and Prettnner 2020; Sahay 2015; Law and Singh 2014). Benczur et al. (2019) find that credit to NFCs tends to have a positive, while credit to households a negative impact on growth, with differentiated impacts between securities and stock market-based financing. The emphasis in the finance-growth literature is on the black box of allocative inefficiencies (both financial and human capital) of an overly large financial sector.

An increasing body of literature looks at the relationship between financialization and a range of vectors of inequality - income and wealth, as well as geographic, gender and race-based inequalities. Kohler et al. (2019), looking at 14 developed economies for the period 1992-2014, find an inverse relationship between financialization (proxied by four variables covering degree of financial openness, financial payments of NFCs, stock market turnover, and household debt levels) and the wage share. They argue this is linked to: increased options for exit, that is capital account openness simplifying the process of geographic relocation of production; pressure on wage costs from financial overheads and capital market competition; and the rise in household debt acting as a disciplining mechanism against labor activism. Barradas (2019), assessing 27 EU countries for the period 1995-2013, finds that technological progress was the main driver in the fall in the labor share, in line with the standard literature, but finds a significant negative impact of shareholder value orientation. Kollmeyer & Peters (2019), based on observations for 18 developed countries between 1970 and 2012, find that financialization - particularly significant are proxy variables for capital market intensity, and inward portfolio flows - is an important cause of falling union density. The authors hypothesize that this operates via increased pressures for firms to reduce their payrolls to the benefit of shareholders (more significant in so-called Liberal Market Economies), and the redirection of economic activity away from labor-intensive productive investment and towards financial activities.

Within the wage distribution, Lin & Tomaskovic-Devey (2013) find that in American non-financial industries for the period 1970 to 2008, firm financialization, calculated as the ratio of financial income to non-financial income, leads to a significant rise in earnings dispersion, measured as the variance of the log of earnings. The authors think that this reflects the substitution of production and sales investment with financial investment, strengthening owners' and elite workers' negotiating power against other workers. Looking at France for the period 1996-2007, Godechot (2012) finds that the finance sector contributes 57 per cent of the rise in the income share of the working rich.

As was the case with the financialization and growth literature, the financialization and inequality literature is consistent with that which considers the contribution of financial deepening to income inequality. The seminal theoretical argument of Greenwood & Jovanovic (1990) posited that nations would pass through a period of rising inequality in a Kuznets-type fashion (supported by Nikoloski (2012)). While subsequent research has supported the non-monotonic nature of the relationship, there is increasing agreement that there may not be a 'pay-off' in terms of ultimately falling income inequality as the process of financial deepening continues. Jauch & Watzka (2016) find that financial development increases income inequality

across 138 developed and developing countries over the years 1960-2008. De la Cuesta-Gonzalez et al. (2020) find that after a threshold of financial development in nine developed countries for the period 2000-2015 income inequality deteriorates. Benczur & Kvedaras (2021) find the relationship conditional on the size and sign of the gap between real interest rates and real GDP growth rates in developed countries in the period after 1960. Cihak & Sahay (2020) using a panel of 180 countries over the period 1980-2015, show that increases in income inequality are associated with high levels of financial deepening, with the effects stronger for the rise of financial markets over financial institutions.

Increasing wealth inequality is generally viewed as the result – in stock terms – of an accumulated flow of unequal incomes (Dávila Fernández and Punzo 2021). However, there is research that suggests that financialization amplifies this process through the inflation of asset market prices, including both securities and real estate (Fernandez and Aalbers 2016). While this tends to be a process centered in developed economies, Löscher (2019) provides an interesting case study in Ethiopia where financial market development has been accompanied by a relative decline in industrialization but an inflated real estate market which has contributed to rising inequality. Fernandez & Aalbers (2020) have argued that this is a symptom of subordinate financialization as real estate markets in developing economies serve as investment opportunities during periods of excess liquidity and search for yield in developed economies.

Financialization has been linked to rising spatial inequality. Higher median salaries in the financial sector, combined with the networked nature of finance has meant that the benefits of financial sector growth have been highly concentrated resulting in a widening the gap between rich and poor sub-regions in the countries of Central and Eastern Europe (Wallusch, Woźniak-Jęchorek, and Kuźmar 2020). Arestis & Phelps (2019, 1571) find that the increased volatility associated with rising financialization benefits the finance sector in Brazil's centralized financial districts, while the impact of the associated increase in exchange rate volatility, uncertainty and unemployment falls most heavily on the northernmost regions, "... placing significant constraints on the social policy model".

The impact of financialization on the sustainability of the social contract is an area of emerging research. Oyvat (2020), looking at the EU-28 countries for the period 1991-2017, finds that financialization (employing 5 proxy measures) has a negative impact on the growth of tax revenues, which itself reflects the findings that financialization both reduces GDP growth and tax revenue as a share of GDP. The study takes the further step of estimating the negative impact of this decline in the growth of tax revenues on spending on healthcare and education. These findings are consistent with the work of Dagdeviren et al. (2020) linking financialization with welfare retrenchment in the UK. Hunter and Murray (2019), indicative of a range of work examining the impact of financialization on particular public service sectors, argue that the financialization of healthcare, marked by the increasing penetration of private capital seeking to transform the sector into a set of tradable assets, has negative implications for health outcomes and equity through, for example, an over-emphasis on those services which generate revenue growth. Gouzoulis et al. (2022), looking at OECD countries, find that financialization as embodied in higher levels of household indebtedness and pension fund privatization, increases precarious employment, particularly for women.

4. Financialization: Investment, Innovation and Structural Transformation

Financialization and Investment

As discussed above, the financialization literature points to a range of novel financial relations and practices, which have characterized NFC behavior over the last three decades. Importantly, these financial operations are found to have negative implications for the core operational activities of NFCs, their productive investment and employment and wage decisions (Tori and Onaran 2022; Orhangazi 2008; Stockhammer 2004). Two main channels for this negative impact have been proposed in the literature (Davis 2017). The *crowding-out hypothesis* which assumes that given a fixed supply of financial sources (either internal or external), real and financial assets are held in proportions depending on their relative yields. This means that an increase in the return of financial assets can lead to a replacement of tangible investments if their returns lag that of the financial assets. The *shareholder-value orientation hypothesis* attributes the falling of real investment to the increased emphasis paid by firm managers on shareholder value. This in turn, increases the short-termism or myopic management behavior and raises the attention to financial performance indicators like earnings per share. Also, attention to shareholder value changes the corporate strategy from one aiming to ‘retain and reinvest’ to that of ‘downsizing and distributing’ (Lazonick and O’Sullivan 2000), and more generally raises payments to financial markets in the form of interests, dividends, and share buybacks.

