

Integration or Fragmentation? International Capital Flows in the Post-crisis World
How the Revised OECD Codes Can Improve Transparency, Accountability, Credibility, and Trust

Session : “Next Vulnerabilities: Capital Flows and the Migration of Risks to New Corners of the Financial System”
September 11, 2019 – OECD Conference Centre, Paris, France

“Capital Flows and the Migration of Risks: The Recent Chilean Experience”

Remarks by Mario Marcel, Governor of the Central Bank of Chile

1. Issues for discussion*

a. Which new sources of vulnerabilities are building up a decade after the 2008 crisis?

- Risks associated with the growing importance of non-bank lenders. In some EMEs, this may result in credit lending going informal due to a relatively higher cost in credit provision due to regulation.
- Risks that can emerge from a less developed financial infrastructures outside the regulatory perimeter.
- Risks attributed to disruptive FinTech activities, such as the development of crypto-assets markets, as well as cybersecurity issues.
- Risks and challenges associated with the changing nature of banks’ business model. In particular, those coming from the internationalization of banks’ activities.

b. How to better consider a cost-benefit framework for financial regulation, such as currency-based measures (CBM)?

- While the banking regulation and supervision arising from the 80s-banking crisis was restrictive in several ways, it was supported by sound monetary and fiscal policies.
- In addition, the development of pension funds, mutual funds, and insurance companies, provided support for banks’ funding needs, and help to develop the FX derivative market that has allowed both, banks and corporations to deal with currency exposure without the need of imposing currency-based measures as we have observed in other emerging economies (this includes regulations imposing a different treatment between domestic and FX-denominated operations by banks, such as reserve requirements on FX denominated banks’ deposits).
- Because of this, over the past decades, and despite global financial turmoil and crises, the size of the Chilean-banking system has increased steadily to reach levels similar to developed economies.

c. Which policy actions could ensure the stability of unregulated corners of the financial system without affecting negatively global financial integration?

- Coordination between regulators and supervisors.
- A legal framework that help to avoid fragmentation and the existence of blind spots.
- Policy actions towards high quality data on a comprehensive registry of household credit and debt.
- Prospective analysis of emerging risks in the traditional banking system that take into account indirect exposures to the non-banking system.
- Adapt and/or develop methodologies and models to assess the spillover effect of non-bank lenders in times of stress, as well as considering them in traditional stress test assessments.

* Some context on OECD support to the use of CBM:

- A recent OECD document (De Crescenzo *et al.*, 2015) emphasizes that mainly countries facing the “original sin” use CBM. Chile is one of them. This issue is important because measures of the “original sin” come from Panizza’s work, who will be part of the panel (Eichengreen *et al.*, 2002; Hausmann and Panizza, 2003).
- Based on the previous point, it is worth clarifying what kind of CBM are in place in Chile. In addition, does the fact that in Chile almost all-international bond issuing is in foreign currency represents a constraint/vulnerability for the local financial system?

- Financial literacy and educational programs to support better decisions at the household level.

2. Background

In Chile, the current approach to deal with potential vulnerabilities associated to volatile capital flows can be seen as orthodox, as we rely heavily on the importance of a flexible exchange rate regime and capital account openness, in conjunction with a consistent monetary and fiscal policy framework, and a sound banking regulation and supervision. **However, it is important to remind to the public that we have come a long way.**

In fact, nearly 40 years ago, Chile faced one of the world's costlier financial crises precisely because the lack of several of these elements. In particular, FX exposures at a heavily leveraged and unsupervised banking sector contributed to the spread of the banking crisis after the fixed exchange rate regime collapsed in the early 1980s.

As a result of this experience, banking regulation and supervision was substantially upgraded. In 1986, the General Banking Law introduced limitations on currency mismatch, constraints on related party lending, and restrictions for banks to receive goods instead of liquid resources; all of them, elements that were common practice before the 1982 crisis.

Paradoxically, what could be considered harsher regulation did not hamper financial deepening. Instead, it fostered solvency and credibility of the banking system and allowed its healthy development in the ensuing decades. **At the core of this development was the creation of a funded pension system**, and subsequent capital market reforms, together with capital market openness, which dramatically changed the size, composition, depth, and strength of the financial sector in Chile.

