CENTER FOR LATIN AMERICAN MONETARY STUDIES

October 7, 2020

I Meeting of Heads of Financial Risk Management in Central Banks

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Opening Remarks
Financial Risk Management

- Good morning. It is a pleasure to welcome you to the I Meeting of the Heads of Financial Risk Management. We have a distinguished group of experts and policy makers from the central banking community, who will generously share their perspectives on Financial Risks.

- For this meeting, we have more than 50 registered participants, from 24 institutions. I am convinced that the discussions will be fruitful for all of us, particularly so, under the current circumstances. I encourage you to take advantage of this event and reflect on how this meeting could become even more relevant as a mean to share our experience on Financial Risks and its related policies.

- This Meeting was conceived in 2019, during the Seminar on Financial Risks Management in Central Banking in Madrid, Spain, in which representatives from CEMLA, Banco Central de Costa Rica, Banco de España and Banco de México agreed on the necessity of a space for the exchange of ideas and experiences among peers. The unfolding of recent events has shown the relevance of this.

- Allow me to thank the participants, especially our members from central banks, Serafín Martínez Jaramillo and our CEMLA staff for assembling a relevant and meaningful agenda for this event.

Introduction

- Risk management is crucial for any organization and even more so under uncertain circumstances, like the conditions we are currently living in. An adequate risk management involves the identification of risks and their management before they can affect the well-functioning of the organization. Without proper risk management, organizations cannot define adequately their goals for the future; well, in fact they could, but such previsions would have to be adjusted or could be derailed if any of the risks that weren't identified and therefore planned for materializes.

- For the purpose of this meeting, we are concerned about financial risk and, in particular, financial risk from the point of view of central banks.

- Our interest in this meeting has its roots in the fact that the macroeconomic and financial environment since the GFC has led to a greater focus on financial risk management at central banks. This interest has, in turn, been potentiated by the current crisis.

- In particular, in the last few years, the Latin American and Caribbean economies have faced a complicated landscape with greater interconnectedness in local and global financial markets, volatile capital flows, and an overall complex economic environment, which has forced them to revise and strengthen risk management at their central banks. The pandemic has made this even more urgent.

- In the remaining part of my talk, allow me to focus on three very important concerns, from my point of view, in the field of Financial Risk Management: 1) the Covid-19 crisis, 2) the risks associated to climate change and, 3) the risks related to overlapping portfolios and the configuration of sovereign and financial risks.

Covid-19

- So, let me go on to the first topic. The outbreak of the Covid-19 health crisis came to change many things in our everyday lives as central bankers, like the way in which we have been (and probably will be) operating for the months to come, including financial risk management.

- Global growth forecasts have been continuously revised downwards within the negative terrain, as the epicenter of the illness moved from China to Europe, and then to India and the Americas, with the unfortunate increasing numbers in contagions, hospitalizations and fatalities. In the last weeks, there has been careful tracking of the recent spikes in contagions in some regions that had previously appeared to have contained the disease.

- The financial turmoil that ensued after the pandemic´s outbreak reverberated within the markets. Indeed, the paralysis of the lockdown took place in an already decelerated global economy reflecting, to some extent, trade wars. The plummeting of oil prices resulting from the grim projections for world aggregate demand growth due to the pandemic made things even worse.

- Despite it being in its origins a health crisis, the repercussions for the economy have been unprecedented. The first line of defense has been fiscal policy, particularly, the provision of liquidity to households and businesses as a lifeline for them to be able to make it through the pandemic.

- <u>Central banks have also contributed through two main objectives</u>: 1) avoiding a systemic crisis, and 2) facilitating the recovery. These have been pursued by two intermediate objectives: a) the provision of liquidity, and b) the enabling of credit channels in the economy.

- Liquidity in financial markets can “dry up” quickly in times of systemic stress, as we witnessed during the Global Financial Crisis (GFC) and the beginnings of the pandemic. Moreover, under these conditions, financial markets can "freeze" quite rapidly, as participants will have an incentive to act cautiously and, thus, to hoard liquidity, given the sharp increase in counterparty risk.

- In effect, a financial crisis is characterized by reduced market liquidity, large risk premiums, elevated uncertainty, and a higher probability of defaults. A crisis can thus affect the ability of financial institutions to assess the conditions and prospects of a given company. This makes the assessment of its credit risk more uncertain and difficult (Flannery, 1992).

- All in all, this has led central banks to implement an important degree of monetary accommodation, either through significantly lowering their reference interest rates, or by establishing new and/or enhancing already existing facilities for the timely provision of all necessary liquidity. Regulatory forbearance has also played an important role.

