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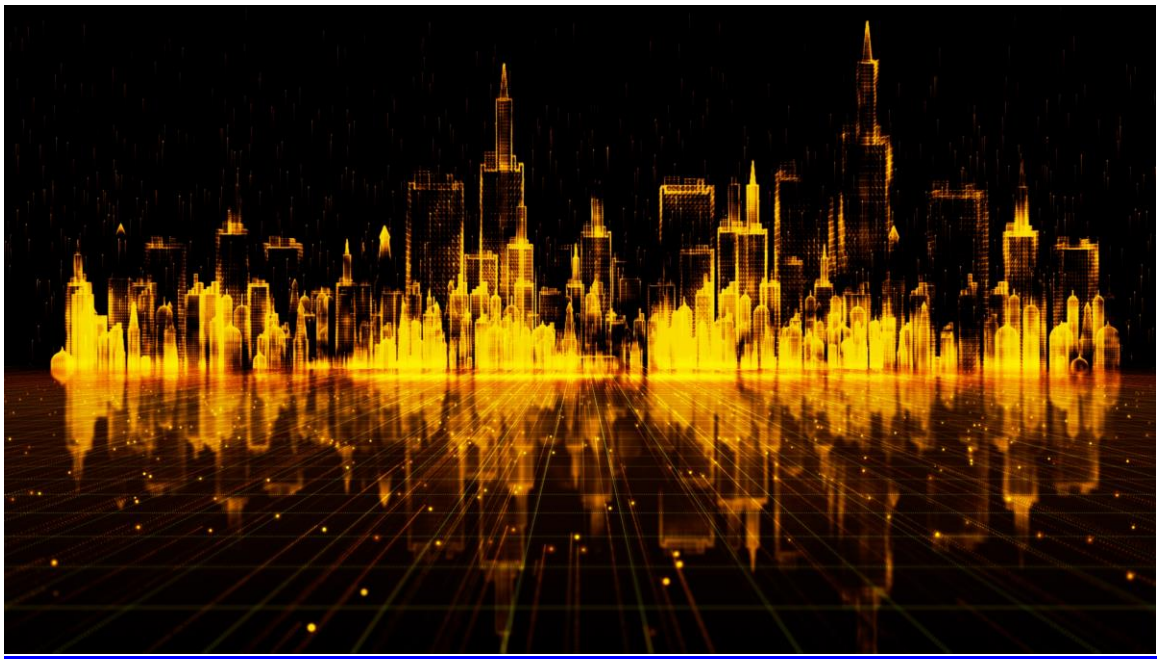


# Basel iii News, October 2021

Dear members and friends,

Today we will start with the *FSI Insights on policy implementation No 36*.

## Big tech regulation: what is going on?

Juan Carlos Crisanto, Johannes Ehrentraud, Aidan Lawson and Fernando Restoy

*The emergence of large technology firms (big techs) represents a major source of disruption to the financial system and the economy.*

Big techs have expanded the available range of financial products and services, often with enhanced customer experience. However, the ease and speed with which these companies can scale up their activities and expand into finance may generate pronounced concentration dynamics.

This could significantly affect the adequate functioning of the financial system and may damage market contestability and eventually increase operational vulnerabilities due to the excessive reliance of market players on the services provided by big techs.

*Different jurisdictions have moved to adjust their policy frameworks to cope with the risks presented by big techs.*

In particular, a number of policy initiatives have emerged in China, the European Union (EU) and the United States over the last few years in the areas of competition, data protection and data-sharing, operational resilience, conduct of business and financial stability.

These initiatives generally seek to achieve a balance between addressing the different risks posed by big techs and preserving the benefits they bring in terms of market efficiency and financial inclusion.

*Thus far, competition has been the policy area where the most initiatives have been conducted and a paradigm shift is emerging.*

Given the large potential for big techs to abuse their technological and data superiority to quickly dominate different market segments and adopt anticompetitive practices, preserving market contestability has become a top priority for authorities in China, the EU and the US.

Competition policy proposals include not only the augmentation of traditional ex post enforcement tools but also the creation of new big tech-specific ex ante regulatory regimes.

*A number of data protection and data-sharing initiatives have been proposed.*

Policy initiatives across the three jurisdictions place special emphasis on personal data use and data protection.

Moreover, there are relevant initiatives, particularly in China and the EU, with respect to users' data portability.

This, together with emerging policy and market developments on data-sharing, seems to be paving the way to a generalised use of personal data for the provision of financial services by different types of entities.

*Policy initiatives are addressing the operational resilience of big tech firms.*

These typically apply to big techs either as providers of financial services2 or as third-party service providers of financial firms.

The operational resilience requirements in both cases intend to capture all sources of operational risk (in particular, information and communication technology risks) and expect adoption of sound risk management practices, swift response in case of disruption and continuity of critical services.

*Some jurisdictions have taken meaningful policy efforts to address potential conduct issues and financial stability challenges but they do not follow an homogeneous pattern.*

A key development in the conduct of business area is the EU's proposed Digital Services Act (DSA). This establishes extensive requirements for very large online platforms connected with the functioning and use of their services.

As such, the DSA represents a comprehensive effort to deal with how big techs treat their customers and the information they receive.

Regarding financial stability, the main regulatory development is the China financial holding company (FHC) regime.

This requires all entities holding two or more types of financial institutions to be structured and licenced as FHCs (if size thresholds or other conditions are met).

This effectively mandated big techs to reorganise their financial business and represents a novel entity-based regulatory approach that entails a comprehensive oversight of the activities performed by big techs through all their financial subsidiaries.

*Additional regulatory responses might be needed to comprehensively address big tech risks and achieve policy consistency at the international level.*

Recent initiatives in China, the EU and the US constitute important steps in addressing risks posed by big techs. However, if big techs continue to gain prominence in the financial system, additional policy responses might be necessary.

It is also very likely that new policy actions will largely need to follow an entity-based approach and require close cooperation between competition, data and financial authorities. Moreover, given the cross-border scope of big tech activities, enhanced international regulatory cooperation is essential.