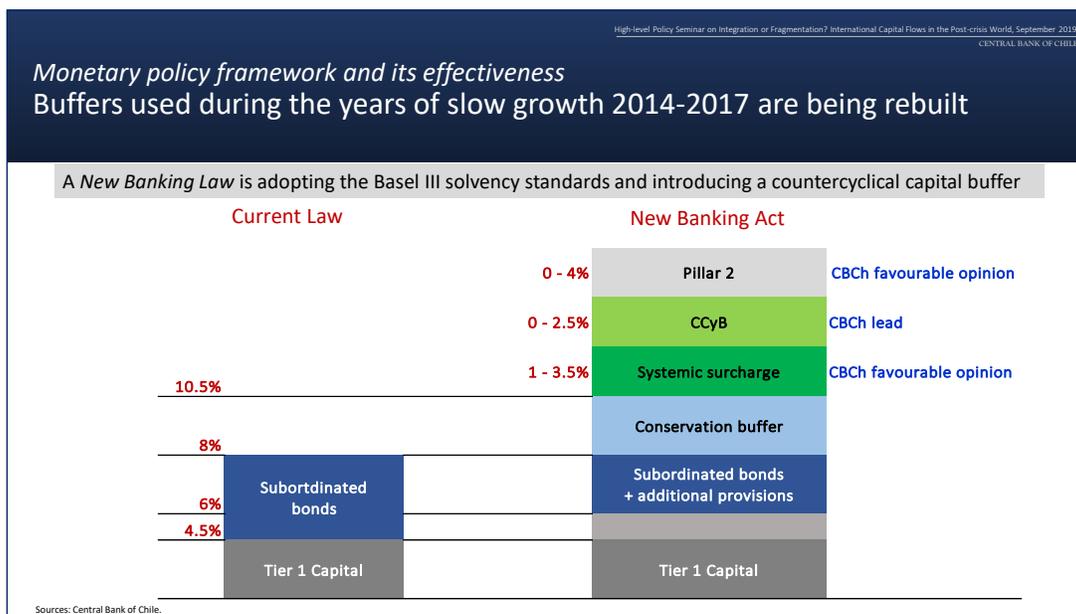
Now, during the transition toward fully implementing the current policy framework, Chile experienced a period of capital control that have been highly reviewed in the literature. The *unremunerated reserve requirement* (URR) implemented in Chile during the 1990s helped to change the composition of capital flows toward longer terms but was less effective in terms of reducing the aggregate level of capital flowing into the country.

After removing the URR completely by the end of the 90s and allowing the exchange rate to fluctuate freely, the banking and corporate sector learned to operate in a completely different environment, characterized by an extensive used of the derivative market. In particular, corporations have learned to operate in a flexible FX environment by using both, natural and market-based FX risk hedging instruments. This development has been supported by the development of the derivatives market, in which Pension Funds have been key counterparts as well. Banking regulation, in turn, have result in limited currency mismatches at the bank level, **which have made the introduction of new regulation to deal with FX risk unnecessary, as we have observed in many emerging market economies after the *Global Financial Crisis* (GFC).**

While may be true that other emerging economies have been increasingly active in the implementation of CBM in their banking systems, **in Chile, we have followed a different approach to deal with FX risk at the banking level.** This approach has been mainly characterized by **limiting banks' direct FX-currency exposure** (limited currency mismatches) as part of our overall capital requirements for market risk purposes. Also, **by acknowledging the potential indirect FX risk through the credit provisioning requirements.**

In fact, in Chile, the main regulatory changes introduced has been the recent modification of the *General Banking Law* (GBL), which constitutes a major step forward for the local banking industry, in that it will contribute to reducing the gap with international regulatory standards established under Basel III. **The new regulatory**

framework raises important challenges for the industry in terms of compliance with the new, more demanding solvency requirements, especially for entities with a smaller capital cushion.



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The Chilean banking industry

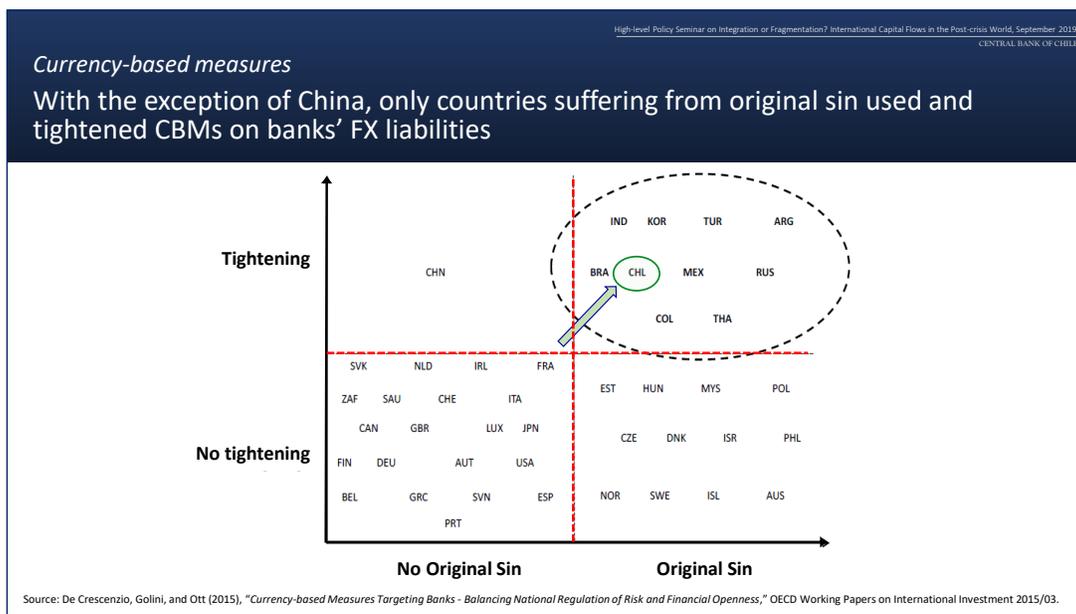
Main changes in the Chilean banking industry

Change	Concept	Characteristics	Advantages	Challenges
	New GBL	New solvency requirements (B3)	Reduces gaps with international standards	Bank's capacity to comply with new standards
Regulatory environment	Revision of Compendium of Accounting Regulations	Changes if financial statement reporting requirements	Greater importance to the financial statement; reduces asymmetries in financial statement reporting	Maintaining the quality and timelines of financial information; measures for mitigating operational risk
Emerging risks	Cybersecurity events	Vulnerability of digital platforms; temporary suspension of services	Mitigation strategies at the industry level	Greater investment cybersecurity
	Integration of retail financing	Parent banks absorb nonbank card issuers	Wider coverage of consolidated debtor information	Incorporation of new debtors in credit risk models
Expansion into new business areas	Overseas bank subsidies	Acquisition of Banks overseas	Diversification of business models	Different regulatory framework; large overseas investment by local parent banks

Source: Financial Stability Report, first half 2019, Central Bank of Chile.