Prior research (Demir 2009a; 2009b) shows that the crowding out effect could be assumed stronger in developing countries given their lower access to internal funds (due to lower profitability) and external funds (due to more shallow financial markets). In other words, the crowding out effect might be bigger in situations where agents are finance-constrained and cannot borrow at will (in which case they could just borrow in order to invest in financial assets without substituting their real investments). For example, Demir (2009a) shows in his seminal paper on the portfolio decisions of Argentine, Mexican, and Turkish firms, that the rates of return gap between financial and fixed investment assets had an economically and statistically significant negative effect on real investment in all three countries (over the period 1992:2–2001:2 for Argentina, 1990:2–2003:2 for Mexico, and 1993:1–2003:2 for Turkey). He also found that the average ratio of financial revenues in total profits of the top 500 manufacturing firms in Turkey increased from 23 per cent between 1982 and 1989 to 112 per cent between 1990 and 2002, with a peak of 546 per cent in 2001.

Moreover, the literature points out that in developing economies, financial operations could be driven by explicit carry trade operations where firms invest in very liquid local currency assets (for example bank deposits and/or short-term derivatives) to take advantage of the structural return differential between developed and developing countries (Kaltenbrunner 2017; Bruno and Shin 2015; Powell 2013). In this vein, Demir (2009a) documents annual arbitrage gains in Argentina, Mexico, and Turkey that were two and sometimes three digit numbers with averages of 9,11, and 22 per cent respectively in the 1991-2005 period. Moreover, given the higher uncertainty of investment returns in developing countries (see also below), financial assets might crowd out real investment in those economies, because of their higher liquidity, that is the ability to reconvert them into cash and/or the funding currency (predominantly the US Dollar).

More generally, given less sophisticated financial systems, financialization in developing countries might be characterized by the holding of high yielding bank deposits and/or government bonds, rather than trading activities in complex financial assets as has been observed in developed economies. Indeed, an emerging literature shows that NFCs in developing countries very often hold their liquid assets in cash and cash equivalents (e.g. bank deposits), rather than short-term financial assets such as securities (Powell 2013; Correa, Vidal, and Marshall 2012; Kalinowski and Cho 2009).

On the liability side - though evidence is still limited and there is some geographical variation - empirical evidence suggests that in developing countries, financial pressures on firm behavior stem more from the (international) bond market, rather than the equity market and shareholder value pressures as observed in developed economies. On the one hand, this is due to the more limited broadening of shareholders across developing economies, where despite significant increases in stock prices, the concentration of equity markets remains very high. On the other hand, to the exception of Asia, non-resident investor participation seems to be higher in bond than in equity markets across most emerging economies (BIS, 2021). This is important, because non-resident investors can be more active and potentially influence price dynamics given their size relative to underlying domestic markets. It is also important to note here, that international borrowing by NFCs in developing economies has frequently taken place offshore, through financial subsidiaries, rather than in the domestic market (e.g. Avdjiev, McGuire, and Peter 2020, Coppola et al. 2021). This implies that national statistics might not account for the total bond issuance taking place, and therefore the additional pressures faced from international bondholders.

For example, Kaltenbrunner et al. (2022) show in their comparative study of firm financialization in Brazil and Turkey, that large Brazilian firms have started to substitute bank for bond market funding, both on domestic and international financial markets. In line with what has been observed for other emerging economies frequently this borrowing has taken place offshore through financial subsidiaries. External borrowing has been exclusively in foreign currency and has been closely tied to the global financial cycle. The trend started in the early 2000s, as liquidity returned to international financial markets, and gathered pace particularly during the loose liquidity conditions of the quantitative easing period in the aftermath of the Global Financial Crisis. The authors also show that although corporate borrowing remained much more bank-based in the case of Turkey, much of it was also in foreign currency and also tightly linked to liquidity conditions on international financial markets (through the arbitrage operations of internationally operating banks). This dependence on international market conditions also indicates that recent reductions in corporate bond borrowing might be the result of tightening global liquidity conditions, rather than the reversal of a structural trend. Whether we will see a more structural trend towards equity, rather than bond financing, in developing countries might depend on their success in building a larger domestic wealth base.

As Figures 7 and 8 show, portfolio liabilities and bond markets have grown across developing economies, especially in the last decade. Furthermore, these numbers underestimate the size of capital market liabilities by developing economies' corporations, a large share of which takes place offshore (Coppola et al 2021). Domestic capital markets remain significantly smaller than in developed economies, and banks remain key players in many developing countries.

[Insert figures 7 and 8]

In line with firms' rising financial liabilities, Tori and Onaran (2022) find a strongly significant negative effect of financial payments (interest plus dividends) on physical investment in developing economies (using a sample of 25 such countries over 1995 to 2015). In principle, this would lend support to the shareholder value channel of financialization, though the authors don't distinguish between dividends (payments to shareholders) and interest rates (payments to debt holders). In line with the important role of debt in developing countries, the authors find that the ratio of debt to total assets has a significant negative effect on firm investment. Interestingly, whereas the impact of financial income on firm investment is insignificant for the whole sample, it becomes significant and positive for larger NFC firms (from the top 50 per cent to the top 10 per cent). According to the authors, this is in contrast to results for developed countries, where typically cash-constrained smaller companies show a positive relation between financial income and investment. This could be explained from a 'catching-up' perspective, where larger firms try to compete internationally drawing also on financial income, whereas small firms prefer (reversible) financial investments over (irreversible) fixed capital expenditures.

In addition to crowding-out effects and pressures arising from shareholder-value orientation, the literature on developing countries points to the crucial role of external vulnerability and macroeconomic volatility and uncertainty in shaping these financialization patterns (Kaltenbrunner and Paineira 2018a; Akkemik and Özen 2014). For example, Akkemik and Özen (2014) show for a panel of 41 firms listed in the Istanbul Stock Exchange for the period 1990-2002, that Turkish non-financial firms generate increased financial revenues in a condition of macroeconomic uncertainty.

