CEMLA
CENTRO DE ESTUDIOS MONETARIOS LATINOAMERICANOS

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X Meeting of Heads of Financial Stability

Digital Meeting

Opening Remarks
Financial Stability in extraordinary times

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

- For this meeting, we have 72 registered participants, from 25 institutions. I am convinced that the discussions will be thought-provoking 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 Stability and its policies.

- Allow me to thank the participants, especially our members from central banks, and our CEMLA staff for assembling a relevant and meaningful agenda for this event. Let me also thank our keynote speaker, my friend, Professor Dimitrios Tsomocos, who is at Oxford Said Business School; our invited presenter, Ricardo Correa; and all of our panelists, for taking the time to share their expertise and knowledge.

Motivation

- Now, let me try to motivate our interest in Financial Stability in relation to recent events. After the Global Financial Crisis (GFC), some of us believed that the next "lower frequency" most important threat to the financial system would be climate change; however, the Covid-19 pandemic came to change many things, among them, this perception. In fact, Covid-19 and its detrimental economic consequences has brought the first "real" test for financial stability after the GFC.

- This crisis is, first and foremost, a public health one. On the economic front, the first line of defense has been fiscal policy, by providing funding for the necessary and urgent medical response, such as the provision of personnel, personal protective equipment, respirators, and so on. Also, by providing liquidity to give individuals, firms and businesses, the appropriate incentives to isolate and, quite frankly, a lifeline to get them through the pandemic.

- Central banks have also played an important role, through monetary policy and regulatory forbearance.

- A key question now is, of course, whether the policies put in place in the wake of the GFC have been useful in making the financial system more resilient to the negative shocks that Covid-19 pose. It´s even more than that, I believe. It´s whether the framework, methodologies and analyses developed to better understand systemic risk and the policies derived thereof, which objective is to try to safeguard financial stability, will pass a crucial test of their usefulness.

- I believe firmly that everything that we have learned so far concerning the attainment of financial stability has been enormously beneficial for confronting the impact of Covid-19 on the financial sector. However, the Covid-19 crisis is far from over, so we will have to wait some more before we are able to make a final assessment.

- This meeting will address questions such as: Was the financial system sufficiently prepared and, if so, how? Were the emergency measures taken adequate? Did financial stability issues help in calibrating some policies that were urgently put in place when market instability took hold in March and April? Will they help if some of these policies need re-calibrating? Did policies address moral hazard appropriately? Will financial stability issues play a role when the time comes to unwind various policies put in place resulting from the emergency? Most of these questions are particularly relevant for the regulatory forbearance that has taken place.

- In the rest of my talk, I will first comment on the financial stability implications of the current Covid-19 crisis and the type of responses needed; second, I will discuss macroprudential stress testing and its usefulness; third, I will comment on financial stability monitoring, which is of particular importance under the current circumstances; fourth, I will briefly talk about some of the Financial Stability work that is being done at CEMLA, led by Serafín Martínez Jaramillo; and, finally, I will briefly talk about the outlook for the meeting.

Covid-19 and Financial Stability

- Before anything, let me just say that in a crisis like the present one, the response by central banks needs to be quick, timely and forceful, that is, with significant backing.

- The main objectives are: 1) to avoid a systemic crisis; and, 2) to facilitate the recovery.

- In this context, central banks have had mainly two *intermediate objectives*: a) the provision of liquidity; and, b) the enabling of credit channels.[1]

[1] Most countries have taken different measures to mitigate the impact of the present pandemic. According to the World Bank (WB) and the International Monetary Fund (IMF) in their Position Note published in May, some of these actions consisted on 1) prudential regulatory and supervisory measures to support banks facilitating credit to the real economy; 2) measures related to supporting borrowers and loan restructuring, and measures to 3) strengthen payment systems, among others, IMF-WB (2020). In the same vein, according to the FSB, policymakers have taken some actions such as: "(1) government guarantees and direct lending, loan restructuring; (2) central bank policy

- In a crisis, liquidity in financial markets can "dry up" very quickly. In effect, it is well known by now that, under conditions of intense systemic stress, financial markets can "freeze" quite rapidly, as participants will have an incentive to act cautiously and, thus, to hoard liquidity given that counterparty risk rises dramatically. This possibly leads to adverse equilibria. These equilibria are akin to that of a prisoners' dilemma strategic game, where, in the absence of some coordination device to reach the social optimum, each individual's incentives are to not cooperate (e.g., in our case, to hoard liquidity).