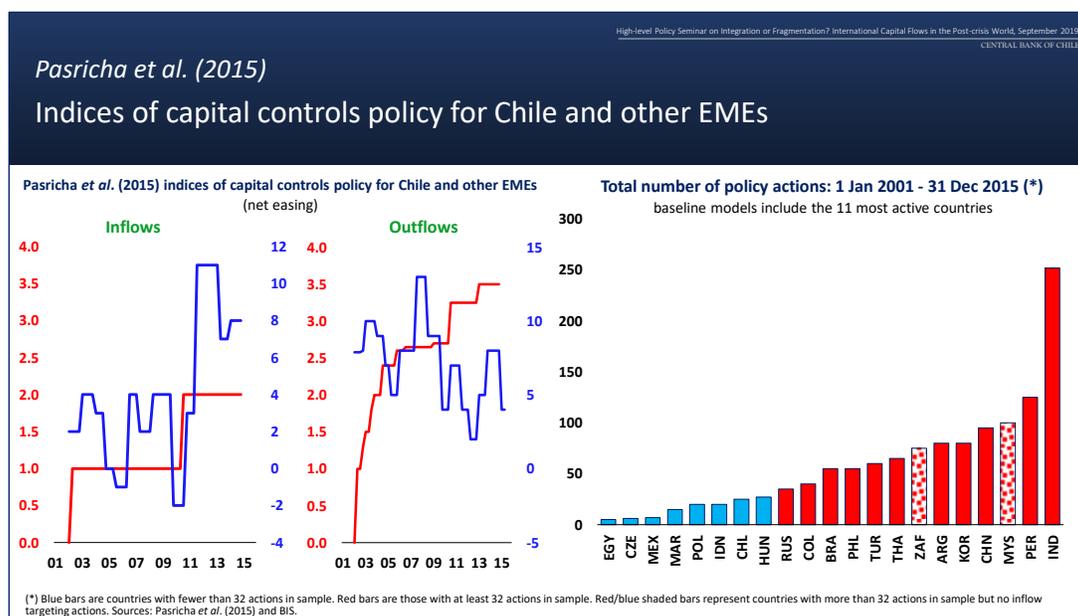
Let me add one more thing regarding the use of CBM by several EMEs, which have targeted the banking system, rather than the general resident-non-resident relationship, as is usually done by capital controls. The Figure below, for example, based on De Crescenzo *et al.* (2015), shows that EMEs countries exposed to the original sin (unable to borrow internationally in local currency) appear as tightening CBMs on banks' liabilities during the 2013-2015 period. Our understanding is that the databases used in cross-country analysis still **contain a high degree of self-judgement by reporting countries** that sometimes affect the quality and consistency of the information provided. At least this is our experience regarding answering the IMF's survey on exchange rate

arrangements and exchange restrictions (AREAER), which is used in the majority of cross-country comparison of CBM and capital controls usage.



Recent evidence on the evolution of capital controls shows that Chile has taken more liberalization actions than tightening actions on both inflows and outflows (Pasricha et al., 2018). The following Figure shows the cumulated weighted net inflow easing actions and weighted net outflow easing measures in Chile and in a group of EMEs (excluding Chile).

Pasricha (2017) shows that policymakers use capital inflows tightening for macroprudential concerns, while use capital outflows easing for competitive purposes. In Chile, the dynamic of outflows easing reflect mainly that Pension Funds' limits on investing overseas have loosen. Nonetheless, Chile is among those EMEs that are less active when it comes to capital control actions over the past decades. **The challenge, however, still remains in terms of addressing the actual level of capital account openness rather than it's tighten/loosen evolution.**