This is also confirmed by Kaltenbrunner et al. (2022) who present evidence for Brazil and Turkey that increased holding of liquid assets were concentrated in cash and cash equivalents (e.g. bank deposits) to protect firms against economic uncertainty and financial crises (rather than speculative and/or financial gains as put forward by the traditional financialization literature or the Bank for International Settlements' emphasis on carry trade operations). Indeed, the authors show that, although both Brazilian and Turkish firms have increased their exposure to financial markets (reflected in rising financial income), neither of them have made profits on these financial holdings.

In this vein, Tori and Onaran (2022) show - through splitting the sample along different institutional and financial system characteristics - that the negative impact of financial payments and incomes on firm investment is significant in those developing countries which have greater stock market development, and that financial income distracts from investments particularly in those countries which have more liberalized financial markets and a higher degree of capital account openness. Interestingly, and in line with Bonizzi et al.'s (2022) hypothesis that financialization patterns in developing economies are fundamentally linked to their productive integration into global value chains, Tori and Onaran (2022) also find that firms in countries with a higher GVC index experience negative effects of both financial payments and incomes on investment. According to the authors, participation in GVCs could increase the susceptibility of investments to financial payments, as these would likely mean payments upstream to lead firms, generating an effect similar to the pressures from shareholders.

Financialization and Innovation

Whilst there is by now quite an extensive literature on the relation between financialization and aggregate investment, we know less on the relation between financialization and higher risk/innovative expenditure (e.g. into more sustainable and greener production methods) or indeed the relation between financialization and more long-term structural change, such as that which will be needed if we want to mitigate the climate crisis.

On the one hand, the literature on the economics of innovation points out that financing innovation using capital from sources external to the firm is constrained due to market failures. Specifically, market failure for R&D investment arises from asymmetric information, moral hazard, and the incompleteness and inefficiency of capital markets. Empirical evidence indicates that small and newly funded firms are externally constrained (Levenson and Willard 2000). For instance, studies in the context of the US point out that financing of R&D does not rely on debt but rather on internal sources (Himmelberg and Petersen 1994). Prior studies in the context of developing economies indicate that access to external financing stimulates firm innovation (Ayyagari, Demirgüç-Kunt, and Maksimovic 2011). Evidence from cross-country studies points out that countries with well-developed financial markets, and therefore higher access to external finance for firms, are more innovative (Hsu, Tian, and Xu 2014).

On the other hand, a recent, though still small, literature argues that the negative impact of financialization processes also holds for firm innovation (Dosi, Revest, and Sapió 2016; Gleadle et al. 2014; Mazzucato 2013; Lazonick 2007). For example, Lazonick and Mazzucato (2013) argue that increased shareholder-value pressures divert resources from R&D investments to financial payments (primarily dividends and stock repurchases), and change managerial preferences from those focused on ‘value creation’ to those driven by ‘value extraction’. As to the latter, the authors argue that we see a stronger separation between economic actors who take the risk (that innovative activities might not bear fruit), and those who reap the financial rewards (and extract the value from the innovative activities, e.g. venture capitalists, hedge fund managers, and private equity fund managers). According to the authors, stock markets strengthen those focused on value extraction processes through broadening the array of financial sources available and hence liquidity (the cash function), and providing the option of corporate stock as remuneration for employees and managers (the compensation function). Moreover, increased managerial short-termism induced by stock markets is seen to weigh particularly on innovative activities, which bear higher risk (Dosi, Revest, and Sapió 2016; Edmans, Fang, and Lewellen 2013; see Montalban and Sakinç 2013 for case studies of the pharmaceutical sector; and Carpenter and Lazonick 2017 for the telecommunications sector).

Econometric evidence that shareholder value pressures might reduce innovation are presented in recent finance and business literature. For example, using an instrumental variable approach Bernstein (2015) finds a decline in the innovative novelty of firms and both an exodus of skilled investors and a decline in the productivity of the remaining ones after firms’ Nasdaq IPOs. Similarly, Aggarwal and Hsu (2014) show that firms undergoing a public offering experience a boost in forward patent citations in the short-term, but a decline in the medium and long-term. This is also confirmed by Wies and Moorman (2015), who present evidence that while the size and variety of innovations increases after going public, they are less risky, characterized by fewer breakthrough innovations and fewer innovations into unfamiliar categories. Lee et al. (2020) show for thirty-one developed countries that as financialization advanced (approximated by the contribution of financial and insurance activities to total value

added and the ratio of stock market capitalization), the radicalness of technological innovation (qualitative indicator of innovation measured by the number of times a certain patent has been cited) declined, while the number of patent registrations (quantitative indicator of innovation) increased. This finding could be the result of recent trends wherein financialization has led to a rise in corporate funding through financial markets, which has boosted the motivation of companies to increase their patent registrations quantitatively, whereas the growing short-termism in firms' technological innovation strategies led to a decline in the qualitative importance of these patents (radicalness of technological innovation). Seo et al. (2020) show for the case of Korea that financialization payout indicators have a negative relation with innovation, quantitatively and qualitatively. Though estimation by the firm's size reveals that the hypothesis of managerial myopia leading to short-termism of innovation strategy is valid only for conglomerates.

There is still little literature on the relation between financialization and innovation in developing countries. Jibril et al. (2018) delineate analytically and test econometrically three channels through which finance can affect innovation (measured by investments in intangibles) in the case of Brazil: positively through the access to finance channel, and negatively through the crowding out and shareholder value orientation channels. Drawing on a relatively new literature in innovation studies, the authors use 'inputs' into the innovative process in the form of intangibles, rather than outcome variables such as patents to measure innovative activities in Brazil. This is in line with how innovation takes place in many developing countries and late industrializers, which is more about adapting international technologies or production techniques to local environments to progressively move up in global value chains, rather than fundamental scientific breakthroughs reflected in patents or IPRs. The results of the empirical analysis show that both the crowding-out channel of financialization, measured as financial assets relative to total assets, and the shareholder-value orientation channel of financialization, measured as dividend payments relative to equity, discourage the accumulation of intangible assets in Brazil. The authors find no evidence in support of the access to finance channel. Moreover, the results suggest that the economic impact of the crowding-out channel is larger than the shareholder-value orientation channel in the context of Brazil.