- In effect, a crisis is characterized by reduced market liquidity, large risk premiums, elevated uncertainty, and a higher probability of defaults.2 As a result, the common sources of liquidity and credit dry up. As banks lack their usual liquidity and credit sources, asset fire-sales can ensue. If the crisis deteriorates, banks could default. Investment will fall and corporate defaults will increase. This will adversely affect the demand for labor. These elements will feed into those factors mentioned initially, a situation that could spiral out of control (Bindseil, 2014). In short, a lack of liquidity and systemic risk can rapidly evolve into generalized insolvency.

- <u>The most immediate response by central banks, thus, has much to do with avoiding a systemic crisis</u>. **In effect, in a crisis such as this one, central banks must quickly act to provide a significant degree of monetary accommodation, through lowering reference rates as much as possible, and through establishing facilities for the provision of liquidity.**

- There are various ways through which this pandemic can lead to financial instability. Three important ones, which are highly interrelated, are: 1) causing markets to freeze; 2) leading to large and abrupt exchange rate depreciations and/or negative shocks to term premia, causing long term interest rates to spike, especially in EMEs; and, 3) the fall in economic activity in the second quarter of 2020 was unprecedented. Moreover, aggregate demand will probably remain quite sluggish compared to pre-pandemic levels, so long as the virus is not mitigated, brought under control or eradicated.

- In terms of the provision of liquidity, one can consider two types: general policies and specific ones, what one could call "precision shots". The latter are aimed at assuring that the markets for some specific assets continue to function properly. Evidently, the appropriate provision of liquidity refers to both in local currency and, in most cases in the region, in US dollars. <u>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</u>.

- The implementation of policies and facilities to provide liquidity entails various kinds of measures. I would like to highlight three groups: collateral; local currency government yield-curve support; and, FX market intervention.

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interventions to ease credit conditions and keep markets open; (3) prudential measures to facilitate the flow of credit to the real economy," . For instance, some authorities have recommended that financial institutions use capital buffers to finance the real economy and absorb losses in this stressful period, FSB (2020).

[2] A crisis can 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).

- ✓ First, most facilities involve the use of collateral, a representative example being repurchase agreements, commonly 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 collaterals with the central bank, the maturity of the repos in which 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.[3] **Evidently, all of these go in the direction of relaxing standards, so as to increase liquidity rapidly and, thus, restore proper market functioning**.

- ✓ 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 (that is, swap) government bonds with different maturities.

  - The central bank can offer interest rate swaps.

  - The central bank can buy government bonds in the secondary market.

  - Of course, a central bank can buy bonds in the primary market, which means it would be monetizing the fiscal deficit. Obviously, in this case and in the previous one, the central bank may face legal restrictions on doing so.

  - Another measure would be for central banks to buy corporate bonds. 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.

- ✓ 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 AEs, among other factors, have led corporations in 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. This could increase systemic risk.

- There are various other reasons that merit the provision of liquidity to FX markets in the case of EMs. 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

[3] During a crisis, there is much uncertainty on how the value of collaterals will evolve. As credit quality requirements for collateral have been relaxed by the authorities, adds to this uncertainty. Moreover, if the borrower defaults, there would be uncertainty on whether the collateral would be sufficient to completely cover the loss, even when considering haircuts. If it does, there might be some administrative expenses.

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.

- <u>As I previously mentioned, basically all of the measures described go in the direction of rapidly increasing the degree of monetary accommodation. Evidently, all have merits and costs, but must be evaluated through the lens of there being an emergency</u>.

- <u>I will not discuss here either the merits or the potential costs of the different actions taken by central banks to mitigate the impact of the pandemic. What I want to highlight is that, in taking on these emergency-like measures, central banks sometimes incur in risks. However, taking these risks should be informed processes. In this context, I believe that financial stability tools can be very helpful to central banks in doing so</u>.