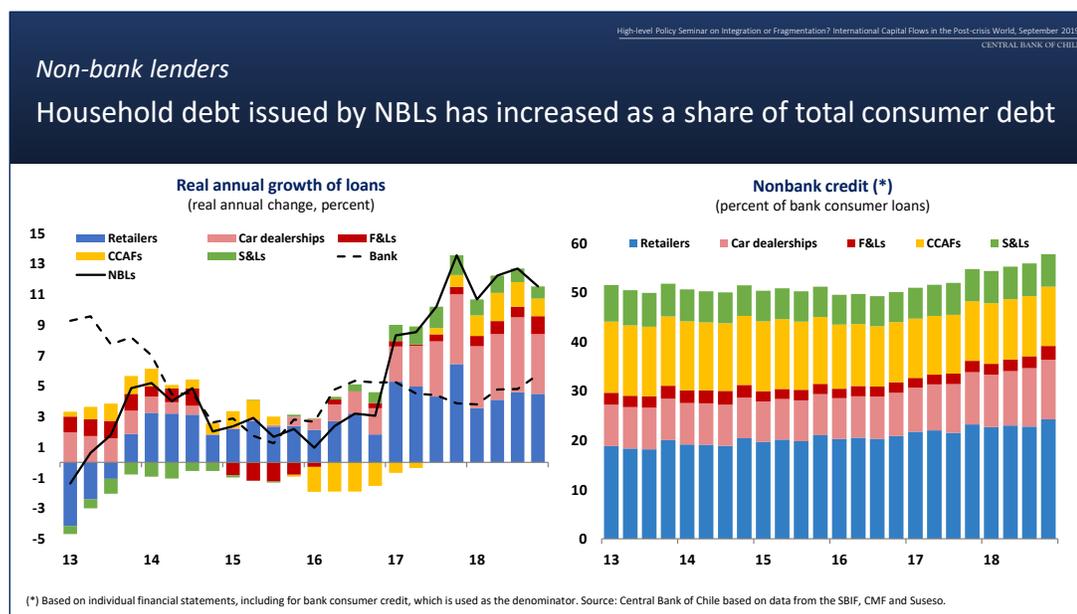
Besides the Chilean approach to deal with FX risk at the banking level and the recent trend that has deepened financial liberalization, the possibility to activate capital controls under extreme circumstances is still part of our constitutional law. In Chile, we are under the process of simplifying our FX regulation, as well as improving our Financial Market Infrastructures (FMIs), including the FX dimension to them. Thus, the Central Bank of Chile is currently working to allow the clearing of USD denominated large-value payments through its Real Time Gross Settlement payment system. Also, it is developing a Trade Repository for OTC derivatives, and it is about to issue the regulation for FX clearinghouses. Finally, the onboarding of the Chilean Peso into the *Continuous Linked Settlement* (CLS) System is a priority for the Central Bank of Chile. These measures may contribute to increasing the likelihood of issuance of local currency bonds overseas.

Now, let me address some of the concern raised regarding new vulnerabilities, in particular at the non-banking sector. A reasonable concern is to what extent the low level of FX-risk at the banking sector in Chile have pushed for higher FX-risk in the non-banking sector? Our assessment is that the rising vulnerabilities observed in the non-banking sector can be associated to the stronger bank regulation, but it does not correspond to the evolution of FX risk. In fact, the evolution of the non-banking sector reflects mainly issues of information asymmetries and the fact that some of these institutions can take advantage of payroll direct charges to enhance their consumer credit business.

While non-bank lenders (NBL) provide commercial loans, their main business is to lend to households in the form of consumer and mortgage loans. In the consumer portfolio, NBLs include retailers, family compensation funds (CCAF), savings and loan associations (S&Ls), factoring and leasing companies (F&Ls), and car dealerships. The mortgage portfolio includes endorsable mortgage loans ("*mutuos hipotecarios*") issued by banks and mutual societies included among the assets held by life insurance companies (LICs). Finally, factoring and leasing companies mainly provide trade credit to businesses. **Therefore most, if not all, of the lending activities of this sector is done in local currency.**

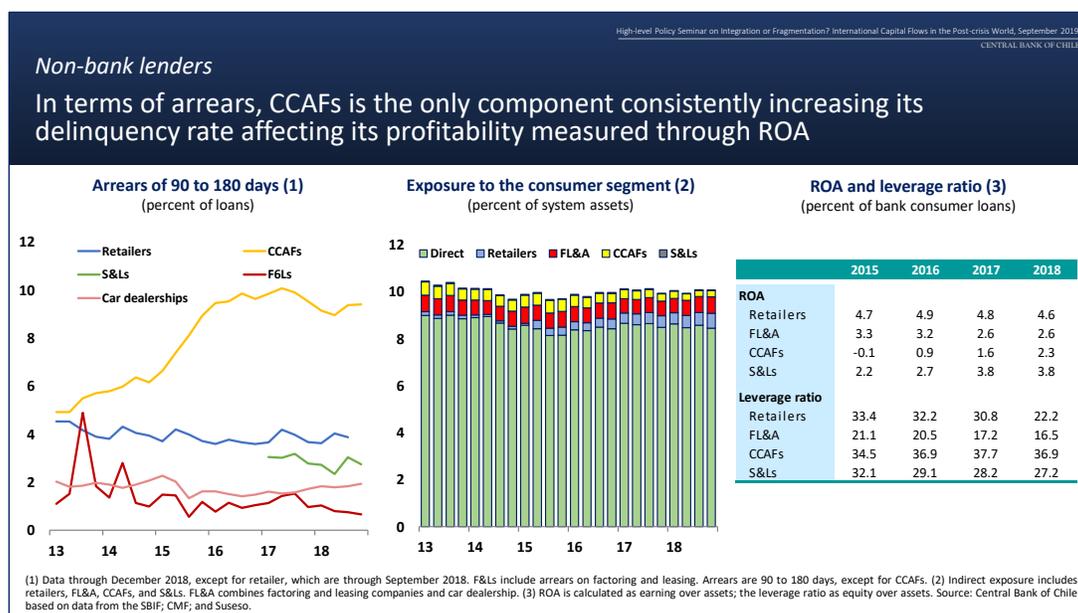
Having said that, we monitor this sector carefully, since the household debt issued by NBLs has increased a share of total consumer debt. Nonbank loans had a real annual growth rate of 11.5% in the fourth quarter of 2018. The contribution of debt with retailers was 4.5%; car dealership, 3.9%; CCAFs and F&Ls, 1.2%; and S&Ls,