Financialization and Structural Transformation

Building on the seminal literature on the financialization-investment/innovation nexus, an emerging literature has started to pay attention to how financialization not only affects investment in the aggregate, but also fundamentally shapes the sectoral distribution and structural composition of developing economies. The backdrop of this discussion - and emerging empirical evidence of such an effect - is, on the one hand, the apparent return to an emphasis on primary commodity production of certain economies (in particular in South America), and, on the other hand, the structural difficulties for developing countries to move up and assume activities higher up the value chain. In their overview paper on the Brazilian case, Corrêa and Feijo (2022) identify three channels through which financialization (broadly defined) can interact with structural change: first, the financialization and investment/innovation nexus discussed above; second, the financialization of commodity markets which can create speculative gains in those markets and incentivize an orientation of production in that direction; and finally the financialization of the exchange rate in the form of speculative carry trade operations, which create exchange rate dynamics detrimental to developing a high-value added manufacturing sector. With regards to the third channel, the authors highlight in particular the problem of overvalued real exchange rates and the

detrimental impact on the competitiveness of the tradable sector (for a recent overview of the important relation between the real exchange rate international trade, economic development, and growth see Demir and Razmi, 2022).

Three recent empirical contributions substantiate these concerns. Botta et al. (2021) focus particularly on the detrimental impact of non-FDI flows as a potential source of premature deindustrialization in the context of increasing financial integration. The channels through which non-FDI inflows can affect the structure of the economy include: a negative impact through real exchange rate appreciation and loss of competitiveness (both through nominal exchange rate appreciation and rising prices), which tilt the economy towards the non-tradable (less efficient) sector; a short-term positive impact through company balance sheets as nominal exchange rate appreciation reduces the domestic currency value of dollar liabilities; followed by a negative long-run impact as a resulting increase in firm borrowing creates financial fragilities and the risk of boom-bust cycles (see also Kohler, (2019) for these external debt induced boom-bust cycles); a theoretically indeterminate impact of a potential domestic credit boom set off by strong capital inflows. Based on these conceptual considerations, the authors show for a sample of 36 developed and developing countries over the time period of 1980 to 2017 that the manufacturing employment share, manufacturing share of GDP, and economic complexity (measured by the Atlas economic complexity index) contracts during periods of strong *net* non-FDI inflows (flows higher than the country average for three years). The impact is significantly stronger for developing than for developed countries. These results confirm earlier results by Botta et al. (2017) for the case of Colombia, where the authors found that initial increases in natural resource oriented FDI attracted booming portfolio inflows that caused an even stronger appreciation of the Colombian peso and a decline in the contribution of manufacturing to domestic GDP. Similarly Bortz (2018) presents evidence of a positive correlation between the increase in gross capital inflows and the variation in the contribution of the financial, real estate and commerce sectors to GDP.

Nguyen et al. (2020) provide the first study to investigate explicitly the impact of different indicators of financial market development on economic complexity - broadly defined as the productive capabilities/knowledge accumulated in certain locations (using both the Economic Complexity Index calculated by Hidalgo et al. (2009) and the economic complexity index (ECI+) estimated by Tacchella et al. (2013)). The authors find for a sample of 52 developed economies over the 1995-2017 period that whilst the issuance of new patents is consistently positively related to economic complexity, the impact of financial development is more complex: whereas the financial development indicators seem to have a positive impact on economic complexity in the short-run, most financial development indicators have a negative impact on economic complexity in the long-run. According to the authors, this result could be explained by the fact that whilst larger and more sophisticated financial markets provide access to funding in the short-term, a 'too-large' financial sector does not contribute to the sophistication of companies' operations and production.

This result is also echoed by Castillo (2022), who analyzes the role of financialization as a potential driver of structural change (also measured by Hidalgo's economic complexity index) on a global scale over a long period, using data from 121 countries from 1970 to 2015. The paper investigates if financialization (measured by different macroeconomic indicators of financial sector size and type) plays a different role in the productive structures of developing countries vs developed ones. It finds that financialization-fed detrimental structural changes: private credit shows a negative and significant effect on economic complexity for the entire sample and also when dividing into two: developed countries and emerging and developing

countries. Castillo also finds that Latin America and the Caribbean seem to exhibit a distinctive pattern when investigating at a regional level. In this region, private credit positively affects economic complexity up to a point, and then it becomes damaging. In addition, the total non-FDI stock of foreign assets and liabilities impacts economic complexity negatively in this region. In the case of MENA, this variable shows a similar behavior affecting technological upgrading. The results are robust to different specifications and the inclusion of several control variables related to primary commodity-driven economies.

Financialization, Domestic Patient Capital and Development Financing

Financialization can also be seen in the changing structure of the financial system towards market-based finance (Karwowski, Shabani, and Stockhammer 2020). Most directly this can be seen in the significant growth of capital markets, stimulated by the growth of institutional investors and the liberalization of cross-border financial flows. Additionally, market-based financial relations have become more commonplace among financial institutions, including banks (Hardie et al. 2013). Here the literature highlights the rise of market collateral as a way to back credit creation and derivatives (Sissoko 2019; Gabor 2020).

This has made the global financial system more reliant on short-term liquidity. Long-term lending is increasingly backed by short-term funding markets, backed by collateral. The liquidity and stability of collateral and money markets is crucial to the functioning of the financial system. Importantly, these are largely US dollar denominated and therefore dependent on the accessibility of the US dollar and the liquidity of US markets, including the provision of liquidity by the Federal Reserve (Howell 2020; Murau, Rini, and Haas 2020). Another key characteristic highlighted by the financialization literature is the increasing importance of new types of financial institutions. Institutional investors and asset managers have become more prominent players in capital markets, and are now some of the largest shareholders of listed companies in developed economies (Fichtner 2020; Braun 2021). Many of these asset managers follow benchmark indices closely, or even passively, so that an important role in the allocation of funds is also played by index providers (Petry, Fichtner, and Heemskerk 2021).

These new financial structures can act as a constraint on the domestic provision of development finance and patient capital. The traditional sources of long-term finance, commercial banks and pension funds, have become more mindful of short-term liquidity, even if they do not directly have funding constraints, due to the collateralisation of finance. In developing economies, where this is also coupled with volatile cross-border capital flows, it makes the financial system overall more prone to short-termism and less likely to finance long-term investment (Bortz and Kaltenbrunner 2018; Kaltenbrunner and Paineira 2018b; Bonizzi, Churchill, and Guevara 2021). The role of development banks is also more challenging in this environment. In countries that are vulnerable to capital flight and in conditions of tight global liquidity development banks can be limited in providing patient capital domestically, due to the high credibility of the disinvestment threat by the private financial sector (Naqvi 2018; 2022a; Quist 2022). More generally, as we will discuss in more detail in the policy conclusions, even the provision of long-term, affordable finance might not be sufficient in volatile and financially subordinate market structures with low trust in domestic currencies (high level of domestic currency substitution) and lack of complementary structural policies (tax, industrial policy etc.). However, there are cases where domestic financial institutions have been able to act as stable sources of long-term finance. Public financial institutions, including development banks,

can fulfill their role, when their role is part of a more comprehensive set of industrial and financial policies that reduce external vulnerability (Naqvi 2019; Henow 2022; Nagel 2022).

