CEMLA
CENTER FOR LATIN AMERICAN MONETARY STUDIES

WORKSHOP ON GROWTH-AT-RISK APPLICATIONS

Growth-at-Risk models as a financial stability monitoring tool

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Welcome and acknowledgements

Good morning. It is a pleasure to welcome you to the Workshop on Growth-at-Risk Applications, organized by the Center for Latin American Monetary Studies, CEMLA. I want to divide this introductory session in two parts. I will begin with some brief welcome remarks and will then continue with a presentation of one of the research applications using Growth-at-Risk models that we have been working at here at CEMLA, aiming at setting the stage for the discussions that will follow up in the agenda.

The workshop we are hosting today has a twofold objective. First, in our role of fostering central banks' analytical and research capacities, the workshop aims at disseminating recent advances in the use of Growth-at-Risk models based on the experience from central banks both in Latin America and abroad.

In a complementary way, the workshop also aims at launching an online platform in the context of CEMLA's Growth-at-Risk Project, which contains open-source material available for external researchers to replicate and adapt Growth-at-Risk models. We hope that this event will allow participants to benefit from the experience of central banks that have already incorporated these models in their policy toolbox, motivating the use of a methodology that we believe to be tremendously useful in a context of an increasing demand to effectively monitor financial stability risks.

I would like to begin by thanking our invited speakers, who will generously share their views and expertise on using Growth-at-Risk models. We are honored to have Tobias Adrian as our keynote speaker today. Tobias, who is Financial Counsellor and Director of the Monetary and Capital Markets Department at the International Monetary Fund, has led the main contributions motivating the inclusion of Growth-at-Risk models both at the IMF and in central banks worldwide. Needless to say, his seminal paper published together with Nina Boyarchenko and Domenico Giannone in the American Economic Review in 2019, was a key inspiration for researchers that have, since then, extended and adapted this approach.

I want also to thank other participants for their valuable contribution to this workshop: Jorge Galán from Banco de España, Lucyna Gornicka from the IMF, Simon Lloyd and Ed Manuel from the Bank of England, Thibaut Duprey from Bank of Canada, María Victoria Landaberry from the Banco Central del Uruguay, and Rafael Nivin from the Banco Central de la Reserva del Perú.

CEMLA's Growth-at-Risk project started as an initiative led by Serafín Martinez-Jaramillo, who was also key to put together the Workshop's program. Serafin recently finished a three-year stint at CEMLA and is now back at Banco de México. Last but not least, let me thank Matias Ossandon Busch, CEMLA´s Director of Financial Stability and his team, as well as CEMLA´s IT unit, for organizing the workshop.

A primer on Growth-at-Risk

We are all familiar with the notion that dynamics in the financial system and the presence of macrofinancial vulnerabilities have a strong informational content to monitor future trends in economic activity. Recent crises have shown how these vulnerabilities often find their origin in times of buoyant economic growth, when liquidity is widely available, risk-appetites are high, and several regulatory mechanisms are not binding.

Against this backdrop, Growth-at-Risk models fill a gap in financial stability monitoring by adding a simple and flexible analytical tool that offers the possibility of tracking the likelihood of adverse economic scenarios conditional on current trends in both domestic and global financial-risk factors. At a time when countercyclical regulatory mechanisms have become the state-of-the-art architecture in several countries, this type of analysis is key to inform policymakers ahead of activating preemptive actions.

I wanted to briefly use this opportunity to highlight three aspects that, in my view, reflect the usefulness of Growth-at-Risk models for central banks. First, it is important to recall that Growth-at-Risk models find their origin in the well-known Value-at-Risk method, an analytical approach that has been long at use in central banks, for instance, to support banks' international reserves management and/or financial supervisory activities. This experience certainly facilitates incorporating Growth-at-Risk models.

Second, Growth-at-Risk models have the advantage of relying on a relatively simple dataset, available for most central banks from official and commercial statistics. This feature is important to adapt these models to institutional contexts in which sometimes it becomes difficult even for central banks to collect and process the necessary data to monitor financial systems. Certainly, from a methodological point of view, it matters whether proper aggregation methods can be developed to generate indices that capture multidimensional trends in macrofinancial risks. Later today, Thibaut Duprey from the Bank of Canada will show us how novel approaches can be used to create financial stability indices key to allow Growth-at-Risk models to capture a precise profile of macrofinancial risks.

As a third aspect I would like to note that Growth-at-Risk models have become in a short time a popular tool among researchers and analysist because of the flexibility behind its intuition. While the original idea was to forecast the entire density function of GDP growth, applications have evolved to estimate, for instance, the distribution of capital flows or to evaluate the effectiveness of macroprudential policies, as we will see in today's presentations. These applications

show that central banks can benefit from Growth-at-Risk models by incorporating a tool that is adaptable to different institutional contexts and that can be used to monitor multiple sources of country-specific and global risks.

Final remarks

We hope that the discussions today, together with the methodological tools that we will provide to the community in our online platform, will help other central banks to adapt these models and draw interesting elements to inform policy debates.

Please allow me to turn now to a brief discussion of the results drawn from a Growth-at-Risk application, entitled ***Volatile sovereign bond flows and market stress: do resilient pipes absorb the hit?*** This is a joint work between researchers at CEMLA and Banco de México, where we explore whether key changing patterns in international financial markets have affected the stability of bond flows to Emerging Market Economies.

Thank you very much.

References

• Adrian, Tobias, Nina Boyarchenko, and Domenico Giannone (2019). **Vulnerable Growth, American Economic Review, American Economic Association, vol. 109(4), pages 1263-1289, April.**