0.8%. In the same period, bank consumer loans grew around 5.7%. **Nonbank consumer loans together were equivalent to about 58% of total bank consumer loans. This rate has been stable since 2012, although the composition has changed.** Specifically, the share of retailers has been steadily increasing since mid-2013, while the share of companies oriented toward car financing has expanded more recently. As of December 2018, retailers accounted for 24.3%; car dealership, 12.1%; CCAFs, 12.1%; S&Ls, 6.6%; and F&Ls, 2.8%.



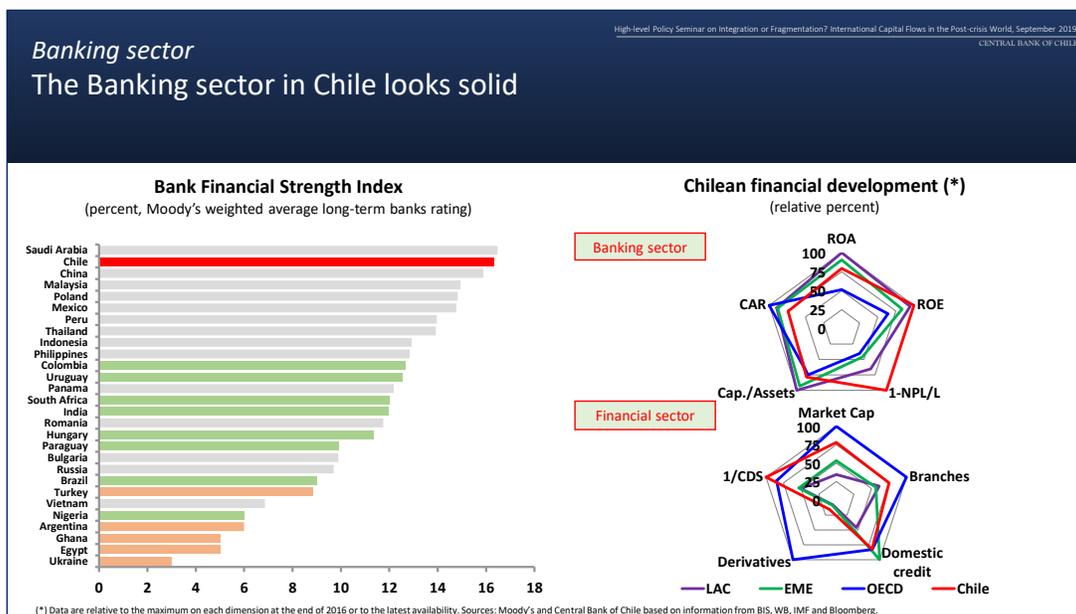
The steady growth of the nonbank portfolio is a potential source of vulnerability, given that most of these lenders are outside the consolidated debt perimeter. In terms of arrears in the nonbank consumer portfolio, retailers recorded a slight improvement relative to end-2018, to 3.8%. In contrast, for the CCAFs, delinquency has increased steadily since 2013—when they began to use accounting criteria more similar to the banks—and it is currently more than double the rates for the rest of the nonbank consumer lenders.

Moreover, the banking sector has significant exposure to the NBLs, through commercial loans to these institutions. In particular, loans to this segment have increased among medium-sized banks in recent years. Thus, the exposure—to NBL debt—of the large and medium-sized banks, as of February 2019, represented 12.7 and 27.2% of their regulatory capital, respectively. The profitability of the NBLs, measured through ROA, has been relatively stable, standing at 4.6% at year-end 2018 for retailers; 3.8% for S&Ls; and 2.6% for factoring, leasing, and car dealership (FL&A) together. In the case of the CCAFs, ROA has increased in the last two years. The leverage ratio, in turn, is highest for the FL&A group, and it increased for the retailers in 2018.