Overall, the financialization literature focusing on the transformation of the financial sector highlights a contradiction. While finance has undoubtedly expanded and extended its provision of services, this has not resulted in proportional increases in finance to long-term productive investments. Market-based financial structures have reinforced the short-termist tendencies of finance, potentially crowding out patient capital. Indeed, evidence shows that financing of non-financial corporations for investment has been declining (Figure 9).

[Insert figure 9 here]

5. Policies for a Financial System to Support Sustainable, Structural Transformations

Emerging from the previous discussion is the incompatibility of financialization with either a conducive macroeconomic environment for SST, or with providing sufficient and appropriate microeconomic incentives for the same. Policies for SST can not be limited to regulatory changes within the financial sector itself. It will be critical instead to develop a systematic policy program involving a range of domestic measures, differentiated by developed and developing status, as well as supportive regional/international frameworks. Domestic measures will need to extend beyond financial sector regulation and monetary policy into fiscal, industrial and labor market policies.

In the discussion below we outline some of the range of policies that are needed to discourage financialization which undermines SST. These encompass both ‘carrots’ to financial sector support for a sustainable economic, social and environmental framework and provision of finance for SST, as well as ‘sticks’ to reduce financial sector volatility and over-investment in non-value-adding activity. Importantly, this must not be viewed as a one-size-fits-all recipe, as the precise combination of policies and institutions needed to support investment in SST and the appropriate timing of their implementation is spatially and temporally specific, and can only emerge with the necessary political legitimacy from the interplay of both domestic and international interests.

a. Financial Sector Development and Regulation

Domestic financial system: Managing capital market development

While significant variation exists, developing countries are moving towards more market-based systems where equity and bond markets are assumed to provide the financing for SST. However, as the discussion above has shown, capital market growth can impair real investments through (a) offering an increasing array of financial assets which crowd out real investment through offering more attractive yields and higher liquidity, and (b) increasing the payments to financial markets in the form of interest and dividend payments. There is some evidence that the former - the crowding out channel - is more significant in developing countries because of higher yielding assets and increased demand for liquidity in the presence of uncertain macroeconomic conditions (see also our recommendations below). These

potentially negative implications of capital market development on non-financial investment are particularly significant for high-risk innovative expenditures needed for SST.

This highlights the need for reining in capital market development, and ensuring the financing of SST through affordable, long-term bank credit. This would be particularly important for small-and-medium sized enterprises which are not only key agents for equity transformation, but also most likely to be adversely affected by a lack of financing in uncertain macroeconomic conditions. This financing could either come from a strengthening of public banks (see below), or more active state intervention into private banks' credit allocation processes. The experience of India's more gradual process of financial liberalization underscores how directed credit can play an important role in maintaining financial inclusion. While such programmes need close monitoring, liberalization does not necessarily remove distortions but can limit financial development and worsen the concentration of credit allocation, and ultimately developmental outcomes (Chakrabati et al 2019; Ganguly and Vasudevan 2022; Jayadev et al 2018). Yeyati and Panizza (2004) however show that public banks act less pro-cyclically than private banks, which can contribute to smoothing the business cycle.

Much of the financialization literature stresses the role played by market-based finance in increasing the risks of volatility and short-termism. The details of how domestic securities' markets are structured and regulated matters. Petry (2020) argues that Chinese authorities have followed 'state-capitalist' principles in the development of private exchanges. Authorities have introduced a range of regulation to discourage speculation, such as the requirement for traders to indicate if trades are for hedging or speculative purposes accompanied by concomitant quotas and position limits. In contrast to international futures markets, almost all futures contracts in China are required to be physically delivered. To avoid commercial banks using their implicit (or, indeed explicit) public backing to subsidize their investment activities, Chinese commercial banks and securities markets have been strictly separated. Based on the US experience where rising levels of share buybacks have been associated with declining fixed capital investment, Lazonick (2013; 2012) has urged an outright ban on the practice. To reduce the over-emphasis on shareholder value orientation and its risks to short-termism, he has also called for stock options to be indexed to longer-term firm performance.

Pension funds can play a complementary role in providing long-term, stable and patient finance for SST. This cannot be taken for granted, and is contingent on a number of institutional meso-level factors, such as regulation and governance capacities, and macro-level factors, such as financial market capacity and interest rates (McCarthy, Sorsa, and van der Zwan 2016; Braun 2022; Bonizzi, Churchill, and Guevara 2021). However, in countries with a history of strong developmental institutions, pension funds can act as patient investors, by both providing long-term finance for the real economy and by stabilizing domestic financial markets: the case of South Korea since the 1998 crisis is again instructive, as its National Pension Fund has acted as a key counter-cyclical investor in bond markets, especially during crises (Y. Lee and Grimes 2022).

International financial integration: Limiting non-resident investor participation

Another key result of the literature surveyed above, is that the nature of processes of domestic financialization and their impact on investment in developing countries varies according to the degree of international financial integration and how that integration process is managed (see, for example, Tori and Onaran 2022). This accords with the argument in the literature that financial liberalization is one of the drivers of financialization, as captured in metrics of both *de jure* and *de facto* liberalization as well as financial volatility. Moreover, financial

liberalization makes it more difficult for traditionally long-term, patient investors such as pension funds or national development banks (see below) to fulfill their role.

In South Korea, increasing financial liberalization played a role in the crisis that emerged in 1997, with a range of measures taken subsequently to dampen the associated risks to financial stability (Nagel 2022). Other developing countries can learn from this experience regarding the measures that should be in place *before* greater financial liberalization is considered. A withholding tax was introduced to encourage patient capital over international hot money flows. Legal requirements regarding accounting and disclosure systems were updated to improve transparency for investments and the assessment of asset values. In the commercial bank sector, limits were placed on foreign exchange risk exposure, with local branches of foreign banks eventually treated the same as domestic banks. A levy was placed on non-deposit foreign currency liabilities with maturities of less than a year to reduce the potential for currency / maturity mismatch. A range of banking regulations on fees, dividend payments and interest rates led to a retreat in overall foreign bank numbers (Henow 2022). Restricting banks' ability to fund themselves in international dollar funding markets not only reduces financial fragility, but also increases the use of local currencies as 'funding currencies' which can lend more stability to those currencies (Kaltenbrunner 2018).