- Central banks have also taken measures to facilitate the economic recovery. Particularly, by implementing policies and facilities to enable the provision of credit. In this context, there has been an important degree of regulatory forbearance, such as temporary reductions in capital adequacy and liquidity requirements and in nonperforming loan provisions. Another instrument has been the reduction in reserve requirements for commercial banks. The objective of these actions has been to "free up" resources commercial banks need to continue providing credit, either generally, or to some specific sectors.

- Summing up:

  ✓ Undoubtedly, the global financial system today is in better shape to cope with this tremendous global shock, as a result from the reforms promoted by the G20 after the GFC.

  ✓ As can be appreciated, and although sounding counterintuitive if we were living under normal conditions, considerable monetary accommodation, including through regulatory forbearance, has played an important role in mitigating systemic risk. **Financial stability tools can be helpful in calibrating the degree of plausible regulatory forbearance and, when the time comes, in re-calibrating or unwinding it**. Financial stability monitoring, stress testing and interconnectivity analysis have been and could be particularly helpful here.

  ✓ Some financial institutions are still vulnerable in this period of stress due to Covid-19. In this context, and learning from the previous crisis, it would seem to be particularly important to assess the degree of interconnectedness and potential contagion effects in the financial sector through direct exposures and through overlapping portfolios. Thus, it would seem to be important to identify those banks and financial institutions (and, if possible, also non-financial institutions) that can contribute to systemic risk contagion across the financial system.

Macroprudential Stress Testing

- Macroprudential stress tests are done to detect macro-financial vulnerabilities of the financial system. Stress tests assess the impact of stress scenarios in macroeconomic and financial variables on tested institutions. They inform policy makers about the resilience of the financial system to possible shocks and are, therefore, a useful ingredient for macroprudential policy decisions.

- The methodology of macroprudential stress tests is both versatile and complex. This allows tailoring stress tests for different purposes, while raising technical and resource-driven challenges. Let me emphasize the potential of employing stress tests for macroprudential purposes that might justify the effort:

  ✓ First, stress test methodologies have great potential to be used for the calibration of macroprudential policies. For example, the analytical framework behind stress test models could be used to calibrate macroprudential capital buffers, van Oordt (2018). Stress test results on the banking system are used in many jurisdictions to set forward-looking capital guidance. They are therefore an important complement to accounting-based capital ratios and underpin the macroprudential aspect of the new revised <u>Basel</u> capital framework.

  ✓ Second, stress testing frameworks are adaptable to different scenarios according to policy needs. They therefore a helpful tool in assessing upcoming risks to financial stability. Most recently, central banks implemented Covid-stress tests to gauge the resilience of banking sectors to the recession caused by the pandemic.4 Stress tests are also applied to assess the impact of climate change on financial systems.5

  ✓ Third, stress test methodologies can be extended to evaluate complex interconnections in financial systems. Particularly, extending stress tests beyond the banking sector by including non-bank financial institutions has great potential to evaluate the risks to financial stability that stem from the growing shadow- banking sector and from the real economy.

- As much as we can enhance all the benefits that adequate stress testing frameworks can bring for central banks and supervisory authorities, there are some important challenges that this tool must address in the short and medium terms:

  ✓ With all its potential, macroprudential stress testing is still a relatively new policy tool. Progress is needed to make full use of stress testing potential. <u>A key challenge is to develop and implement methodologies that reflect the complexity of macro-financial linkages and banks' adaptive behavior to crisis situations</u>. This includes incorporating feedback loops between macroeconomic variables and bank balance sheets, allowing dynamic balance sheets that include endogenous capital measures, and integrating

[4] For example, Covid-stress tests have been executed at the ECB, the Fed in form of a sensitivity analysis to Covid during the 2020 DFAST, the Central Bank of Uruguay, and the Central Bank of New Zealand, among others.
[5] Climate change scenarios have been developed, for example, at the Dutch Central Bank DNB, Banque de France, or Bank of England.

interdependencies between financial institutions and contagion mechanisms in the modelling framework.

- ✓ These modelling advances are still in their early stages of development and require great investment in capacities until they are fit for setting policies. Exchanging experiences and discussing methodologies across jurisdictions will help facing these challenges.