To read more: https://www.bis.org/fsi/publ/insights36.pdf

# Central bank digital currencies: Executive summary

## Central bank digital currencies: executive summary

September 2021

Bank of Canada
European Central Bank
Bank of Japan
Sveriges Riksbank
Swiss National Bank
Bank of England
Board of Governors Federal Reserve System
Bank for International Settlements

*Motivation*

The centrality of central bank money in a monetary system anchors public trust in money and supports public welfare. As history has demonstrated, the evolution of money and payments delivers new opportunities and business models, alongside new challenges.

Our economies are becoming increasingly digital, user needs are rapidly evolving, and innovation is reshaping financial services. Many of our jurisdictions are seeing falling transactional use of cash, and new forms of digital money issued by the non-bank private sector (such as stablecoins) are emerging.

These developments have accelerated since the onset of the Covid-19 pandemic. Today, central banks are exploring how they can continue to deliver their public policy objectives, ensuring they are able to respond to a future system that appears to be changing rapidly.

A CBDC robustly meeting the foundational principles envisaged by this group could be an important instrument for central banks in such a future to enhance financial stability, harness new technologies and continue serving the public.

As money and payments develop rapidly, central banks' plans for CBDC will evolve. CBDC issuance and design are sovereign decisions. Whether or not to issue a CBDC, and its design features, are sovereign decisions for relevant authorities based on their assessments and a jurisdiction's circumstances.

To date, none of our jurisdictions has yet decided to proceed with a general purpose CBDC, which is one option within a wider set of open possibilities for central banks.

International cooperation on CBDC could provide an avenue for improving cross-border payments. This group's work has been focused on domestic explorations of CBDC.

Yet beyond this group there are valuable insights being generated in other fora which will contribute to our collective understanding and respective evaluation of CBDCs.

The ongoing work under building block 19 of the G20 roadmap to enhance cross-border payments has highlighted the potential for CBDCs to enhance the efficiency of cross-border payments for countries working together.

Facilitating international payments with CBDCs may be achieved through systems with different degrees of interoperability or cooperation.

As more central banks begin to consider issuance of CBDC, the practicalities of implementing such arrangements will be important areas for research, as will their macro-financial implications, where the IMF would have an important role to play.

Finally, CBDCs would be likely to have wide-ranging impacts on public policy issues beyond a central bank's traditional remit.

Broad engagement and cooperation will play a key role in central banks' future CBDC deliberations.

Continuing our collaborations, we are publishing three reports, whose key messages are summarised below:

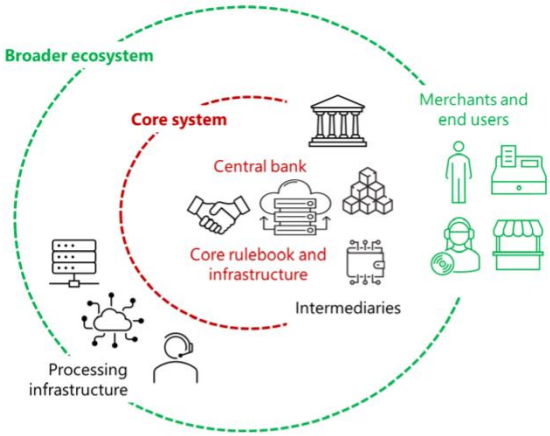
1. System design and interoperability; You may visit:
https://www.bis.org/publ/othp42_system_design.pdf

**Central bank digital currencies:**
**system design and interoperability**
September 2021

Report no 2
in a series of
collaborations from a
group of central banks

Bank of Canada
European Central Bank
Bank of Japan
Sveriges Riksbank
Swiss National Bank
Bank of England
Board of Governors Federal Reserve System
Bank for International Settlements

Illustrated elements, functions and roles in a CBDC ecosystem Graph 1




2. User needs and adoption; You may visit: https://www.bis.org/publ/othp42_user_needs.pdf

# Central bank digital currencies: user needs and adoption

September 2021

Report no 3
in a series of collaborations from a group of central banks

Bank of Canada
European Central Bank
Bank of Japan
Sveriges Riksbank
Swiss National Bank
Bank of England
Board of Governors Federal Reserve System
Bank for International Settlements

3. Financial stability implications. You may visit: https://www.bis.org/publ/othp42_fin_stab.pdf

# Central bank digital currencies: financial stability implications

September 2021

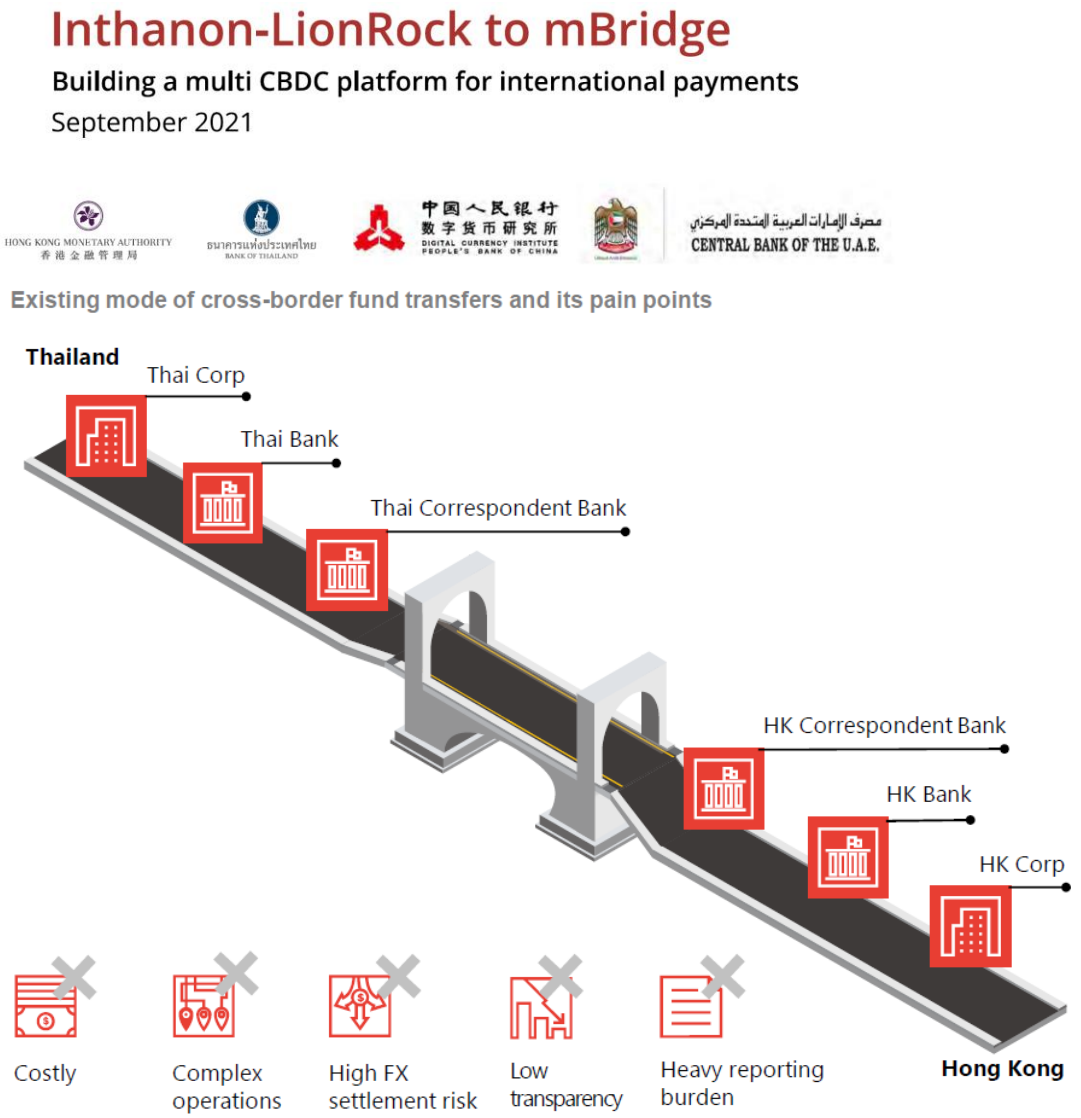
Report no 4
in a series of collaborations from a group of central banks