With regards to the non-financial sector, the report showed that one of the key vulnerabilities in developing countries is the issuance of (increasingly market-based) foreign currency liabilities. In this vein, South Korea introduced measures which prohibited both bank and non-bank financial institutions from buying foreign-exchange denominated bonds issued by domestic NFCs if the issuer was to convert proceeds into Korean won. Regulations on Chaebol-owned NBFIs were introduced to reduce investment in subsidiaries, with the result of reduced leverage. In the South Korean household sector, limits were similarly placed on foreign exchange exposures. In a similar vein, to reign in speculative positions on foreign exchange derivatives (including by Brazilian corporates) Brazilian authorities increased the financial tax on margin requirements on FX derivatives transactions from 0.38 to 6 per cent in 2010, and imposed a one percent tax on excessive long foreign exchange positions in 2011 (Prates 2014).

In China, more explicit management of the capital account and the type of foreign financial flows which are allowed access to the domestic financial market has played an important role in securing financial stability and reducing macroeconomic uncertainty (Xie, Kuang, and Li 2022). High barriers to entry to the financial sector have been erected through the use of capital and licensing requirements. Regulations limit the role of foreign institutional investors, and strict controls have been placed on capital inflows which delineate the desired qualifications of investors, and sectors they are allowed to invest in. This has had the effect of limiting the stock of foreign-currency denominated debt. The result has been a high growth rate in fixed capital investment led by national development banks (discussed below), a higher profit share in industry compared with the FIRE sector (before 2008), low financial profits as a share of total NFC profits, and almost no share buybacks (before 2013).

Reforms to the international financial architecture

While it is outside of the remit of this paper to explore the complex debates over needed policy reforms to the international financial architecture (IFA) (and many such reforms are discussed in other chapters in the UN FfD 2023 report, [see xx](#)), it is important to note that the domestic

policy reforms here discussed need to be complemented to the greatest extent possible by a range of IFA reforms, including but not limited to:

- Expanded support for the selection of appropriate capital control measures and their implementation (see Erten et al., 2021) to discourage speculative flows, sudden stops and capital flight;
- Work towards a multilateral clearing union wherein trade and investment are denominated in units representing a basket of currencies, reducing exchange rate risks associated with external liabilities and providing greater space for the pursuit of domestic policy preferences; as an interim step, there is an urgent need for the establishment of fair and equitable multilateral swap lines;
- Worldwide treaty on international financial regulation and financial sector remuneration to prevent regulatory arbitrage; in the interim continued efforts towards the coordination of risk assessment, regulation, supervision and standards implementation as led by the FSB;
- International debt restructuring mechanism that considers debtor countries' SDG obligations to citizens;
- Increased efforts towards eliminating tax evasion and minimizing tax avoidance; broad-based implementation of wealth, land and transaction taxes to address national/international inequality and volatility respectively;
- Establish a public credit-ratings agency (ideally at global level, but perhaps initially at a regional level), funded by the financial transaction tax, that would put greater emphasis on drivers of long-term growth and productivity potential of firms over recent profitability;
- Requirement of systemically important central banks to consider both domestic distributional impacts as well as international spillover effects of monetary policy; and
- A dramatic increase in concessional finance, by both meeting existing global aid commitments and a step change in the provision of climate adaptation funding and the payment of climate reparations.

Maximising the potential of National Development Banks

Transnational corporations have access to international capital markets to meet their financing needs. However, for domestic commercial banks in developing countries, the absence of profit opportunities on large corporate borrowing can lead to a focus on lower-risk investment in government paper rather than higher-risk portfolios in domestic SMEs (Castel-Branco and Maia 2022). Given the structural inequality in the international financial architecture which ensures significant interest rate premia must be paid on developing countries' sovereign borrowing, public debt bond trading can thus become highly profitable for domestic banks. This suggests that there is a need for National Development Banks (NDBs) to play a catalytic role in creating financing for SST.

East Asia provides numerous examples where NDBs have both directly channeled funds into priority areas, but equally importantly contributed to a stable macroeconomic environment. Korean state investment banks channeled funds into priority areas including IT, green technology and the creative industries. The Korean Development Bank (KDB) has played an industrial policy role, carrying out industrial risk analysis and technology evaluation,

and providing support for SMEs in export sectors (and supporting private venture capital to do the same). After the 2008 crisis, KDB was merged with Korea Finance Corporation, and reoriented toward financing of industries with greater risks and providing SMEs with new financing solutions such as IP acquisition and commercialization financing (Mikheeva 2019). The Korea Investment Corporation (KIC) was created to invest the country's growing reserves, helping to circumvent accusations of currency manipulation. Discussions have taken place about whether KIC should replace local branches of foreign banks in offering dollar-denominated liquidity (Henow 2022). Post-crisis, several of these public banks played roles in re-capitalizing commercial banks, providing liquidity to NBFIs, stabilizing bond markets, and buying the debt/real estate/assets of distressed NFCs (Nagel 2022).

In Taiwan, the China Development Industrial Bank (CDIB) has played multiple roles including as leading venture capitalist taking equity stakes in its long-term partners, providing international investment banking operations and a range of fee-based services such as wealth management, and project finance. The Development Bank of Singapore (DBS) moved from its traditional role of large-scale fixed capital investment through venture capital and project financing, into the provision of a range of financial services, assisting domestic firms with international expansion, financing schemes to SMEs and social enterprises. In Malaysia, while their contribution has been relatively modest compared to NDBs in Northeast Asia, amongst the 11 existing NDBs are institutions devoted to SMEs, agriculture, industry, export-import and savings for affordable housing (Mikheeva 2019).

Marois (2021) describes the examples of the Indian National Bank for Agriculture and Rural Development (NABARD) and Bank of North Dakota (BND) in the United States as NDBs which can support SST. NABARD sources funding from urban-based, partially state-owned commercial banks; channels medium and long-term loans at subsidized interest rates to farmers and priority sectors (recent lending has grown towards non-farm and MSME lending and rural infrastructure); and supports investment in public research around questions of agricultural development. BND receives public financial backing from the state, itself backed by US federal government support; and its returns are subject to legislative oversight, with the lending portfolio limited to the state and focused on commercial and business lending, often partnering with local banks (two recent strategic priorities are the expansion of municipal infrastructure and provision of affordable housing support).

