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Report on the "New Age of Central Banking in Emerging Markets" Conference*

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The Corvinus University of Budapest, the Bank for International Settlements (BIS) and the London School of Economics and Political Science (LSE) organised an international conference entitled "New Age of Central Banking in Emerging Markets". Held on 17 March 2023, the event was supported by the Magyar Nemzeti Bank (the central bank of Hungary, MNB) and provided a forum for high-level decision-makers and leading global financial experts to discuss the most topical issues in today's central bank tasks: fighting inflation and promoting central bank digital currencies (CBDCs).

The motivation of the conference was to analyse the emerging market institutions, which used to lag behind those in advanced economies. From a historical perspective, however, catching up was already occurring before the pandemic, particularly in the area of central banking. In the aftermath of the pandemic, central banks in major emerging markets responded faster and more aggressively to signs of emerging inflation than their peers in advanced economies. Their timely reaction may have prevented higher inflation and larger capital outflows. The issues discussed included the following: (i) Are emerging market monetary policy frameworks better equipped to react to inflationary pressures? (ii) What roles have institutional development and governance in emerging markets played over the past two decades? (iii) Has policy tightening yielded clear gains for early-starter emerging markets? (iv) To what extent have systemic central banks, such as the Federal Reserve and the European Central Bank, helped emerging market counterparts with currency swaps and repos? (v) Is there currently a risk of global "over-tightening" by central banks around the world, in reaction to global inflationary pressures? And can – or should — central banks cooperate better to avoid such risk?

According to the premise of the conference, emerging markets have undergone changes that point in the direction of being much better able to cope with economic policy and economic shocks. However, central bank interest rate increases have an impact on financial stability, and thus it is necessary to examine how much the economy and the financial system can handle without serious damage, as well as

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what the central budget balance (higher interest expenditure) and the real economy (excessively falling demand should not turn into recession) can take. Participants at the conference were in absolute agreement that as long as inflation remains high, tight monetary conditions must be maintained as the only way to bring inflation down.

The Honorary doctorate award ceremony

A ceremony granting an honorary doctorate to *Dr Agustín Carstens* was organised on the margins of the event. The *Doctor Honoris Causa* award recognised Carstens's post-academic career in policy institutions and international financial organisations. Carstens began his career in 1980 at the Bank of Mexico. From 1999 to 2000, he was Executive Director at the IMF. He later served as Mexico's deputy finance minister (2000–2003) and as Deputy Managing Director of the IMF (2003–2006). He was Mexico's finance minister from 2006 to 2009. Carstens has been a member of the Financial Stability Board since 2010 and is a member of the Group of Thirty. He became General Manager of the Bank of International Settlements on 1 December 2017, was Governor of the Bank of Mexico from 2010 to 2017 and was a member of the BIS Board from 2011 to 2017. He was chair of the Global Economy Meeting and the Economic Consultative Committee from 2013 until 2017. He also chaired the International Monetary and Financial Committee, the International Monetary Fund's (IMF) policy advisory committee from 2015 to 2017.

Luiz Pereira, Deputy General Manager of the Bank for International Settlements, sent a video message expressing his views on the well-deserved recognition honouring Carstens' influence, especially the importance of good policy and academic work. In the ceremony, the title was conferred on Carstens by *Előd Takáts*, Rector of Corvinus University of Budapest, who worked at the BIS in Basel from 2009 to 2021 where he took part in Basel III development.

Carstens' acceptance speech had two parts. In the first part, he claimed that a virtuous circle must be created between the theory, research and implementation of economic policies. The virtuous cycle starts with the high-level conceptualisation of policies. It then moves to formalisation – determining the details of how policies can be applied to the real world. The next stage is implementation, as policies are actually put into practice. This is followed by monitoring, to make sure that policies operate as they should, and evaluation, to determine if they have achieved their intended objectives. As a final stage, based on the evaluation, policies must be adapted, which may in turn initiate a new stage of conceptualisation and design.[1] According to Carstens, close interaction between theory and practice should

[1] See in more detail: https://www.bis.org/speeches/sp230320a.htm

be sought at each stage. Economic theory can, and in many cases has been, an inspiration for public policies. Economic science cannot advance without learning from public policies that have been implemented, because in some circumstances, practice advances faster than theory.