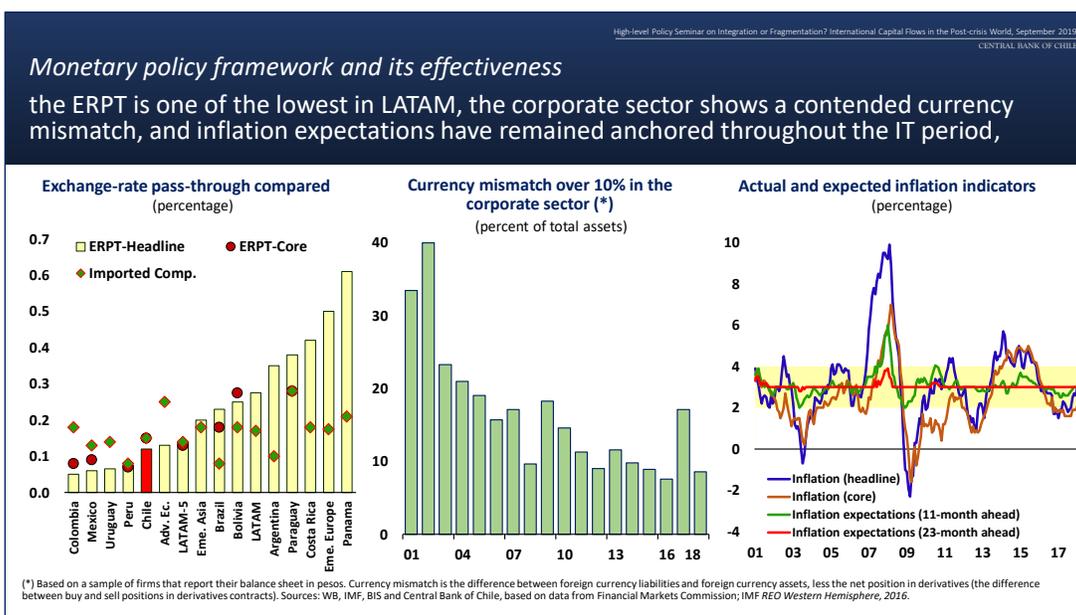


Now, regarding potential trade-offs associated to the Chilean regulatory framework: Has the Chilean regulatory framework in place be repressive? The evidence shows that Chile's banking strength have not undermine its financial development under different perspectives. The Chilean financial system has evolved significantly in recent decades, and its contribution has been key in the economic development of the country and the construction of a more prosperous, healthy and modern economy.

Today, the Chilean financial sector is one of the most developed in the emerging world. In five decades, it has gone from being almost exclusively made up of traditional banks, to include several other market participants, such as Pension Funds, General Fund Administrators and Insurance Companies, among others. The Chilean financial system relatively outperforms with respect to other comparable countries in dimensions such as market capitalization, number of branches per inhabitant, and participation in domestic credit. On the other hand, the banking system in particular is positioned among the strongest in the reference group of emerging countries according to comparable international assessments.



Over time, markets have developed adequate FX hedging mechanisms having lower currency mismatches, inflation expectations have become firmly anchored at the monetary policy target level, the CBC has overcome fear of floating and the economy exhibit one of the lowest FX pass-through to domestic prices, financial markets have deepened and the labor market has gained some flexibility. As the Chilean economy is not immune to external shocks, the ability to cushion them through FX and countercyclical policy response has improved significantly.



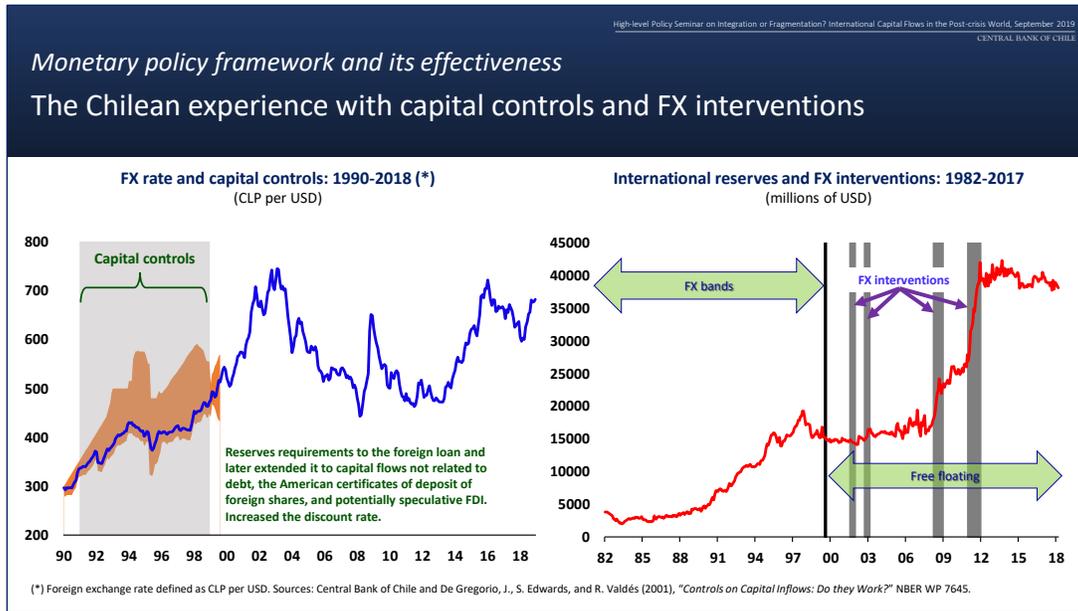
Regarding the risk at the public sector, in normal times the fiscal space is determined by the fiscal rule and public indebtedness. Fiscal policy in Chile is based on a structural (cyclically-adjusted) balance rule adopted in 2000, but after seven years of strict compliance of a 1% surplus target, a tacit escape clause was called at the time

of the GFC, raising the structural deficit from 0.5% of GDP to 3.1%. Despite fast economic normalization afterwards, the actual structural balance never returned to pre-crisis levels and even softened targets were frequently not met in the ensuing 10 years. It is currently conducted based on an explicit commitment of the fiscal authority to attain a previously defined target. **However, during times of crisis and periods of emergency Chile's experience suggests that the space of fiscal policy is limited.** In fact, the fiscal impulse of 2009 generated a fiscal deterioration that is still under consolidation. Nonetheless, in the current juncture, the Chilean economy appears to be prepared to face external shocks, but with some gaps to be filled in the fiscal front. For these reasons, several measures are being taken to achieve fiscal consolidation. Among others: (i) a gradual path to reduce structural deficit by 0.2% of GDP per year, to 2022, (ii) first step above target: structural deficit reduced 0.5% of GDP, (iii) a Debt/GDP ratio currently at 24% should level off in the next two years, (iv) Fiscal Council given independent status, (v) preferential regime for defense spending in course of reform, and (vi) fiscal sustainability a central concern in discussion of tax and pension reforms. Not all emerging economies are equally prepared to react, and Chile is relatively well positioned when compared to other emerging economies.