A key issue for any NDB intervention is over the choice of financing instrument. The use of more complex financial instruments to induce additional private financing may result in too large a 'risk subsidy' to the private agents, as well as a loss of policy control over the associated developmental impact (Griffith-Jones et al. 2022). Criticism of 'blended finance' has characterized it as a way to align aid and development finance to the interests of international investors, and to 'de-risk' their investment (Mawdsley 2016; Dafermos, Gabor, and Michell 2021; Gabor 2021). However, much of the (limited) additional finance in blended financial investments originate in fact from development banks rather than the private sector, raising the more immediate concern of additionality of both finance and developmental outcomes (Attridge and Engen 2019), and suggesting that risk is being re-allocated rather than eliminated.

The other important question for the ability of NDBs to fund SST is their funding structure. If NDBs - in particular national NDBs or regional MDBs - remain dependent on short-term, foreign currency funding, this will undermine their ability to provide long-term, sustainable financing given sustained maturity and currency mismatches on their balance sheets. Indeed

NDBs' and MDBs' desire to maintain their high credit ratings could be undermined by balance sheet risks; at the same time fiscal resources which could be used to provide equity remain severely limited in developing countries. One potential solution would be to require patient institutional investors such as pension and insurance funds (where present) to hold NDB securities. Another proposal would be to encourage large, international multilateral development banks (e.g. the World Bank or the European Investment Bank) to provide long-term, local currency financing to national or small regional development banks.

Rather than being seen as a silver bullet, it must be noted that the political settlement required to maintain support for NDBs is influenced by a range of factors. This includes the political orientation of the governing party, the historical experience of developmentalism, the relative power of domestic interest groups, and the credibility of threats of disinvestment or capital flight itself influenced by conditions of global liquidity (Naqvi 2022b). NDBs will find it difficult to provide long-term, stable financing in a volatile, liberalized and financially integrated market-based financial system. This speaks to the need to complement developmental banking with the financial and macroeconomic policies which reduce financial instability as discussed above. Equally important is the need for a supportive international financial framework, which encourages counter-cyclical liquidity provision to developing economies and discourages capital flight. Public development banks will need to collaborate globally, with particular attention paid to the resource challenges of banks serving low-income countries (Marodon 2022), and the need to align both strategy and operations with the UN SDGs (Riaño et al. 2022).

Monetary policy: Navigating macroeconomic volatility

As discussed throughout this paper, macroeconomic volatility has detrimental impacts on SST in developing countries. Central banks' efforts to navigate this volatility thus play a critical role in creating an environment conducive to investment in SST. Especially crucial for developing economies is the maintenance of a broadly supportive macroeconomic environment, affording greater certainty in financial flows, exchange rates, inflation and ultimately growth.

Central banks in developing economies have built up considerable foreign exchange reserves. Despite the adoption of floating exchange rate regimes, they have defended their right to targeted intervention in foreign exchange markets. Such interventions serve to reduce exchange rate volatility which distracts from investments into productive, high-risk sectors, and can threaten the liquidity and ultimately the solvency of domestic firms. To be successful, exchange rate management should be complemented with a range of macro-prudential and/or capital account regulations. In relation to their inflation mandate, a number of central banks have either formally adapted their mandate or informally given greater priority to financial stability concerns. This involves the inclusion of asset price movements into monetary policy decision-making, the introduction of macroprudential rules over bank and non-bank FI balance sheets (as discussed above), and the imposition of loan-to-value and loan-to-income ratios on commercial bank mortgage lending to regain control over housing market inflation. There is a responsibility on the part of central banks from developing countries to carefully balance the goals of output and employment growth, price and financial stability (Epstein 2009).

Depending on institutional arrangements, the central bank, banking regulators or even treasury, may play a more interventionist role in the monitoring and guidance of credit, via private banking and non-banking financial institutions, to priority economic sectors. It is important that such interventions are coupled with strong monitoring and transparency standards, to

ensure they improve access to finance to underserved sectors. As discussed, the case of India shows that financial liberalization can lead to partial capture of existing directed credit institutions by large corporations (Ganguly and Vasudevan 2022). Guidance may incorporate the introduction of liquidity provision tools for non-financial corporations, and the widening of eligible collateral and counterparties to support innovative sectors, especially during periods of challenging conditions. Additionally, it may introduce specific financial access facilities for innovative firms and sectors that are not already recipients of FDI or foreign credit, and therefore at an earlier stage of maturity and more vulnerable to changes in financial conditions.

b. Fiscal, Industrial and Labor Market Policies

Likely to be neglected in any discussion of creating a financial system which supports SST are fiscal, industrial and labor market policies. Such neglect would be a mistake. These policy areas have an important role to play in addressing both the causal factors (rising inequality, monopoly and rent extraction, labor exploitation in GVCs), as well as the negative impacts (weak investment, rising inequality and volatility) linked with financialization

On the revenue generation side of fiscal policy, an extensive literature (for example Arestis and Karagiannis 2022) has discussed the potential for some form of international financial transaction tax to, not only raise considerable sums that could be channeled into global public goods, but importantly for the discussion here, also discourage speculation and volatile short-term capital flows. The sticking point remains largely political; while easier to introduce unilaterally, there is growing consensus that any such measure would be more efficiently adopted at least at a regional if not global level (Damette, Sobczak, and Betti 2022).

While transaction taxes offer both revenue-generating and stability-enhancing possibilities, the emphasis in the discussion of wealth taxes is on their potential for redistributing highly unequal levels of wealth as well as supporting expenditure on social and environmental priorities. Emphasis in this literature has been on national measures (Saez and Zucman 2022; Advani, Miller, and Summers 2021), though proposals have arisen for regional wealth taxes to fund health (Saez, Zucman, and Landais 2020) or environmental challenges (Kapeller, Leitch, and Wildauer 2021).

Other proposals for tax reforms to support SST target rent-seeking activities which contribute to financialization. Taxes on the windfall profits of extractive industries could be levied in recognition of their origins as a natural resource rent as well as their contribution to excessive financial accumulation. To counteract asset price inflation in real estate markets, governments should consider higher and/or countercyclical taxes on real estate, in particular targeting the purchase of existing housing stock by investors, in order to reduce speculative pressures. Land value taxes can be an effective tool to address the inequality which drives financialization, and the fixed nature of land makes tax collection technically (if not politically) more feasible (Kumhof et al. 2021).