The second part of *Carstens*'s acceptance speech featured two practical, real world examples. The first example concerned inflation, which had re-emerged in the past year as the most significant macroeconomic challenge facing central banks. In 2020–2021, most central banks expected that the Covid pandemic would add to the forces keeping inflation low. In 2022, inflation had risen but was expected to be transitory. According to Carstens, there is clearly much that we still do not know about inflation. Researchers have been working hard to fill the gaps. Central banks must act decisively to bring inflation down. In this way, policy is moving ahead of theory, teaching lessons about the inflationary process, and monetary policy transmission in a high-debt environment. The second example concerned innovation in money and payments systems. BigTechs have enlarged their footprint in the financial system, particularly in the sphere of payments. Central banks must provide money that meets public needs and expectations. If they do not, then other, less trusted, institutions will step in to meet that demand. According to Carstens, central banks are aware of the challenge, as they are already experimenting with CBDCs. He emphasised that this did not mean that central banks want to get rid of cash. Central banks should be ready, in a given case, to meet markets' demand for a digital representation of money.

Morning panel: Central banks fighting inflation in advanced and emerging markets

The session was chaired by *Andrés Velasco*, Dean of the School of Public Policy at the London School of Economics and Political Science**,** who was the Minister of Finance of Chile between 2006 and 2010. The title of the presentation by *Christopher Erceg*, Deputy Director of the Monetary and Capital Markets Department at the IMF, was "*Battling High Inflation*". The Covid crisis hit the global economy hard and necessitated an unprecedented policy response. The global economy contracted sharply in 2020, with output falling 3 per cent below the 2019 level and activity in consumer-oriented services suffering particularly large declines. In addition to public health measures, policymakers responded aggressively and creatively to cushion the blow to the real economy, notably by easing fiscal policy and monetary policy (see more *Chen et al. 2022*). According to Erceg, there was little historical precedent for "winning a battle" against inflation so easily, and the financial markets appear too optimistic about the likelihood of bringing down inflation quickly. Upside risks were intensified by strong labour markets in many countries. The high inflation over the past two years increases the risk of de-anchoring in response to further adverse cost shocks. Focusing on inflation reduction, he mentioned three urgent topics: (i) appropriate central bank risk management strategy, (ii) financial stability risks, and (iii) the potential contribution of other policies (such as fiscal). Central banks' risk management strategy should take account of the risk that inflation may be much more persistent than in recent history. There is a need to push towards a more aggressive policy response to inflation pressures. However, providing liquidity support while tightening could lead to confusion between monetary and financial stability objectives. An optimal output-inflation trade-off means restraining output more today if a rise in inflation is expected to last longer. Central banks may counter financial stresses via liquidity support, which may include asset purchases (sovereign, corporate) and lending to a broad set of counterparties. According to Erceg, fiscal policy can be helpful in assisting monetary policy: with more fiscal consolidation, interest rates do not have to rise as sharply, which might also add to reducing financial stability risks and may contribute to debt sustainability. In the final part of the presentation, Erceg emphasised that energy subsidies to cushion the real effects of energy shocks and reduce headline inflation may appear attractive, but have many downsides, because the energy subsidy policy may reduce incentive to conserve energy and/or expand aggregate demand and may be counterproductive by boosting core inflation. Although fiscal dominance would make the task of reining in inflation more costly, it is crucial to maintain strong and independent central banks, according to the Deputy Director of the IMF's Monetary and Capital Markets Department.

Ricardo Reis, A.W. Phillips Professor of Economics, London School of Economics and Political Science, presented a contribution entitled "*What can keep inflation high?*" In his view, economic policy is always a balancing act. Independent and mandate-oriented central banks are capable of achieving the inflation targets very soon by implementing high interest rates, but they should not to do so because of extra-monetary policy reasons. *Reis* compared the following potential dominant factors on central banks: (i) misjudgement, (ii) expectations, (iii) fiscal, (iv) financial, and (v) fear of recession. The dominance is *misjudgement*, when a central bank uses outdated theories or measurements of the economy, finding excuses for why inflation was rising. A central bank is dominated by *expectations* when expected inflation is persistently high and the central bank does not talk and act tough enough to reestablish its credibility and reputation. A central bank is *fiscally* dominated when it does not bring inflation under control because it fears damaging the government's budget. It is the fiscal authority that dominates, forcing the central bank to not harm its fiscal position. The central bank is *financially* dominated when it resists bringing inflation down because it fears damaging parts of the financial system in the process. The financial sector dominates the central bank, forcing it not to risk a financial crisis. The central bank is dominated by the *fear of a recession* if it persistently raises policy rates too little or too late because it is concerned about the depth of the ensuing recession. In response to Reis's speech in the Q&A session Carstens commented that central banks before Covid were afraid of low inflation and expectations were difficult to manage, he also mentioned that he preferred the terms strength or autonomy instead of dominance. Carstens claimed that autonomy is much bigger than independence.