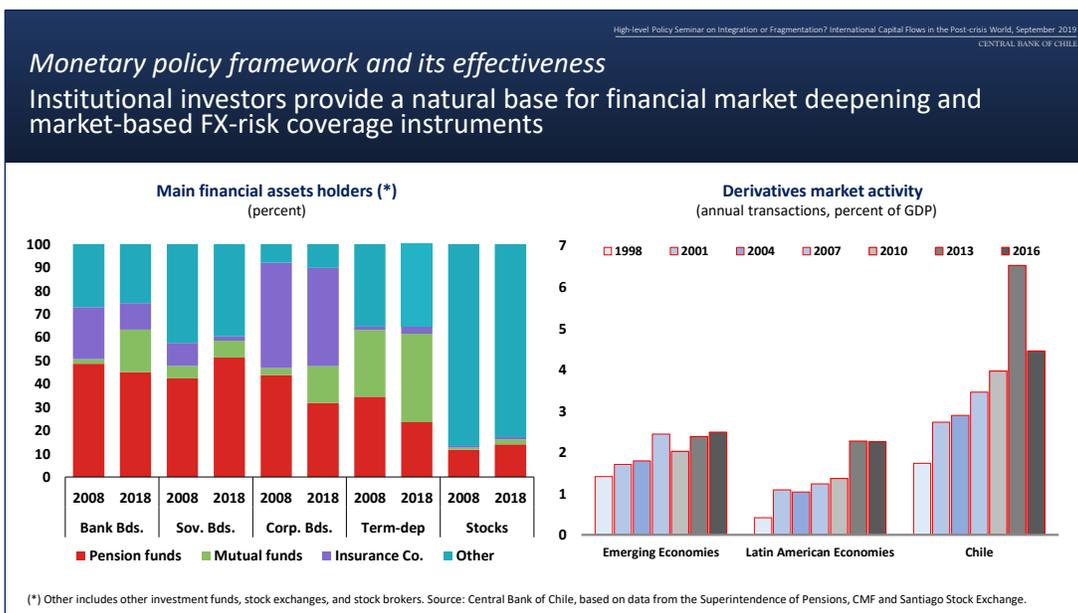
In order to deal with the undesired effects of volatile capital inflows, several EMEs have implemented different policies to deal with the appreciation/depreciation cycle and credit booms (e.g reserve requirements, FX intervention, capital controls). There is substantial evidence that capital flows to EMEs are volatile and that in part depend on “push” factors that are unrelated to the marginal productivity of the host economy. Volatile (boom-bust-cycle) capital inflows are a significant concern for policymakers. The surge of capital flows is usually associated with booms in asset prices, appreciation, credit booms, and increasing current account deficits. While the sudden stop is associated with asset prices adjustment and financial distress.

In Chile, free floating and FX volatility has helped reduce incentives for arbitrage and carry trade. Besides, the exchange rate flexibility facilitates asset price adjustment. Providing the right incentives for resident investors (pension funds and the government) to counteract the non-residents behavior, smoothing net capital flows! Nonetheless, sectorial mismatches in banks, non-banks, and households, still need to be monitored. In Chile, as mentioned above, these mismatches are limited due to FX hedging and regulation.

The CBC was an early adopter of an inflation-targeting regime, shortly after its independence granted in 1989. A fully floating FX regime was adopted in September 1999 and capital controls were abolished in a necessary step to complete a coherent framework to effectively control inflation. Since then, the Central Bank has kept its commitment of no intervention in the FX market, except when required by extraordinary circumstances.