Financial stability monitoring

- For diverse reasons, the financial strain triggered by the pandemic has highlighted the importance of building sound financial stability monitoring capabilities. Since the global financial crisis countries have been working on methodologies and infrastructures to measure, track, and evaluate financial stability risks. The aim of these initiatives has been to reduce systemic risk by identifying financial vulnerabilities that could amplify unexpected shocks and disrupt financial intermediation.

- Hereby, the distinction between triggers and vulnerabilities is central (Adrian et al., 2014): while the former imply shocks that are usually difficult to predict, the latter ones refer to features of the financial system such as leverage, maturity transformation, or interconnectedness, that can amplify shocks through financial contagion or through collapses in asset prices. A proper financial stability monitoring framework should therefore be able to measure and trace over time vulnerabilities that can harm households and businesses and that could be a target of preemptive policy actions.

- In the current context, at least two aspects of monitoring have proven to be key to calibrate policy responses. First, as I commented earlier, the unique feature of the crisis has required a precise targeting and timing of policy measures, including relaxing liquidity provisions, the release of countercyclical capital buffers, and establishing credit guarantees. Authorities have faced the challenge of identifying key funding markets experiencing stress and of designing in due course measures to sustain credit supply. Hereby, frameworks that provide a broad range of comparable real-time financial stability metrics are needed to identify and prioritize policy targets (see, e.g., FSB 2020).

- Second, the incipient, although still uncertain, recovery path will highlight the fact that, during economic expansions, different sources of systemic risk tend to build up, while usually materializing when contractions take hold. In effect, while economic expansion comes along with a reduced cost of financial intermediation and more risk appetite, the potential for financial externalities and therefore for systemic risk will tend to increase. Here, we should note that financial externalities such as asset fire sales only manifest in "bad" states of the world, the opposite to the usual textbook production externality. Therefore, monitoring frameworks should be designed to anticipate the potential for financial externalities, especially during an expansionary recovery cycle.

- Beyond the current crisis, global discussions on the improvement of financial stability monitoring suggest three important lines of action.
  - ✓ First, there is a need to introduce comparable and forward-looking financial stability

indicators that can guide preemptive policy actions. The International Monetary Fund has been encouraging, for instance, the introduction of Growth-at-Risk (GaR) indicators, which provide a tractable estimation of the likelihood of economic downturns given current macro-financial conditions (see IMF 2019).

GaR indicators have two key advantages: a) they can be based on a broad range of variables including, for instance, housing market imbalances or credit boom-bust cycles; and, b) they can facilitate the global coordination of policy actions by providing a common methodology to gauge financial stability risks.

- ✓ A second line of action reflects the fact that monitoring frameworks need to capture the importance of non-bank and shadow-bank financing and their contribution to systemic risk (see FSB 2020). To the extent that non-banks get increasingly involved in maturity transformation and credit activities, they become important both because of their direct role in credit provision, and because of their interconnectedness with other financial institutions.

- ✓ A third aspect related to the above is the role of FinTech companies. The FinTech Issues Group of the Financial Stability Board (FSB) has drawn attention on how emerging FinTech innovations can both support financial stability and engender systemic risk, in areas such as credit scoring, digital currencies, and machine learning. Up-to-date monitoring frameworks have been encouraged by the FSB to incorporate issues like the operational risk from third-party service providers used by banks, the role of cyber security, and the monitoring of macro-financial risks arising from FinTech activities being integrated to incumbent financial firms (see FSB 2017).

- These challenges are likely to remain in the international agenda in the coming years. The exchange of countries' experiences in setting up monitoring frameworks will certainly facilitate the adoption of global standards in this important area.

Financial Stability work at CEMLA

- Here at CEMLA, we are collaborating with University College London (UCL) and with some central banks in the region on the development of tools to study interconnectedness, financial contagion and systemic risk. Now is the time to put these studies to work. It is important to mention that, in addition to the academic papers produced resulting from such collaboration, we have the knowledge, models and code available for other jurisdictions that would like to perform similar studies.

- Among the studies that we have performed with some central banks in the region we find: 1) anomaly detection on payment systems; 2) interconnectedness analysis in payments as well as in interbank markets; and, 3) identification of systemically important banks, firms and systemic risk measurement.