Bank of Canada
European Central Bank
Bank of Japan
Sveriges Riksbank
Swiss National Bank
Bank of England
Board of Governors Federal Reserve System
Bank for International Settlements

To read more: https://www.bis.org/publ/othp42.pdf

## Inthanon-LionRock to mBridge: Building a multi CBDC platform for international payments

Joint report by the BIS Innovation Hub Hong Kong Centre, the Hong Kong Monetary Authority, the Bank of Thailand, the Digital Currency Institute of the People's Bank of China, the Central Bank of the United Arab Emirates.




In the absence of multilateral solutions for cross-border payments, correspondent banks currently act as bridges, moving payments from one jurisdiction to another.

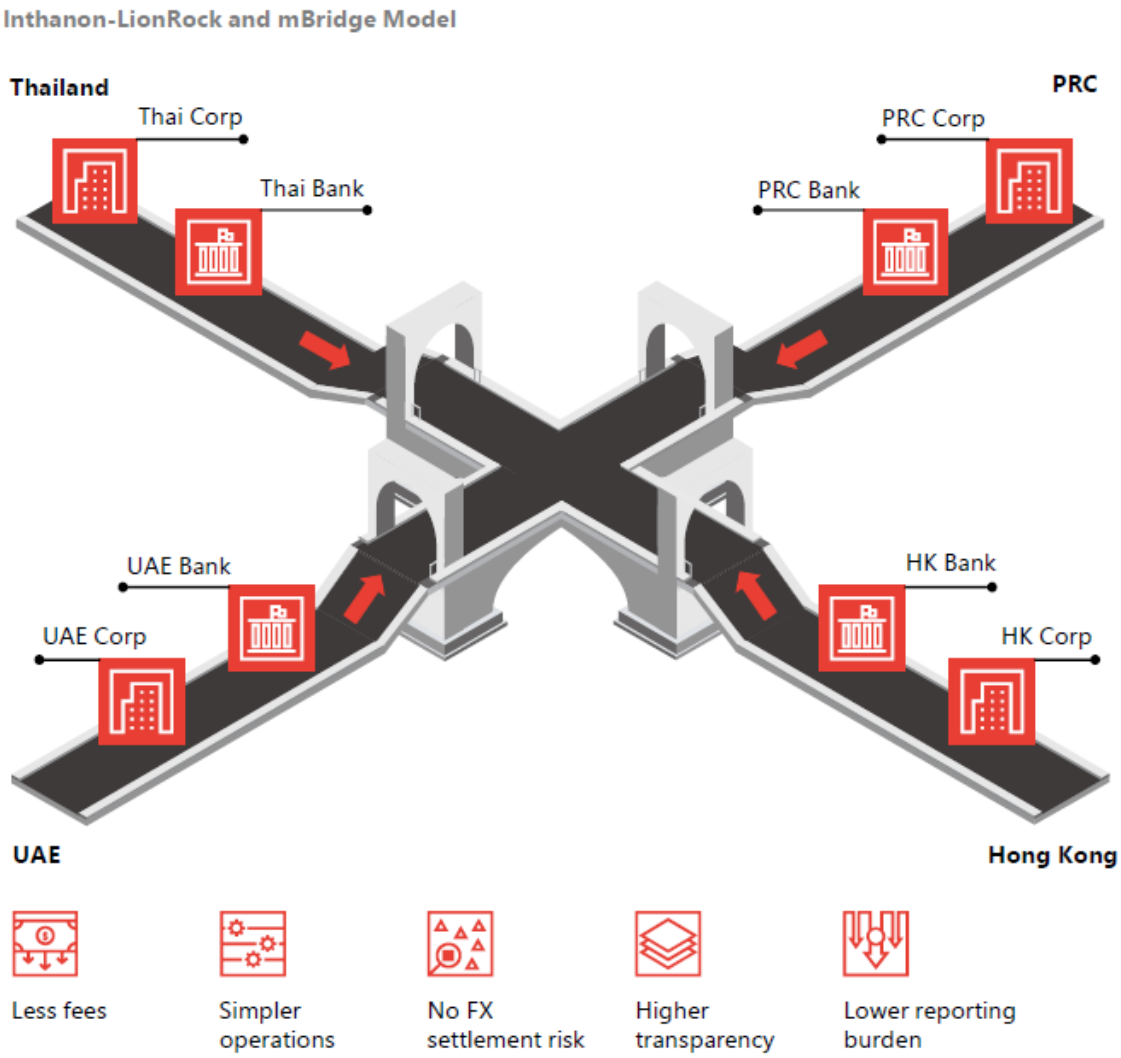
To achieve this, they have built extensive correspondent banking networks and arrangements.