- In terms of the provision of liquidity, one can consider two types: general policies and specific ones. The latter are aimed at assuring that the markets for some specific assets continue to function properly. Evidently, the adequate provision of liquidity refers to both, that is, in local currency and, in most cases in the region, in US dollars. These policies characterize the central bank all the way from acting as a sort of market-maker of last resort, to lender of last resort.

- The implementation of policies and facilities to provide liquidity entails various kinds of measures. I know that you will have a full session on this topic with participants from Banco de México, Banco de España and Banco de la República. Nonetheless, I would like to highlight three groups: 1) collateral; 2) local currency government yield-curve support; and 3) FX market intervention.

- First, most facilities involve the use of collateral, a representative example being repurchase agreements, also known as repos. During crises, what constitutes acceptable collateral is usually modified in several ways, including its valuation, the universe of eligible assets that can be used as such, the set of institutions that can celebrate a contract entailing collateral with the central bank, the maturity of the repos where the central bank is the liquidity provider, and the amount of resources that the central bank is willing to channel to support the facility in question.

- *Evidently, the latter go in the direction of relaxing standards* to increase liquidity rapidly and, thus, restore proper market functioning. However, there could be important moral hazard and adverse selection risks associated to the design and implementation of these facilities, which, in turn, could have significant financial repercussions.

- Second, some central banks have opted for supporting the long end of their domestic currency government yield curve. There are several possible ways to do so:

  - ✓ *A central bank can exchange government bonds with different maturities. A big question here is whether the Treasury shouldn´t be the one implementing these debt exchanges or swaps. Indeed, which institution´s balance should make provisions for any expected losses?*

- ✓ *The central bank can offer interest rate swaps.*

- ✓ *The central bank can buy government bonds in the secondary market. This has been traditionally a big issue for central banks in the region. In some cases, central banks could face legal restrictions to do this.*

- ✓ *A central bank can also buy bonds in the primary market, which means it would be going all out on monetizing the fiscal deficit.*[1] *This is a most delicate issue, given the not too distant history of fiscal dominance in some economies of the region.*

- ✓ *Another measure would be for central banks to buy corporate bonds. This can bring about many complicated issues. For example, how to value such bonds, which bonds should participate and which shouldn´t, and so on.*[2]

- ✓ *I believe that access to most of these facilities should have clear restrictions, whenever legally possible, such as any resources obtained through them cannot be used for the distribution of dividends and/or stock buybacks. Central banks should monitor the compliance of these restrictions by any beneficiaries of the facilities or policies put in place.*

- Third, on FX market intervention, consider that in the aftermath of the GFC and since then, low natural interest rates, reflected in the unprecedented accommodative monetary policy stance in the main Advanced Economies (AEs), among other factors, have led corporations in Emerging Market Economies (EMEs) to issue a significant amount of foreign-currency denominated debt, mainly in US dollars.

- Although some of these corporations have so called natural hedges, such as export dollar-denominated revenues, and others use markets to acquire hedges, many can still be highly vulnerable to significant exchange rate depreciation.

- There are various other reasons that merit the provision of liquidity to FX markets in the case of EMEs. Capital flow volatility and the reasons behind it are at the forefront. The nature of Global Asset Managers, the fact that the majority of trading nowadays is algorithmic and/or high-frequency and is mostly done through anonymous electronic platforms, have considerably increased liquidity risk in Emerging Economies´ financial markets, especially during episodes of intense systemic stress, as was the case in March and April.

- Essentially, all measures mentioned go in the direction of rapidly increasing the degree of monetary accommodation. In this context, prominent overall macroeconomic and financial risks associated to these policies are for the resulting monetary accommodation to be too much or for it to remain in place for too long.

[1] Obviously, in this case and in the previous one, the central bank may face legal restrictions on doing so.
[2] This raises the complex issue of their valuation, default risk, and the rule for determining which corporate bonds would be eligible for purchase and which would not. Some central banks could also face restrictions on doing this.

- Summing up, the above measures and policies have merits and costs and must be evaluated through the lens of there being an emergency. Particularly, in taking on these emergency-like measures, central banks incur in risks.

- However, taking these risks should be informed processes and central banks´ risk management units must be at the center of the discussions on the implementation of these measures and the risks of doing so, their duration and possible scenarios when such actions should cease or start being eased or phased out.

