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## **IV Conference on Financial Stability**

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### **Opening Remarks**

#### **New and emerging challenges for the post-Covid era**

- Good morning. It is a pleasure to welcome you to the IV Conference on Financial Stability, co-organized by Banco de México, the Bank of Canada, the University of Zürich, the Journal of Financial Stability, and CEMLA. This conference provides a platform to foster the dialogue between researchers in academia and policy institutions, aiming at improving our understanding of pressing challenges for financial stability both in Emerging and Advanced Economies.
- I would first like to thank Alejandro Díaz de León Carrillo Governor of Banco de México with whom I will share the opening of the conference. I would also like to thank the co-organizers for their collaboration: Fabrizio López Gallo Dey, Director General of Financial Stability at Banco de México; Grzegorz Halaj, Director in the Model Development and Research Division of the Financial Stability Department at the Bank of Canada; Stefano Battiston, Associate Professor in Sustainable Finance and Networks at the University of Zürich; and Iftekhar Hasan, University Professor and E. Gerald Corrigan Chair in International Business and Finance at Fordham University.
- In addition, I would like to thank our keynote speakers, who will generously share their views on current financial stability challenges. These include Prof. Markus Brunnermeier, who is the Edwards S. Sanford Professor of Economics and Director of the Bendheim Center for Finance at Princeton University; and Ms. Jing Yang, Managing Director of the Bank of Canada's Financial Stability Department.
- Also, I would like to thank the program committee for making it possible to review the 121 papers submitted to the conference, which implied processing 242 individual reviews, having had to revise some of the program committee members more than 10 papers in order to select the best scored works, both in terms of relevance and of quality. This effort, led by the head of the organizing committee, Dr. Serafín Martínez-Jaramillo, was key to put together the Conference's program. Serafín, as most of you know, is the main force behind the design and organization of this Conference. He just finished a three-year stint at CEMLA and is now back at Banco de México.

- Last, but not least, let me thank Matías Ossandon Busch, CEMLA’s Director of Financial Stability and his team, as well as CEMLA’s IT unit, for supporting the organization of the conference.
- This Conference could not have been organized at a more opportune moment, considering both the need to evaluate the lessons for financial stability from the COVID-19 pandemic, and the challenges ahead, as we see encouraging signs that vaccination campaigns can provide a route towards economic recovery. Moreover, we have seen an increasing demand to incorporate physical and transitional risks associated to climate change to financial stability frameworks, an aspect that is still new to many central banks and regulatory authorities and that will require more inputs from economic research to underpin the design of tailored policy instruments.

### **Making research relevant to policymaking**

- The topics and the papers selected for this conference are good examples of how to link rigorous economic research with policymaking. While boundary-crossing collaborations between academia and policy institutions are always challenging, I would like to highlight that fostering our understanding of financial stability issues in areas such as finance, banking or macroeconomics will require an increasing dialogue between these fields.
- Policy institutions face increasing pressures to justify their policy decisions vis-à-vis the public and other stakeholders, for which an honest and balanced evaluation of policy interventions is required. While many evaluation exercises are straightforward and can be done by policy experts, economic research can contribute to conceptualize evaluation methodologies, identifying data and methodological gaps, and assessing the rigurocity of evaluation schemes.
- Most importantly, research can assist to identify unintended consequences and spillovers of policy interventions that were not foreseen by policymakers in the first place. While randomized control trials and other forms of quasi-experimental designs are difficult to implement in the field of financial stability, the use of granular micro-data has improved researchers’ capacity to evaluate the effectiveness of policies. Several papers included in this conference are good examples of how research can make us aware of the complexity of policy decisions by inspiring a critical view on policy evaluation.
- From the researcher’s perspective, sticking closely to evidence in the real world can help to adjust theories, critically revise previously documented evidence, and narrow down those narratives that best explain facts. The dialogue with policymaking also matters to reconcile seemingly opposing theories, which may turn to be valid under different institutional contexts or economic circumstances. These complexities remain often unseen for policymakers.