While serving a critical economic role, these networks and arrangements also introduce more intermediary steps in the system, as correspondent banks are spread out across multiple time zones and different operating hours.

This leads to increased operational complexity, possible bottlenecks and duplication. For example, know-your-customer (KYC) processes are repeated by every bank in the correspondent banking process flow.

As illustrated in the published report of Inthanon-LionRock Phase 1 this in turn leads to higher cost and slower speed of cross-border payments.

This process complexity also is paired with high FX settlement risk, low transparency and a high reporting burden.

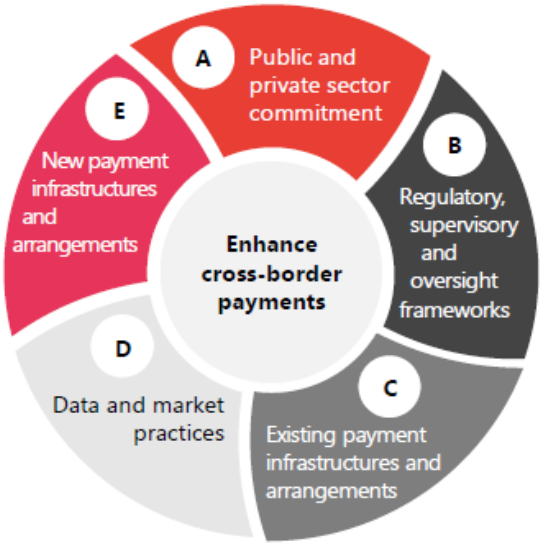



Source: Adapted from Inthanon-LionRock Leveraging Distributed Ledger Technology to Increase Efficiency in Cross-Border Payments, January 2020

**Roadmap to enhancing cross-border payments**

1. Develop common cross-border payments vision and targets
2. Implement international guidance and principles
3. Define common features of cross-border payment service levels

A




4. Align regulatory, supervisory and oversight frameworks
5. Apply AML/CFT consistently and comprehensively
6. Review interaction between data frameworks and cross-border payments
7. Promote safe payment corridors
8. Foster KYC and identity information-sharing

B

C

9. Facilitate increased adoption of PvP
10. Improve (direct) access to payment systems
11. Explore reciprocal liquidity arrangements
12. Extend and align operating hours
13. Pursue interlinking of payment systems

D

14. Adopt a harmonised version of ISO 20022 for message formats
15. Harmonise API protocols for data exchange
16. Establish unique identifiers with proxy registries

E

17. Consider the feasibility of new multilateral platforms and arrangements for cross-border payments
18. Foster the soundness of global stablecoins arrangements
19. Factor an international dimension into CBDC designs

Source: Enhancing cross-border payments: building blocks of a global roadmap Stage 2 report to the G20, July 2020[18]

To read more: https://www.bis.org/publ/othp40.htm

# Selecting and Hardening Remote Access VPN Solutions


Virtual Private Networks (VPNs) allow users to remotely connect to a corporate network via a secure tunnel.

Through this tunnel, users can take advantage of the internal services and protections normally offered to on-site users, such as email/collaboration tools, sensitive document repositories, and perimeter firewalls and gateways.

Because remote access VPN servers are entry points into protected networks, they are targets for adversaries.

This joint NSA-CISA information sheet provides guidance on:

- Selecting standards-based VPNs from reputable vendors that have a proven track record of quickly remediating known vulnerabilities and following best practices for using strong authentication credentials.

- Hardening the VPN against compromise by reducing the VPN server's attack surface through:

Configuring strong cryptography and authentication


Running only strictly necessary features

Protecting and monitoring access to and from the VPN

*Active Exploitation*

Multiple nation-state Advanced Persistent Threat (APT) actors have exploited public Common Vulnerabilities and Exposures (CVEs) to compromise vulnerable VPN devices.

In some cases, exploit code is freely available online. Exploitation of these public CVEs can enable a malicious actor to perform:
- Credential harvesting
- Remote code execution of arbitrary code on the VPN device
- Cryptographic weakening of encrypted traffic sessions

- Hijacking of encrypted traffic sessions
- Arbitrary reads of sensitive data (e.g., configurations, credentials, keys) from the device

These effects usually lead to further malicious access through the VPN, resulting in large-scale compromise of the corporate network or identity infrastructure and sometimes of separate services as well.

To read more:
https://media.defense.gov/2021/Sep/28/2002863184/-1/-1/0/CSI_SELECTING-HARDENING-REMOTE-ACCESS-VPNS-20210928.PDF

# EBA Risk Dashboard points to stabilising return on equity in EU Banks but challenges remain for those banks with exposures to the sectors most affected by the pandemic


- In Q2 2021, banks' return on equity (RoE) remained at levels similar to Q1, not least due to low impairments.

- Capital and liquidity ratios remained strong.

- While the non-performing loan (NPL) ratio declined, asset quality of loans under moratoria and public guarantee schemes (PGS) further deteriorated.

- Cyber and information and communication technology (ICT) related risks remained high.

The European Banking Authority (EBA) published its Risk Dashboard for the second quarter (Q2) of 2021.

The data indicate that banks are benefitting from the economic recovery with RoE remaining broadly similar to the previous quarter.

Capital ratios remained stable and there was a further decline in NPL ratios. Operational risks remain elevated mainly due to cyber and ICT related risks.

**Profitability was roughly stable.** RoE decreased to 7.4% in Q2 2021 from 7.7% in the previous quarter, with the lower end of the 5th percentile moving further into negative territory.

On average, banks benefitted from the economic recovery, not least resulting in lower impairments and a rise in fee and commission income.

Net interest income did not show any major benefit from positive economic developments, and the net interest margin (NIM) remained stable at 124bps.

There are indications of rising operating expenses amid a resumption of pre-pandemic working arrangements, including a return to the office, resumption of some business travels, and similar measures.