- On the other hand, despite the still grim outlook, not everything is bad news. The coronavirus crisis resulted in a drop of carbon dioxide emissions; according to the ECB, the lockdown will allow a reduction of around 4 to 7% from the estimates before the crisis. This is an opportunity to foster greener financial markets to get access to a low-carbon economy by adopting sustainable technologies and lifestyles. Climate change could pose significant risks to price and financial stability as it has been widely recognized. Particularly, for markets, as asset prices might reflect properly the externalities associated with climate change in a not too-distant future.

- Certainly, the Great Lockdown has resulted in lower emissions of CO2 and other greenhouse gases and has also brought important changes and lessons which might remain after the health emergency has passed. For example, it has been proven emphatically that remote working is a reality and, to a certain extent, education and shopping could rely more on its online versions.

- Moreover, we hope that despite its huge impact on the world economy, the current Covid-19 health crisis is temporary, while the risks associated with extreme weather events, whose origin is rooted on climate change, will stay with us for years to come, maybe even, for all practical purposes, forever if not enough is done.

- This health crisis opens a window of opportunity to start managing transition risks. Instead of going back to business as usual, the financial sector can finally reduce its exposures to the carbon intensive sectors of the economy, creating the right incentives for participants in such sectors to trigger the transition to more sustainable practices.

- Many of the short- and medium- term challenges for the stability of the financial system are related to the Covid-19 outbreak. As I mentioned earlier, some of these challenges are related to interest rates, foreign exchange vulnerabilities and vulnerabilities arising from increasing market-wide risks. Therefore, it is important to use effective tools for assessing the impact of Covid-19, such as scenario analysis, adequate risk monitoring and stress tests.

- In this context, it is also important that LAC countries continue with international cooperation and coordination on the Covid-19 response, including information sharing and exchanging experiences on the policies implemented. Here at CEMLA, we are prepared to participate with you on any initiative, and we will also facilitate the exchange of experiences and ideas just like we will be doing in this meeting.

Finally, on the outlook of the Meeting

- In the following three days, we will have valuable interventions by international experts. Starting today, we will have as the keynote speaker Professor Dimitrios Tsomocos from Oxford, a distinguished economist and researcher and a close collaborator of our center. Additionally, a Covid-19 and Financial Stability panel, where distinguished members from the Federal Reserve Board, from the Banco Central de Reserva del Perú and from the Banco Central do Brasil will share and discuss national policy actions to address financial stability risks and challenges related to the Covid-19 pandemic.

- Tomorrow, we will have a special talk about financial stability governance and central bank communications with Ricardo Correa from the Federal Reserve Board. Then, we will have the opportunity to hear from international experiences on the implementation and the challenges of macroprudential stress testing.
- Surely few jurisdictions would have contemplated stressful scenarios like the one we are living in now on their supervisory exercises. Nevertheless, due to its worst-case approach and prospective construction, stress testing is as important as ever in the financial authorities' toolkit. The panel will have the participation of Fabrizio López-Gallo Dey from Banco de México, Rodrigo Lluberas from Banco Central del Uruguay and Daniel Osorio from Banco de la República.

- On the third day, we will have a panel covering regional and international experiences on financial stability monitoring. One of the most important lessons of the GFC was that gathering the right data for financial stability monitoring is crucial. This session will focus on discussing experiences in implementing frameworks to measure, track, and evaluate emerging financial stability risks and systemic risks, with a focus on central challenges ahead. In this session, we will have the participation of Grzegorz Halaj from the Bank of Canada, Ángel Estrada from Banco de España and Gilneu Francisco Astolfi from Banco Central do Brasil.

- Before concluding, I would like to welcome you again to the Meeting. Let me emphasize that if you need anything from CEMLA, let us know. We will do our best regarding collaboration and research initiatives related to financial stability as we have been doing in the past year.

- I expect a productive exchange of ideas, methods and points of view in this field, which has proven to be quite an important contribution towards the understanding of financial stability analysis and monitoring. I wish you all fruitful discussions and once more, thank you for joining us in this virtual Meeting.

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