Accompanying calls for the introduction of new taxes have been arguments for increased action against tax evasion and avoidance, and the role played therein by tax havens (e.g. Tørsløv, Wier, and Zucman 2018). The main channels of corporate tax avoidance include transfer mispricing, international debt shifting, treaty shopping, tax deferral, and corporate inversions. Around 10 percent of global GDP is held in tax havens with developing countries most affected by the related outflows (Brandt 2022). The recent efforts by the OECD to reduce

profit shifting and the introduction of minimum corporation tax levels should be supported. Beyond the obvious losses to the tax bases of these countries, cracking down on tax evasion and avoidance will provide greater incentive for firms to re-invest in productive activity.

Government expenditure, as part of a coherent industrial policy, can both help to maximize the developmental potential of existing sectors, as well as support a more diversified productive structure thereby fostering SST. Particularly important for many developing countries is the need to reverse the financialization of commodities markets; the participation of speculators should be discouraged through the regulation of retail and index traders' positions (Huellen 2020). High liquidity encourages index trader entry into commodity markets driving up correlations between commodities and equities (Ordu et al. 2018). In the longer term, there is a need to break with institutional structures, which have been designed to serve the needs of large commodity trading houses rather than producers and the countries from which the commodities are sourced.

Transforming rent-dominated sectors to better serve structural transformation requires some more general as well as sector-specific industrial policies. For example, in the extractive industries, limits on leverage and dividend payouts of mining and energy firms can limit gearing strategies employed to ramp up capital expenditure which have intensified the inherent volatility of these sectors (Bowman 2018). Similarly, in the pharmaceutical sector, the shift to stock options in senior manager's compensation packages, share buybacks and dividend payouts, has resulted in reduced expenditure on R&D and higher drug prices (Busfield, 2020). The outsourcing of new discovery to biotech firms acquired through M&A activity has not resulted in a substantial increase in new drug approvals, instead leading to a further degradation of in-house innovative capability (Tulum & Lazonick 2018; Gleadle et al. 2014). This argues for limits on financialised practices and rising corporate concentration in the sector; however, if this is insufficient to address the identified problems, there may be a need for a greater public role in the commercial exploitation of intellectual property emerging from the public university system. This need to counter rising concentration is similarly a problem identified in the IT and platform sectors. M&A activity is often used to eliminate future competitors, driving down innovation; as these sectors attract an increasing proportion of financial flows, they deprive other sectors of financing, driving rising spatial as well as income/wealth inequalities (Feldman et al. 2021). Li & Qi (2022) find that growing monopolization of platform sectors in China has contributed to rising inequality, overcapacity and the risk of financial instability; they call for regulation requiring greater stakeholder involvement in the platform development process emphasizing the role of platform economies as public goods.

Governments may wish to consider alternative social and physical infrastructure ownership models. The experience of those countries where the process of privatization and marketization of social and physical infrastructure has led to the increasing leverage of participating firms and rising cash payouts to shareholders, with detrimental impacts on investment and service levels (Karwowski 2019), warrants careful scrutiny. Public ownership models of physical infrastructure are less prone to financialization and allow for the capture of broader public externalities (Hall et al. 2019). The existing regulated asset base (RAB) model has made private capital investment in infrastructure a low-risk opportunity for private investors, and encouraged making profits from increased leverage and financial engineering over increased network investment and better management (Helm 2009).

Finally, it has been argued (Bonizzi, Kaltenbrunner, and Powell 2022; Baglioni, Campling, and Hanlon 2021; Hanlon and Harney 2021) that reducing excessive investment in financial instruments requires diverting the source of value which funds it. Beyond addressing inequality, monopoly and rent extraction as discussed above, there is a need to consider the flow of value within the global production system itself. Following the restructuring of production that has transformed the global economy in recent decades, lead firms in global value chains are able to use their market power to reduce payments to the firms and their workers that sit further up the chain in developing countries. This can slow the rise in wages and domestic profits in developing economies so critical to raising living standards, reducing inequality, and expanding the tax base from which to fund SST. Shifting the balance in these relationships requires a global policy package involving strengthening and monitoring of minimum global standards on environmental and labor rights, such as the ILO core labor standards. Tools to enforce such standards on TNCs need to be considered, such as the introduction of commonly-agreed tariffs on non-compliant firms. National regulations over employment contracts are needed to ensure that employees involved in innovation share in the gains; this could be achieved through tying collective wage negotiations to trends in labor productivity. Finally, further research is needed into the linkages between labor exploitation in GVCs and its contribution to processes of financialization.

6. Conclusion

This paper has taken stock of the research and the emerging empirical evidence with regards to the link between financialization and the closing off of space for sustainable structural transformations. Developing economies' subordinate position in the international monetary and financial system poses significant challenges in this context for harnessing long-term, stable financing for structural transformations needed to improve living standards.

Financialization has been argued to emerge variously from financial liberalization, rising levels of monopoly and inequality, the increased importance of intangibles to the global economy, and the opportunities for value extraction associated with the globalization of production. Empirical study has linked proxies for financialization with declining growth potential, rising income and wealth inequality, and greater social and economic volatility and insecurity.

The overall picture of investigations into financialization for investment is not encouraging. Falling levels of non-financial investment may be crowded out by financial investment, financial payouts and the need for greater reserves to act as buffers against the increased volatility of a financialized global economy. The degree of innovation of investment appears also to suffer as pressures to adopt a short-termist perspective weaken incentives for risk-taking on technological complexity. This undermines firms' abilities to contribute to broader domestic objectives of structural transformation, as does increased volatility in exchange rate markets; meanwhile rents extracted from the financialization of commodity markets provide incentives to expand primary commodity investment.

The risks identified in the studies of financialization suggest that a broad package of policy measures will be needed to: shape the degree and nature of financial liberalization, reduce monopoly and encourage non-financial investment in sectors where financial rents predominate, address rising levels of income and wealth inequality both domestically and

globally, and take measures to support workers and firms from developing economies to participate more equally in a world of globalized production. Some suggestions, drawing upon examples where the negative repercussions of financialization have been better managed, were advanced across: financial regulation and central bank policy; and fiscal, industrial and labor market policies. A key role is envisioned for patient capital as might be provided by National Development Banks and/or pension funds. International efforts will be needed in order to provide both a supportive financial architecture for such measures, but also to better manage and monitor the nature of developing country integration into global value chains so as to prioritize developmental objectives.

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