**Banks maintained strong capital levels.** The average CET1 ratio remained unchanged at 15.5% on a fully loaded basis in Q2 2021, amid a parallel rise in CET1 capital and risk weighted assets (RWA).

The leverage ratio increased from 5.6% in Q1 2021 to 5.7% in Q2 2021 on a fully loaded basis, reflecting higher capital as well as a slight decrease of total assets during the quarter.

**The Liquidity Coverage Ratio (LCR) remained high.** LCR declined from 173.6% in Q1 to 172.4% in Q2 2021. Its dispersion shows that the lower end of the LCR's 5th percentile remains well above 100%.

The contraction of the loan to deposit ratio continued, reaching 108.9% in Q2 (110.9% in Q1) due to a strong increase in client deposits.

Overall, the latter increased, but with diverging trends for households and non-financial corporates (NFC).

On the other hand, deposits from households continued their rising trend while NFC deposits declined.

The relatively strong increase in the asset encumbrance ratio during the previous quarter flattened again, slightly rising from 28.8% as of Q1 to 29.1% in Q2 2021.

**The aggregate NPL ratio continued to decline, reaching 2.3% at end Q2.** Due to the uneven impact of the pandemic on corporates, sector level data confirms increasing divergence of asset quality.

For accommodation and food services, the NPL ratio rose further from 9% to 9.6% quarter on quarter (QoQ) and for arts, entertainment and recreation from 7.9% to 8.2%.

Forborne loans increased further and were up by 3.7% in Q2. The forbearance ratio rose accordingly by 10 bps to 2.1% in Q2. The stage 2 ratio declined from 9.0% to 8.8% QoQ.

**Asset quality of exposures under moratoria and PGS deteriorated further.** Whereas loans under existing EBA eligible moratoria declined by EUR 80bn in Q2 to EUR 123.4bn, PGS loans remained roughly stable at around EUR 377bn.

The NPL ratio increased from 3.9% to 4.5% for loans under current moratoria, from 4.5% to 4.7% for loans under expired ones and from 1.4% to 2.0% for PGS loans.

In Q2 2021, the share of stage 2 loans increased by 1p.p. to 28.2% for loans currently under moratoria, while it reached 24.4% (up from 23.6% in the previous quarter) for loans with expired moratoria. For PGS exposures it increased from 13.6% to 18.5%.

**Cyber and ICT related risks remain elevated even though no major successful cyber-attack has been reported.** Amid higher levels of online banking and remote working as well as increased reliance on third party providers, banks' ICT systems remain vulnerable to significant disruptions in their operations.

Conduct-related risks remain high too, stemming from areas like COVID-19 support measures or the upcoming LIBOR and EONIA replacements. In addition, inadequately addressed environmental, social and governance (ESG) factors and considerations can impact institutions' counterparties or invested assets and increase conduct risk.

To read more:
https://www.eba.europa.eu/sites/default/documents/files/document_library/Risk%20Analysis%20and%20Data/Risk%20dashboard/Q2%202021/1021365/EBA%20Dashboard%20-%20Q2%202021.pdf

https://www.eba.europa.eu/sites/default/documents/files/document_library/Risk%20Analysis%20and%20Data/Risk%20dashboard/Q2%202021/1021367/KRI%20-%20Risk%20parameters%20annex%20-%20Q2%202021.pdf

# The long and short of it: A balanced vision for the international monetary and financial system

Tiff Macklem, Governor of the Bank of Canada, Governor Council on Foreign Relations, Washington, D.C.

*Introduction*

Thank you for your kind introduction. I'm very pleased to be here with you, virtually at least. I look forward to the day when we can meet in person again. But the need to invest in international cooperation can't wait. And I know we'll have some thoughtful and engaging conversation despite the virtual format.

My hope is that we can take inspiration from the cooperation among researchers who developed effective vaccines against COVID-19 in record time. Their efforts and collaboration are saving lives and livelihoods and are underpinning the global economic recovery. This is international cooperation at its very best.

Tragically, there hasn't been nearly as much success in ensuring the equitable global distribution of vaccines, especially to developing countries. This is the biggest health and economic risk facing the world, and—as the G20 highlighted in July—governments and the private sector must work together to make vaccines available to all.

While global public health is the most urgent challenge for international cooperation, the international monetary and financial system is one of the most enduring. August marked the 50th anniversary of the end of the Bretton Woods system of fixed exchange rates. Canada exited early, moving to a floating exchange rate in 1970.

That was a year before the United States suspended convertibility of the US dollar into gold and most major countries floated their exchange rates. This anniversary provides a timely occasion to reflect on the international monetary and financial system that has emerged—and how well equipped it is to deal with the challenges ahead.

This global system—the exchange rate and capital accounts as well as the institutions and rules that govern them—affects everyone and is critical to our shared prosperity.

The investments we have made collectively to strengthen the system have allowed us to clear some hurdles. But we need a system that better balances the immediate imperatives of the short run with the important building blocks for longer-run prosperity. That's what I want to talk about today.

We aspire to an international monetary and financial system that favours inclusive and sustainable growth. In the long run, that is best achieved by a system that promotes economic integration—with free trade, open capital markets and flexible exchange rates.

But the current system isn't there yet, and while we aspire to the long run, we live in the short run. For both these reasons, policy-makers face a delicate balance.

Too much confidence that open markets will always deliver economic and financial stability increases the risk of volatile episodes that hurt jobs and growth. But too much focus on managing short-run pressures risks thwarting the medium- to long-run adjustments that are fundamental to productivity and rising standards of living.

Finding the right balance between managing short-run pressures and ensuring steady progress toward liberalization is the crucial task of the international monetary and financial system.

While much progress has been made in the 50 years since the end of Bretton Woods, achieving this balance remains elusive. And looking ahead, it will not get easier or less critical.

As the recovery from the pandemic progresses, and major economies begin to remove exceptional monetary stimulus, the system will likely come under more pressure.

Tighter financial conditions globally will suit some countries better than others. And beyond the pandemic recovery, new and even bigger challenges are on the horizon, including climate change, the digitalization of currencies and growing inequality.