Egon Zakrajšek – a native of Slovenia – joined the BIS in 2019 after nearly 25 years with the US Federal Reserve System. In his presentation[2] "*The two-regime view of inflation*", he introduced an alternative view of the inflation process, which might provide insights that will help central bankers tackle the inflationary challenges they face today and prevent their re-emergence in the future. The presentation outlined the two-regime view of inflation. This view characterises the inflation process as two regimes – a low- and a high-inflation regime – with self-reinforcing transitions from the low- to the high-inflation one. The two regimes tend to become entrenched unless severely tested. However, while inflation tends to be self-stabilising in the low-inflation regime, it is especially sensitive to relative price increases in the high-inflation regime. The presented alternative view of the inflation process[3] highlighted how the behaviour of inflation is quite different at low and high levels. According to Zakrajšek, the empirical evidence indicates that inflation behaves very differently in the two regimes. When inflation has settled at a low level, measured inflation mostly reflects sector-specific price changes that are only loosely correlated with each other. Thus, the component of price changes that is common across different goods and services is small. Those price changes tend to leave only a temporary imprint on the inflation rate itself. Equally important, wages and prices, which are at the very core of the inflation process, are only loosely linked with each other. As a result, inflation tends to be self-stabilising. By contrast, a high-inflation regime has no such properties. The importance of the common component of price changes is much greater, wages and prices are more tightly linked, and inflation is especially sensitive to changes in salient prices, such as those of food and energy, as well as to fluctuations in the exchange rate. Thus, while in a high-inflation regime the inflation rate is not self-stabilising, the regime itself is self-entrenching, just like its low-inflation counterpart. This view of inflation has significant implications for monetary policy. First, it suggests that it would be desirable to conduct monetary policy flexibly in low inflation regimes, tolerating moderate, even if persistent, deviations from narrowly defined targets. Second, it highlights the importance of being pre-emptive when the risk of a transition to the high-inflation regime

[2] The presentation was based on the following paper: *Borio et al. 2023*.

[3] *Zakrajšek* made no attempt to construct a formal model. The theoretical framework was based on a joint modelling of the dynamics of prices over time using a very general Bayesian VAR (vector auto regression). The modelling strategy most suited is the cointegrating model, which posits that the variables in the model are tied together by a long-run relationship such that any deviations from the long-run relationship are stationary. In turn, the short-run dynamics are constructed such that the changes in the variables depend on each other and also on their distance from the long-run relationship – the so-called error-correction mechanism. Zakrajšek mentioned that statistical analysis should be deepened and broadened further.

increases, although assessing this risk in real time remains challenging. Central banks' response to the recent inflation flare-up can be seen partly in this light. Although slow to realise the strength of the underlying inflation surge, in part as a result of limitations of prevailing models and forecasting tools, central banks were then forceful in raising the pace of policy tightening.

Zsolt Kuti, Executive Director responsible for Monetary Policy, Financial Analysis and Statistics at the MNB, a Popovics Awardee, delivered a speech entitled "*Central banks fighting inflation in advanced and emerging markets – the case of Hungary*". According to Kuti, the track record of Hungarian monetary policy was successful because in 44 out of 48 months between 2017 and 2020 domestic inflation remained within the MNB's tolerance band. To fight against inflation, the MNB was the first in the European Union to begin the cycle of interest rate hikes. Kuti noted that the effective interest rate had risen by more than 17 percentage points in Hungary. Compared to the regional countries, annual average inflation in 2022 was moderately higher in Hungary, because of higher food and fuel price inflation, which explain most of the excess inflation in Hungary compared to regional peers. Yet according to the presented data, the structure of inflation has been changing recently, and domestic factors have started to dominate inflation developments in Hungary. In response to these challenges, the MNB had strengthened monetary transmission using various instruments in the past half year. Domestic inflation was expected to reach the single-digit range at the end of the year.

The afternoon panel – Central Bank & Innovation: the CBDC

The session was chaired by *Piroska Nagy-Mohácsi*, Visiting Professor at the LSE and previously Policy Director at the European Bank for Reconstruction and Development (EBRD) and co-creator of the Vienna Initiative. She emphasised that cryptocurrencies were a huge technological innovation that had created entirely new forms of money and made financial transactions and payments more secure.

Priscilla Koo Wilkens, Senior Economist, Innovation and Digital Economy at the BIS and previously head of the Pix Management Division at the Central Bank of Brazil, gave a presentation entitled "*Central banks & innovation: The CBDC*". She explained that Brazil's recent experience with the Pix retail instant payment system illustrates the potential gains. In a little over one year since its launch in November 2020, Pix has signed up 67% of adults in Brazil, with free payments between individuals and low charges for merchants. In December 2022, the average transactions number per day was 93 million. The two key ingredients in the success of Pix are: 1) the mandatory participation of large banks to kick-start network effects for users, and 2) the central bank's dual role as infrastructure provider and rule setter (see *Duarte et al.* 2022). Wilkens claimed that the role of the regulator is twofold: (i) from a technology perspective it is a platform operator, while (ii) from a governance perspective it is a rule setter. She also mentioned the important role of the private sector.