- The different context of research in academia and policy institutions is illustrated by a recent study published in the Journal of Monetary Economics by Elisabeth Kempf from the University of Chicago and coauthors (JME, 2021), who find that central bank researchers and academic economists find systematically different results when evaluating the macroeconomic impact of quantitative easing (QE), even when relying on similar datasets and time periods. Analyzing a large set of studies, they find that central bank researchers use a more favorable language and find more often positive results of QE, a result that highlights the importance of fostering dialogue to maintain a critical assessment of policy interventions.
- In complex decision-making environments that characterize central banks and regulatory authorities in the financial sector, the independence, theoretical insights, and rigorous evidence-based recommendations that research provides are scarce assets. I encourage you to engage with policy challenges that will be discussed in this conference to motivate your own future work and assist in identifying problems and complexities that remain blind spots.

### **Climate-change related challenges to financial stability**

- This conference comes right after one of the biggest shocks that the financial system has experienced in recent times: the Covid-19 health crisis. The Global Financial Crisis (GFC) built up from inside the financial system. We came out of it with an important lesson learnt the hard way: interconnectedness matters when we think about financial stability and the finance-growth nexus.
- The challenging threats of climate change and environmental degradation that have gained momentum in the international agenda highlight once again the importance of improving our understanding of interconnections, especially between the financial and real sectors. As physical and transitional risks related to climate materialize, financial stability challenges will be increasingly linked to the impact of these threats on financially exposed sectors in the real economy.
- While this is a financial stability conference and many interesting works form part of the program, I would like to call your attention to one session entitled “Overlooked challenges to financial stability”, in which papers related to climate change and cyber risks will be presented and discussed.
- One could argue that there are other important topics on financial stability which deserve more attention. Nevertheless, in my view, climate change and environmental degradation deserve our utmost attention and efforts to avoid a possible catastrophe in the not-so-distant future if we decide not to act.

- It is well known that the global health crisis isn't over as we approach winter in the Northern Hemisphere, and there is a good deal of complexity on how we are going to deal with the gradual withdrawal of the support measures implemented by governments and financial authorities around the globe.
- Nonetheless, at some point in the near future the pandemic will ease or, at least, we will learn to live with this virus and its mutations. Unfortunately, climate and environmental risks will not go away, threatening the existence of our own species.
- According to overwhelming scientific evidence, the recent rise in temperatures is anthropogenic (IPCC, 2021). The occurrence of extreme events has also increased considerably as well as its associated costs, affecting all economic agents.
- As most of you know, the economy and the financial sector will face physical and transition risks. However, there are additional social problems that are of great concern. According to a recent U.S. intelligence report, the intensification of the physical impacts will exacerbate some sensitive geopolitical issues, with some countries facing increasing instability.
- Transition risks arise because of a change in market (and the general public's) perception associated with climate related policies. Such changes could induce substantial asset price adjustments on sectors which are sensitive to climate policies (carbon-related, energy-intensive, fossil fuels, sustainable energy generation, etc.). According to a study published this year by Alan Roncoroni and coauthors (JFS, 2021), in the face of possible disorderly transition, financial institutions have the incentive to engage earlier, under the same market conditions (market volatility, recovery rates and market liquidity). Besides, it is possible to reach tighter climate policy targets, at the same level of risk, if market conditions are strengthened enough. The authors also find that the financial system would not face only losses from the direct exposures to carbon intensive economic activities, but also from sizable network effects.
- On the physical risks arena, a recent study published in the Annals of the New York Academy of Sciences shows that the economic costs of climate change over this century under some policy scenarios and damage functions would represent 800% of the world's current GDP (Estrada and Botzen, 2021). These losses would come from agricultural damages, coastal floods, tropical storms, extreme heat and pluvial floods, among many other events.
- I invite you to go through some of the material which is being produced worldwide on climate change and financial stability. The best policymaking that we can design and implement must be based on hard scientific evidence and research. The field is growing and I am aware of a recently published special issue at the Journal of Financial Stability precisely on this topic. I am very pleased that Irene Monasterolo and Stefano Battiston, who is also one of the organizers of the conference, will present some of their most recent work to us.