In my time today, I'd like to talk about Canada's place in the global monetary and financial system. Then I'd like to highlight some of the challenges the system faces, particularly in the wake of the COVID-19 crisis. Finally, I'd like to outline our vision for the 21st century.

*Canada and the global monetary and financial system*

Cross-border economic integration has been a critical source of increased prosperity for Canadians and for citizens the world over. To be effective, the international system needs to deliver stability in prices and allow exchange rate movements that reflect fundamentals.

At the same time, it must be able to adjust to shocks and structural changes in a timely way. In Canada, we have long-standing experience with open capital accounts, inflation targeting and flexible exchange rates, and they have served us and a growing number of countries well.

Still, weaknesses in the arrangements and policies that make up the international monetary and financial system are long-standing. Over the past two decades, the Bank of Canada has emphasized the need for sound economic and financial policy frameworks in advanced and emerging-market economies (EMEs) and sound governance of our global institutions.

Progress has made the system better able to prevent and manage crises. The International Monetary Fund (IMF) has strengthened its surveillance, enhanced its financing facilities and developed a framework to guide the use of capital controls. Many EMEs have strengthened their policy frameworks, including the wider use of inflation targeting and greater exchange rate flexibility.

Financial regulation and supervision have been enhanced globally through the implementation of the Basel III reforms. Swap lines and reserve pooling between central banks—two elements of the global financial safety net—have expanded.

And advanced economies have also become more attuned to the spillovers their policies might cause.

This progress has helped the global economy weather the COVID-19 shock. But the crisis has also reminded us of the connectedness and fragility that are inherent in the system. As we all know, massive liquidity interventions by central banks were needed to restore market functioning and support the provision of credit.

The interconnections in the global financial system—across countries and between banks and non-bank financial institutions—have brought great benefits. But these interconnections can also propagate and amplify stress.

The test we faced together during the COVID-19 shock as well as the challenges that lie ahead underline the need to refocus our attention on where the system should be headed and how we get there. The fallout from the pandemic and the inevitable adjustments ahead as major regions recover at different speeds make dealing with these issues more urgent.

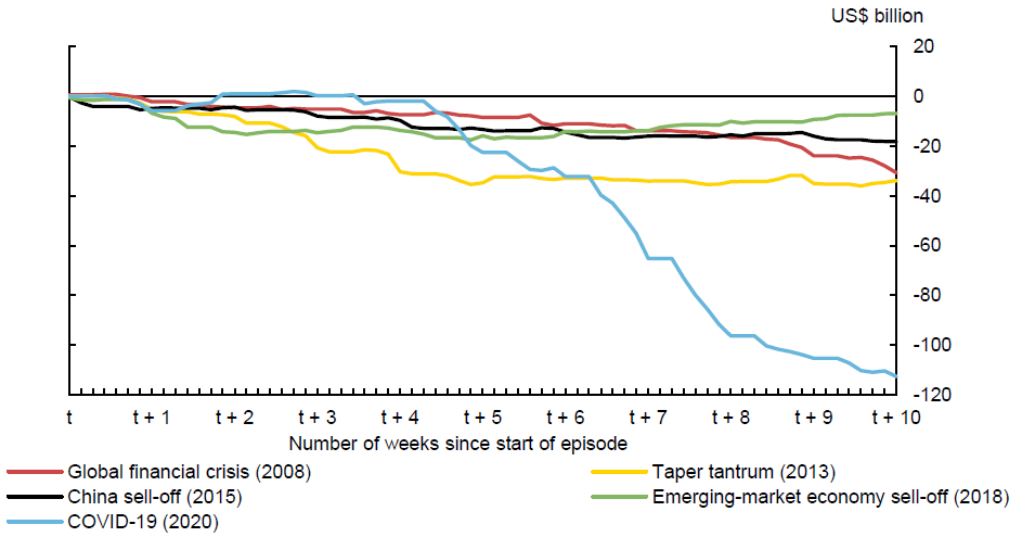
*Challenges and issues facing the system*

The current challenges facing our global system can be grouped into two categories: short-run pressures and longer-run challenges. Let me first talk about those short-run issues.

EMEs have continued to experience volatility in their financial conditions, despite improvements in fundamentals that have resulted in fewer full-fledged crises. In the last dozen years, episodes of global stress have been all too frequent: the global financial crisis in 2008–09, the taper tantrum in 2013, the sell-off in China in 2015 and the sell-off in emerging markets in 2018. The COVID-19 shock dwarfs these in global scale and reach. In March 2020, capital flew out of EMEs at a historic pace (Chart 1).

**Chart 1: Portfolio flows to emerging-market economies declined sharply during COVID-19 compared with previous shocks**

Cumulative daily non-resident portfolio flows to emerging-market economies




Sources: Institute of International Finance and Bank of Canada calculations

Last observation: April 3, 2020

While the situation has since stabilized, capital outflows could happen again when the largest economies start reducing the extraordinary stimulus put in place to deal with the pandemic.

To address similar circumstances, EME policy-makers have used a variety of measures, including restricting capital flows and intervening in foreign exchange markets. These policies have gained increased acceptance, and there are circumstances in which they are justified and can be effective in managing short-run pressures. At the same time, these policy interventions can thwart or delay necessary adjustment in their economies and stunt the development of domestic financial markets and products.

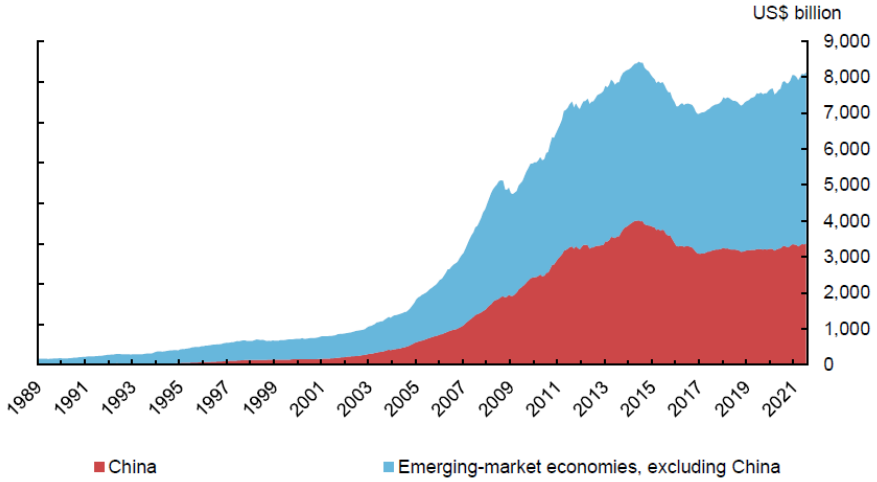
For example, the use of capital controls and foreign-exchange interventions—particularly the repeated use of them—can undermine the longer-run development of deep and liquid domestic financial markets.