Climate Change

- Let me now change gears and go on to the second topic. The climate is changing and human activity, with high probability, is the main cause of this change, as has been presented in many reports produced by the Intergovernmental Panel on Climate Change (IPCC).[3]

- Climate Change impacts not only the financial system, but also some of central banks' most pertinent activities: monetary policy and financial stability. According to McKibbin et al. (2017), the main link between Climate Change and monetary policy is the possibility of economic shocks taking place and the response to them. For instance, one can think of climate disruptions as supply shocks, which can be transitory or permanent in nature. The authors argue that Climate Change and monetary policy should be treated together more clearly.

- In the view of many scholars and experts from the private sector, there is a growing gap between climate objectives and the allocation of financial capital (2-degrees Investing Initiative (2012), Batten et al. (2016) and Clark et al. (2018)).

- Narrowing this gap requires enhancing standard financial risk metrics to encompass climate risk. Moreover, given the interconnectedness of today's businesses, these enhanced metrics of risk and impact need to consider network effects of both investment chains and supply chains (Nuss et al. (2016) and Carvalho et al. (2016)).

- On the financial stability side, Climate Change related risks pose direct and indirect adverse effects to the financial system through various channels.

- According to the Bank of England (2015), there are three types of risks that could have an impact on the insurance sector, which could affect the financial system as well: physical, transition, and liability risks.

- Risk can build up from the increasing misalignment between the current trajectories of some sectors of the economy and the trajectories required by the 2° C targets. The later the alignment of these sectors to these 2-degree trajectories, the more abrupt the adjustment will have to be and the larger the losses these sectors would have to bear (as it has been shown in Roncoroni et al. (2020)). It is worth underscoring that such risks are non-linear with respect to deviations from the required trajectories.

[3] See IPCC (2014) and IPCC (2018) for example.

- In the specific case of financial markets, risk management is essential for their effective functioning. Nevertheless, considering the externalities associated with climate change is still on its early stages. Nowadays, the recognition that climate change might be the greatest threat to the financial system, if not to the existence of humans, has not been fully reflected, in my own personal view, on financial risk management.

- Moreover, the Latin American and the Caribbean region is one of the most vulnerable to the negative effects of such a threat.

- Fortunately, there are initiatives like the Network for Greening the Financial System (NGFS), which was founded in 2017 at the Paris "One Planet Summit" and with members across the five continents.

- The purpose of the NGFS is to enhance the role of the financial system to manage risks and to allocate capital for low-carbon and green investments that meet an environmentally sustainable development. For this end, and having as an example this conference, the NGFS promotes and develops practices to be implemented within and outside its Membership, having as an overall objective, the strengthening of a global response required to meet the Paris Agreement goals.

- At CEMLA we support these efforts as we organized last year the conference "Climate Change and its Impact in the Financial System" in collaboration with Banco de México, the University of Zürich and including the participation of the NGFS. We will also have a workshop on the same topic at the end of the year in collaboration with Banco Central do Brasil and the Financial Stability Institute from the BIS.

- Despite its huge impact on the world economy, the current Covid-19 health crisis is temporary, while the risks associated with climate change will stay with us forever if not enough is done.

- Despite the seriousness of this issue, which has been named by some as an "*environmental emergency*", the right incentives for the relevant players are still not present.
- Unfortunately, despite the incipient good environmental outcomes of the Great Lockdown, perhaps the only good thing to come out of it, the huge costs borne by societies have led to a diminished sense of urgency on the transition to a more sustainable lifestyle. The economic impact has been so large to society that there is the risk that in the frantic process of economic recovery we might lose all the progress made until now.

- Although, the sheer survival of humanity and the whole planet is at stake, individuals, as well as jurisdictions, refuse to assume the costs of transitioning to greener forms of production. We can find several attitudes towards such a transition, where prominent examples are: i) free riding, that is, those who expect others to assume the costs. In effect, climate adequacy or sustainability is a sort of public good, with all the problems that come with it; ii) playing the blame game, that is, those who consider that the current state of affairs is a consequence of the past activities of developed economies; and, finally, and perhaps most importantly, iii) politics. Clearly, the costs of transitioning will far outweigh the future benefits of doing so given the relevant optimizing time horizon for most politicians, in the context where millions and millions of those who will probably be the most affected, for various reasons, cannot vote at present.

- Ironically, given the increasing speed of environmental degradation, this discussion could soon be completely irrelevant.

- The financial sector must finally reduce its exposures to the carbon intensive sectors of the economy, enforcing the right incentives for participants in such sectors to trigger the transition to more sustainable practices. Since some important players (like many politicians) refuse to play their roles in this emergency, in my view, central banks should lead by example and incorporate extensively sustainability in their portfolios and financial risk management. Moreover, central banks and financial authorities can play a huge social role by enforcing and promoting the adequate pricing of climate risks related externalities and, at the same time, influencing other relevant players as well. I believe that they are in a good position to do this, as they usually enjoy a good reputation with the public.