- Regrettably, climate change is not the only environmental problem that we face, biodiversity loss is as important as climate change, but has received considerably less attention from policymakers and the general public. In addition to its own relevance, biodiversity loss and climate change are closely interrelated. Global warming produces biodiversity loss, as well as the latter induces further rises in global temperatures. Therefore, it is all good news that there is buoyant research on climate change and financial stability, but we shouldn't leave behind research on biodiversity loss and its relationship with the financial system.
- I wanted to use this opportunity to highlight that Banco de México and CEMLA will host from November 30 to December 2 a first Conference on Biodiversity and Environmental Challenges for the Financial System, in which international experts will share their views on these emerging challenges. You are all invited to join us, please approach Dr. Matías Ossandon for more details on the registration process.

### **Interest rates challenges in the recovery phase**

- While climate change will likely dominate the agenda in the coming years, the encouraging signals of economic recovery from the pandemic have also raised concerns on threats represented by the changing environment in global interest rates. With the increase in inflationary pressures worldwide, interest rates have started to rise, reflecting the expectation of less accommodative monetary conditions and higher term premiums. While attention has understandably mostly centered on the U.S. case, this dynamic has been observed both in Advanced Economies and, even more acutely, in Emerging Market ones.
- Policymakers and market participants are becoming increasingly aware of the potential threats implied by rising inflation, which is pushing more broadly through the economy as expected, as shown by recent data from the U.S., where consumer prices rose by 6.2 percent on a yearly basis last October. Increasing prices are already being reflected in higher interest rates. For example, the yield on two-year Treasury notes in the U.S. rose from 0.15 percent to 0.53 percent between June and November 2021, highlighting changing patterns in investors' outlook for the overnight interest rate set by the Fed (see data).
- All in all, in the last few months a debate has taken place about the relative importance of the various shocks affecting inflation and, thus, about how long the resulting increase in it will last. Clearly, the longer it does so, the higher the risk of inflation expectations and wages becoming contaminated.
- Markets don't seem to be discounting a long-term problem with inflation just yet, although most of the economics and finance punditry is. Looking at inflation break-evens, inflation and interest rate swaps and so on, they seem to anticipate that the present higher inflation levels will persist for the next year or two, and then that inflation will stabilize again at around 2 percent. Nevertheless, inflation jitters are notably on the rise.

- Evidently, higher inflation rates for longer could have important implications for the interest rate outlook in the short and medium terms and these, in turn, for financial stability.
- A first implication relates to the impact of higher interest rates in an already highly indebted economy. Leveraged borrowers can be affected by financial vulnerabilities that remained hidden in the context of historically low interest rates. With mounting interest rates, lenders can become more risk averse, leading to enduring firm insolvencies and a problem of debt overhang, whereby highly leveraged firms forgo investments due to tighter conditions to access funding. This dynamic would make the recovery process more difficult and could further impair firms' ability to service their debt.
- Perhaps the most important general implication has to do with asset valuation and the overall functioning of financial markets.
- In the case of the former, many of the people working in finance, managers, investors and so on, have spent an important part of their careers in an environment of ultra-low rates, sky high asset valuations and an insatiable search for yield reflecting very low risk aversion. Addiction to very low rates is widespread. A change in these conditions could certainly upend markets.
- In the case of the latter, in the last few years there have been rising voices alerting about fragilities in the market for U.S. Treasuries. These fragilities have to do with many issues, but two stand out. The first one concerns the inability of banks, due to changes in regulation arising from the Global Financial Crisis, to hoard Treasury securities in their own balance sheets, which has affected their traditional role of market makers in those securities. The second has to do with the growing importance of High Frequency Trading and/or Algorithmic Trading in that market. As was evident in March of 2020 and other episodes, algorithmic provided liquidity dries up very quickly in times of stress. All in all, a crash in the market which is the cornerstone or central pillar for asset valuation globally could certainly be a considerable hindrance for the recovery.
- Another important implication of rising interest rates relates to the volatility of exchange rates and capital flows. The evidence accumulated since the GFC shows that tighter global financial conditions can translate into weaker currencies and subsequent disruptions in capital flows to Emerging countries, through all three of the so-called determinants of capital flows, that is pull, push and pipes factors, as investors become more risk averse. Valentina Bruno and Hyun Song Shin (2015) have coined the term risk-taking channel of currency depreciation when referring to scenarios in which weaker currencies lead to such disruptions in capital flows. Further work at CEMLA has shown that pipes factors can exacerbate the adverse effects of the aforementioned risk-taking channel.