Appropriate guardrails are required to ensure that short-run actions do not get in the way of needed development. Otherwise the short run can become the long run.

There is another knock-on effect. Faced with elevated volatility, EMEs are taking out more insurance by accumulating reserves (Chart 2).

**Chart 2: Reserve holdings by emerging-market economies remain high**

Official reserve assets (including gold)




Source: International Monetary Fund International Financial Statistics

Last observation: July 31, 2021

At a minimum, this self insurance looks globally inefficient. And this demand for reserves is contributing to a shortage of reserve assets, which may be reinforcing the decline in the neutral rate of interest. This in turn raises the risk of liquidity traps and can lead to the buildup of financial vulnerabilities everywhere.

Turning to longer-run challenges, there are several. The first involves the welcome evolution of countries from frontier to emerging to advanced economies. As these economies grow and increase in importance, their integration into the international monetary and financial system will become more pressing.

Early on, they may not have a well regulated and stable domestic financial sector, or open trade and capital markets that promote economic integration. The international community needs to develop and invest in a clear long-run strategy to assist with the smooth integration of these countries into the global system and to encourage them to adopt the rules that guide this system.

A second longer-run challenge is the choice of exchange rate regime. We've seen how a freely floating exchange rate may lead to excess volatility in response to short-run disturbances.

But to accommodate longer-run structural changes that are essential for sustained development, some margin of flexibility is needed. If nominal exchange rates remain fixed, then domestic prices and wages have to adjust, and this can be protracted and painful.

In particular, if domestic prices and wages need to fall, this is likely to require an extended period of weak demand and high unemployment. In the medium run, the real exchange rate moves and the system adjusts, but the cost of forcing the adjustment through all wages and prices can be steep.

Worse still, if that adjustment is also hampered by capital controls, external imbalances are likely to persist and build. And if, as a result, the currency peg becomes unsustainable, the country is likely to face an abrupt adjustment, and the effects are often felt by the entire system.

*Vision and agenda for the 21st century*

As we consider these challenges together, the right balance is crucial. We need a vision for the international monetary and financial system of the 21st century in which EMEs will form an increasing share of the global economy, while gradually developing their financial systems.

This vision for the long run cannot merely focus on a utopian system where all participants have mature, well-regulated financial systems, fully open capital accounts and exchange rates that are freely floating.

We must also be mindful that some are closer to the destination than others. In discussing this vision, I want to focus on three priorities: the need to find balance between short-run policies and long-run progress, the value of a framework for currency intervention, and the need for global cooperation and resources.

Over the past decade, the focus has been on widening the set of policies countries use to deal with temporary external shocks. This is welcome and is reflected in the IMF's Institutional View. But there has not been enough attention to ensuring that these policies do not impede longer-run progress. Many EMEs seem to be settling for intermediate exchange rate regimes with more or less regular foreign exchange interventions.

This risks slowing needed structural adjustments in the real economy. It also risks exacerbating the very pressures these short-run tools seek to manage. By thwarting adjustment, they can cause pressures to build up, leading to greater volatility.

Finding balance means allowing countries to respond to excess volatility or disruptions in the short run while making the system flexible enough to

adjust in the long run. Progress has been made in the IMF's Institutional View, which supports the use of macroprudential policy to manage financial stability risks.

And only if macroprudential measures are insufficient, should capital flow management be considered. But more work is required to understand the implication of short-run policies for longer-run financial development.

Currency intervention needs attention as well. A freely floating currency may not provide as much benefit to some EMEs as once thought. Dominant currency pricing reduces the benefits of exchange rate adjustment for some countries, and currency mismatches on balance sheets increase the costs.

But the system needs guardrails to make sure currency intervention does not get in the way of needed relative price adjustments. At the Bank, we would like to see the development of a framework for exchange rate management similar to that in the IMF's Institutional View for capital flow management.

Such an agreed-upon framework could guide managed floating exchange rate regimes to make sure they do not stall adjustment in the medium to long run. The focus here should be on a coherence between the choice of exchange rate regime and other policies.

In the end, policy-makers need to recognize that capital account and currency interventions should be targeted to address specific concerns, and these interventions should be temporary.

Over the longer run, countries should plan to rely less on these policies as their financial systems mature. In the shorter run, every time these interventions are used, a clear exit plan should be in place.

And the circumstances under which interventions may occur should be well defined, so that an exit can be facilitated when conditions are no longer met.

Global cooperation and resources are also required to agree on a long-run vision for the international system. Considerable resources have been devoted to the management of short-term liquidity and volatility issues, and that has been necessary and important.

Global policy-makers need to balance this effort with greater focus and resources to promote longer-term economic and financial development.

The IMF's multilateral role in surveillance is essential—the global system needs to be managed as a system. And the Financial Stability Board is doing

valuable work with peer review and assessments to strengthen adherence to international standards.

My hope is that we can build on these elements to deepen the engagement of systemically important economies on an international monetary and financial system that maximizes the benefits of economic and financial integration.

In Canada's experience, the destination is one with open capital markets, robust and transparent policy frameworks—including monetary, fiscal and macroprudential policies—and enough exchange rate flexibility to promote the timely and symmetric adjustment to shocks. Effective and legitimate multilateral institutions are essential to this destination.

To this end, continuing efforts to improve the governance of these institutions are important. This includes ensuring that IMF members are properly represented in their quota shares and there are transparent and clear roles and responsibilities for each level of decision-maker at the IMF.

*Conclusion*

Let me conclude here, so that we have enough time for a good discussion. I want to leave you with a sense of urgency and purpose.