Overlapping Portfolios

- Lastly, let me make some remarks on a financial risk that has been, I believe, overlooked or, at least, underplayed. In Jones (2018), the author explains the evolution of reserve management and discusses on the procyclical behavior by reserve managers during the crisis, which complicated even more the financial stability duties of the reserve currency issuing jurisdictions. Given some of the constraints faced by central banks and the small number of assets which can be part of their portfolios, there is a good deal of similarity in their responses and overlapping among them.

- This discussion brings to our attention that we do not act alone in the global financial system and that our actions bring about consequences to other players. As it has been documented in the Asset Fire Sales literature, the risk of similar adjustments in a world of common investments might bring undesired negative consequences for all players. This means that the risk associated with overlapping portfolios[4] is of great relevance, not only at the individual jurisdiction level, but at a global scale.

- One important form of financial contagion arises from direct connections (exposures) (as it has been shown in, e.g., Poledna et al. (2015)). Nevertheless, indirect interconnections between financial institutions mediated by financial markets can also be an important source of contagion and systemic risk. This indirect interconnection occurs when financial institutions invest in common assets and is referred to as overlapping portfolios (Poledna et al (2019)).

- This research on financial contagion has progressed significantly, but most of the studies have focused on direct exposures and have ignored exposures to common assets holdings, which might represent a considerably sizable source of systemic risk. This is of paramount importance given that the current regulation not only ignores this important source of systemic

[4] Poledna, S., F. Caccioli, S. Martinez-Jaramillo and S. Thurner (2020), "Quantification of systemic risk from overlapping portfolios in the financial system", Journal of Financial Stability, forthcoming.

risk but, even overall, provides the incentives to hold a considerable share of government securities into banks' balance sheet.

- This problem has been recognized in other works like Abad 2018[5] in which the author finds that an initial shock to the banking sector increases public debt and sovereign risk as a result of the increasing probability of government bailing out failing banks. Also, surviving banks are attracted to hold high yield risky sovereign bonds resulting in excessive exposures to sovereign risk. This exposure increases the default risk of banks, creating a transmission channel for systemic spillovers.

- The author concludes that by changing the sovereign exposures treatment in the capital requirements could lessen the impact of this negative feedback loop. It is worth mentioning that existing capital regulation in some jurisdictions assigns relatively benign risk weights to domestic sovereign securities. Additionally, government debt holdings are exempted from large exposure limits and are even encouraged by the recent liquidity regulation.

Finally, on the outlook of the Meeting

- Before concluding, let me go briefly through the rest of the Meeting. In the following days, you will be discussing aspects related to financial risk governance within the central bank, emergency liquidity provision and the front office perspective on financial risk management. Let me guide you briefly through the structure of this meeting.

- First, we open with two panels on governance aspects of the financial risk responsibilities at central banks. In the first panel we have the participation from Jean-François Tremblay from the Bank of Canada and Jens Ulrich from the Bank for International Settlements. In the second part of the panel we will hear from the region with the participation of Christian Ferrada from Banco Central de Chile and Luis González from Banco de España.

- The first session on the second day Carlos Bernadell from the European Central Bank and Joshua Rosenberg from the Federal Reserve Bank of New York will address the experience regarding the financial risk aspects of the measures that were put in place to mitigate the effects from the COVID-19 crisis.

- Given the relevance of the participation of central banks during crises, for the following session of the second day, Antonio Marcelo Antuña from Banco de España, Francisco Chamú from Banco de México and Juan Sebastián Rojas from Banco de la República will discuss the mechanisms of liquidity provisions in emergency situations and the implication of their use.

- On the third day, we will have a panel about the financial risks seen from the perspective of the front office. We will have the participation of Joaquín Tapia Macías from Banco de México, Bernardita Redondo from the Banco Central de Costa Rica, and Emilio Rodríguez Alonso from the Banco de España.

[5] A non-exhaustive list of related works includes: Acharya & Rajan R. (2013), Acharya et. al. (2014), Brunnermeier (2015), Farhi & Tirole (2018) and Alogoskoufis and Langfield (2018).

- Before concluding, I would like to welcome you again to the Meeting. I expect a productive exchange of ideas, methods and points of view in this field. I wish you all fruitful discussions and, once more, thank you for joining us in your first Meeting. I wish that you will have many more as it has been the case with other substantive areas of central banks.

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