- There are various ways in which these dynamics affect Emerging countries. Two of them are as follows. First, rising interest rates and weaker currencies can lead firms with a large exposure to U.S. dollar-denominated debt to face increasing difficulties to service their debt. Second, weaker capital flows can further exacerbate the threats represented by weaker currencies and debt overhang after the pandemic, in a doom-loop dynamic that has been linked historically to episodes of economic recessions and financial instability (see, e.g., Freixas et al., 2015; Noth and Ossandon Busch, 2021).
- Be that as it may, in the case of EMEs perhaps we can go further than this. It is quite possible that historically low for long interest rates in AEs, coupled with the relentless search for yield, has resulted in persistent capital inflows to some of these economies, making policymakers somewhat complacent, as markets seem to have lost their roles as disciplining mechanisms. Perhaps higher interest rates in AE could mark the return of the “Bond Vigilantes”.
- Despite these relevant challenges ahead, the experience of the pandemic has shown that sound macroprudential policy frameworks can ease the stress of tighter financial conditions and moderate the pass-through of financial shocks to the real economy. A recent study published in the Journal of Corporate Finance by researchers at CEMLA shows that, for instance, reserve requirements and other macroprudential instruments can curve the effect on domestic credit supply of large foreign financial shocks (see Ossandon Busch et al, 2021). I hope that this conference will offer you the opportunity to learn about recent evidence at the research frontier that informs policy discussions on how to tame the threats ahead in these troubled times.

### **Agenda and final remarks**

- Let me conclude by briefly highlighting the main contents of our conference.
- Today, these opening remarks will be followed by our first keynote speaker, Prof. Markus Brunnermeier. After his presentation, we will move to the first round of parallel sessions in which the selected papers will be discussed. We will begin with sessions devoted to financial network analyses and banking and regulation. Previous editions of this conference have featured a good record of papers on financial networks that have become high-impact publications in top-field journals.
- Tomorrow’s session will begin with our second keynote presentation by Ms. Jing Yang. The parallel sessions feature studies revising some lessons for financial stability from the pandemic as well as emerging risks to financial stability related both to climate change and cybersecurity.

- The final day on Thursday features two rounds of parallel sessions. The first two sessions focus on studies looking at the amplification of financial shocks via contagion and spillover effects, as well as on the evaluation of macroprudential policies and their implication for systemic risk in different settings.
- The last two sessions feature papers exploring the role of bail-in and resolution policies, as well as the interaction between monetary policy and financial stability. Some salient studies included in the program look, for instance, at the real effects of banking resolution and bail-in policies.
- Before concluding, I would like to welcome you again to the conference and emphasize that this initiative is part of CEMLA's ongoing effort to broaden our understanding of financial stability challenges and policy solutions both in Latin America and the Caribbean and abroad.
- I am hoping that you have fruitful discussions and that you can obtain useful feedback for your ongoing research and motivate new research ideas. Thank you for your attention.



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