As Chief Digital Officer and Executive Director at the MNB, *Anikó Szombati* is responsible for (i) increasing the efficiency and stability of the financial system via fostering digital transformation, (ii) supporting the domestic FinTech ecosystem, and (iii) fostering digitalisation within the central bank and analysing opportunities in CBDCs. In her presentation "*The MNB's approach to financial innovation and to CBDC*", she introduced the MNB's pilot projects, which may provide an opportunity for testing within a secure framework. The MNB's first retail CBDC was the *Digital Student Safe* pilot project. This was launched in September 2020 with a dual purpose: (i) to support digital financial inclusion of students; and (ii) to gain hands-on experience on a potential operational model of a future CBDC system (see *Fáykiss et al*. *2022*). Based on its success, further expansion is also being considered in the form of Digital Student Safe 2.0 to raise financial awareness among families and younger generations. The MNB also launched blockchain testing via the so called "*Money Museum Digital coin register*" application, which was released in 2022 with two main functionalities: (i) a new channel for displaying useful content related to the Money Museum and finances in order to enhance the interactive museum experience; and (ii) an innovative opportunity to test blockchain based technology as the MNB had created a dedicated platform for NFT issuance and digital coin registration. The third way is wholesale CBDC testing with domestic and international projects (e.g. the MNB has observer status in Project Dunbar).

Andrei Kirilenko is a professor of Finance at the Cambridge Judge Business School, the Founding Director of the Cambridge Centre for Finance, Technology and Regulation, and a Research Fellow in the Asset Pricing/Financial Economics Programme of the Centre for Economic Policy Research (CEPR). Prior to joining Cambridge, he served as chief economist of the US Commodity Futures Trading Commission (CFTC) where he contributed to designing and enforcing an effective regulatory regime for financial markets in the aftermath of the global financial crisis. The title of his presentation was "*A Primer on CBDCs*". According to Kirilenko, CBDCs are digitally-native bearer instruments that can be used to pay for any good, service or financial asset in one transaction. Their technological advantage is being digitally-native, i.e. they are created and used in a technologically efficient and secure digital form. Their economic advantage is access to a central bank-regulated payment system. Kirilenko explained the history from Bitcoin to Ethereum to Libra/Diem to CBDC, while he also shared the results of a 2021 BIS Survey (*Kosse – Mattei 2022*), which proved that most central banks were exploring CBDCs, and more than one quarter of them are now developing or running specific pilots. Finally, he showed pilot projects from the United Kingdom, the United States of America and China (for these case studies, see *Müller – Kerényi 2022*).

Radován Jelasity has been the Chairman and CEO of Erste Bank Hungary since 2011 as well as President of the Hungarian Banking Association since 2020. He was previously Governor of the National Bank of Serbia. Jelasity emphasised the role of the trust and safety if the money is introduced and issued by the central banks, but he also mentioned the traditional banking system reflecting financial inclusion and promotion alternatives and competition. There is a *growing need for a digital safe asset*. A central bank could be a provider, but there should be an ecosystem, not just one player. By way of analogy, this is like soccer: somebody should be the referee, but the referee should not be omnipotent in the game. Jelasity mentioned that CBDCs could have an impact on monetary policy as well. Sovereignty will remain an important issue even in the digital sphere. He made reference to a paper published by the US Fed, which highlighted the US dollar's role as global key currency, which may continue in the CBDC competition era as well.

Closing remarks

In his closing remarks, Rector *Előd Takáts* expressed his hopes to welcome the distinguished guests again on the occasion of next year's conference to continue the collaboration between policymakers and academia. He noted that the main takeaway was that the inflation would remain and central banks should focus on that challenge. In an exchange of views at the conference on the emergence of global inflation and the fight against it, according to Takáts, the participants underlined the need for determined, strict monetary policy. This is because monetary tightening is reducing demand, easing upward pressure on prices in the economy and moderating price increases. Takáts highlighted the autonomy of the central banks, which should be safeguarded, especially in emerging economies. The future is open to change, but new technologies face challenges. He emphasised that CBDCs will emerge, but this technology is associated with risks. Modern IT has a Janus face, and while ChatGPT can write an essay at the university, this is not necessarily in the best interests of the students.

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