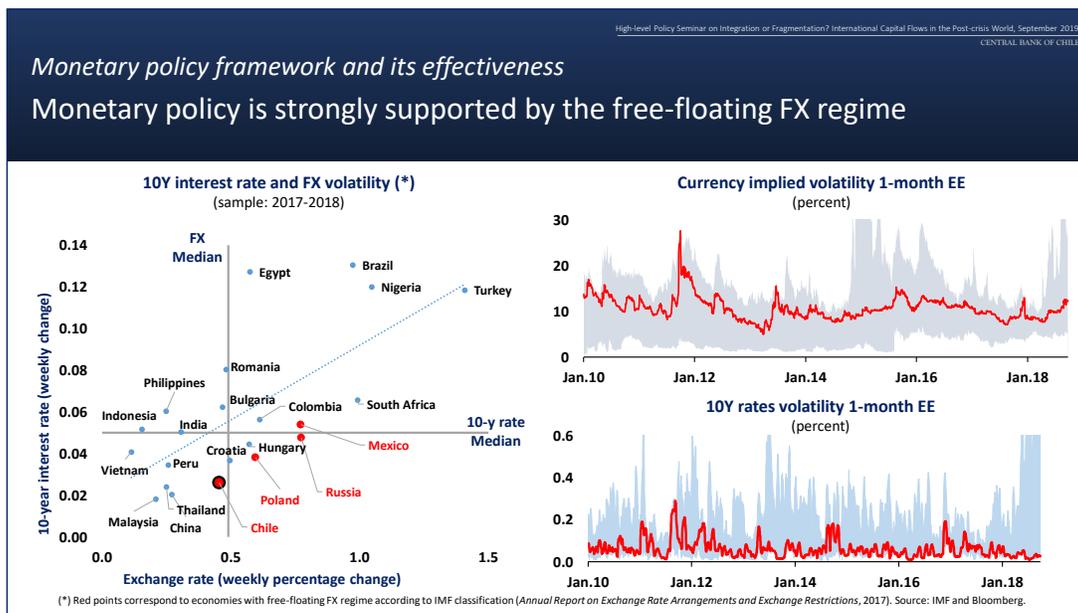


All these elements allow monetary policy to operate as a first defense mechanism against external shocks in normal times. Besides monetary policy, the CBC has a financial stability mandate. Such mandate should be pursued by a combination of regulation, information, and macroprudential management. In particular, monetary policy tools should be used primarily to achieve the price stability mandate, and only as a last resort to deal with financial instability. The free-floating FX regime is perfectly consistent with achieving both mandates (price and financial stability), as (i) the inflation targeting regime is highly credible, and (ii) the corporate sector is well hedged against exchange rate volatility.



The ability to overcome the fear of floating was helped with the buildup of capacities for companies and financial intermediaries to manage the risks associated to a more volatile FX. Consequently, derivatives markets were deepened as well as institutional investors provided a natural base for financial market deepening and

market-based FX-risk coverage instruments. The Chilean financial market has transited from being largely dominated by traditional banking to being composed by several other market participants, including Pension Funds, General Fund Administrators and Insurance Companies; among others. Assets under management of these non-bank investors went from less than 1% of GDP in 1984, to 65% in 2000, and to almost 100% of GDP in 2018. Currently, around 85% of total domestic corporate bonds and around 65% of sovereign bonds are held by institutional investors, as a result of which reliance on banking credit of these corporations has gone from 91% of financial debt in 1986 to around 25% in the recent years.

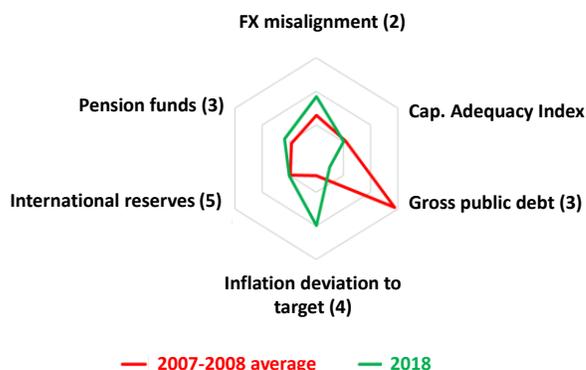


This framework has basically remained in place for almost two decades and its effectiveness has improved as markets, agents and institutions have adapted to it. The learning and effectiveness of the framework can be understood not only with the expectations anchored to the target, but also in the low volatility of interest rates in exchange for a (covered) higher FX volatility.

Monetary policy framework and its effectiveness

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Overall, the Chilean economy appears to be best prepared to face external shocks than before the GFC, except on the fiscal front



(1) A larger number indicates a better relative position. All the variables measured at the level of the respective period in relation to the average 2001-2018. (2) Measured with the percentage of companies in the corporate sector whose currency mismatch exceeds 10% of the value of their assets; (3) As a percentage of GDP; (4) Difference between average inflation for the period and the Central Bank's target; (5) Corresponds to the ratio between the sum of international reserves and sovereign funds, and short-term residual external debt discounted direct foreign investment. Source: Central Bank of Chile.

References

Cerutti, E., Claessens, S., and Laeven, M.L. (2015), *"The Use and Effectiveness of Macroprudential Policies: New Evidence,"* Working Paper No. 15/61, International Monetary Fund.

De Crescenzo, A., Golin, M., and Ott, A.C. (2015), *"Currency-based Measures Targeting Banks - Balancing National Regulation of Risk and Financial Openness,"* *OECD Working Papers on International Investment*, No. 2015/03, OECD Publishing, Paris, <https://doi.org/10.1787/5jrp0z9lp1zr-en>.

Eichengreen, B., R. Hausmann, and U. Panizza (2002), *"Original Sin: The Pain, The Mystery, and the Road to Redemption,"* paper presented to a conference at the Inter-American Development Bank (November 2002).

Hausmann, R., and U. Panizza (2003), *"On the Determinants of Original Sin: An Empirical Investigation,"* *Journal of International Money and Finance* **22**(7): 957-990.

Pasricha, G.K., M. Falagiarda, M. Bijsterbosch, J. Aizenman (2018), *"Domestic and Multilateral Effects of Capital Controls in Emerging Markets,"* *Journal of International Economics* **115**: 48-58.

Pasricha, G.K. (2017), *"Policy Rules for Capital Controls,"* BIS Working Papers 670.