The pandemic and the looming challenges ahead, including climate change and digital currencies, make it more important than ever that the international monetary and financial system evolves.

We need a clear long-run destination that everyone is committed to and a framework to manage short-run challenges in a way that doesn't derail us from that ultimate destination.
What we need is an international monetary and financial system that can handle—even facilitate—the transitions to come, including the exit from exceptional monetary policy, the transition to net zero emissions and the potential digitalization of the international monetary system.

I look forward to discussing all of these issues with you. Thank you.

# A taxonomy of sustainable finance taxonomies

BIS Papers, No 118, Torsten Ehlers, Diwen (Nicole) Gao, Frank Packer

*Abstract*

Sustainable finance taxonomies can play an important role in scaling up sustainable finance and, in turn, in supporting the achievement of high-level goals such as the Paris Accord and the UN sustainable development goals.

This paper develops a framework to classify and compare existing taxonomies. Several weaknesses emerge from this classification and comparison, including the lack of usage of relevant and measurable sustainability performance indicators, a lack of granularity and lack of verification of achieved sustainability benefits.

On this basis, the paper proposes key principles for the design of effective taxonomies.

The principles are then employed to develop a simple framework for transition taxonomies.

The key policy messages of the analysis are:

(i) Endeavor that taxonomies correspond to specific sustainability objectives;

(ii) Encourage the development of transition taxonomies and focus alignment with the objectives of the Paris Agreement;

(iii) Monitor and supervise the evolution of certification and verification processes; and

(iv) Shift to mandatory impact reporting for green bonds.

*Executive summary*

Scaling up sustainable finance is a key element in raising private financing to support the transition to a sustainable economy. How should taxonomies be designed to encourage financial flows to sustainable investments and support this transition in the most effective way?
Before delineating the crucial design features of taxonomies, it is important to establish what taxonomies are and what they are for:

A taxonomy for sustainable finance is a set of criteria which can form the basis for an evaluation of whether and to what extent a financial asset can support given sustainability goals. Its purpose is to provide a strong signal to investors, and other stakeholders, and assist their decision making – by identifying the type of information investors need to assess the sustainability benefits of an asset and to classify an asset based on its support for given sustainability goals.

*Taxonomies can be classified along four key defining characteristics:*

*Objective*. Which sustainability goals are supported?
*Scope*. Which activities/industries/entities are included?
*Target*. How is the purpose translated into a measurable target?
*Output*. What types of information are provided?

Comparing some major taxonomies across key markets for sustainable finance, the paper finds that existing taxonomies often mix several sustainability goals and provide output that could be more transparent and decision-useful for investors.

Key issues are the need for more use of relevant and measurable sustainability performance indicators, a lack of granularity and lack of verification of achieved sustainability benefits.

Based on the above findings, the paper develops five principles for designing effective taxonomies and employs those principles to develop a basic design for transition taxonomies – taxonomies that are in line with a transition to reduced carbon emissions consistent with the Paris accord.

The principles anticipate a rapidly increasing amount of available sustainability-related data going forward – enabled by increasing sustainability disclosures, collection of data from third parties, and technological innovation in collecting these data

To read more: https://www.bis.org/publ/bppdf/bispap118.pdf

## Building Climate Scenario Analysis on the Foundations of Economic Research

Governor Lael Brainard, at the 2021 Federal Reserve Stress Testing Research Conference, Federal Reserve Bank of Boston, Boston

I want to thank all of you for joining our research conference and the organizing committee for inviting me to share some thoughts on climate scenario analysis.

Economic analysis suggests that climate change could have profound consequences for the level, trend growth, and variability of economic activity over time and across regions and sectors.

Some of these effects could occur gradually, while others could occur relatively quickly in the presence of "tipping points." Policy, technology, and behavioral responses could similarly have material financial consequences.

Against this backdrop, the Federal Reserve is carefully considering the potential implications of climate-related risks for financial institutions and the financial system, with scenario analysis emerging as a potential key analytical tool for that purpose.

Climate change is projected to have profound effects on the economy and the financial system, and it is already inflicting damage.

The Sixth Assessment Report by the Intergovernmental Panel on Climate Change (IPCC) notes that "if global warming increases, some compound extreme events with low likelihood in [the] past and current climate will become more frequent, and there will be a higher likelihood that events with increased intensities, durations and/or spatial extents unprecedented in the observational record will occur."

We can already see the growing costs associated with the increasing frequency and severity of climate-related events. The total cost of U.S. weather and climate disasters over the last 5 full years exceeds $630 billion, which is a record.3 During this period, massive flooding in the Midwest has caused billions of dollars in damages to farms, homes, and businesses.

The California Department of Insurance has documented growing problems with the availability of fire insurance for homeowners, and the state legislature provided new protections for wildfire survivors.

Last year was the sixth consecutive year that the United States experienced ten or more billion-dollar weather and climate disasters.

And this summer, Hurricane Ida alone is estimated to have caused more than $30 billion in insurance losses.

The pandemic is a stark reminder that extreme events can materialize with little warning and trigger severe financial losses and market disruptions, and the IPCC Sixth Assessment Report is a reminder of the high uncertainty and potential costs associated with climate-related risks.

It will be important to systematically assess the resilience of large financial institutions and the broader financial system to climate-related risk scenarios.

*Climate Scenario Analysis*

As we are learning from the pandemic, risks emanating from outside the economy can have devastating financial consequences.

As part of our prudential and financial stability responsibilities, we are developing scenario analysis to model the possible financial risks associated with climate change and assess the resilience of individual financial institutions and the financial system to these risks.

The future financial and economic consequences of climate change will depend on the severity of the physical effects and the nature and speed of the transition to a sustainable economy.

So it is important to model the transition risks arising from changes in policies, technology, and consumer and investor behavior and the physical risks of damages caused by an increase in the frequency and severity of climate-related events as well as chronic changes, such as rising temperatures and sea levels.

From the IPCC's work, we know that the physical risks related to climate change will grow over time, while the transition risks will depend in part on how abruptly policy, technology, and behavioral changes take place.

Since financial markets are forward looking, a change in expectations regarding climate-related risks could lead to a sharp repricing of assets at any time. Acute hazards, such as damaging hurricanes, or climate-related

policy changes could quickly alter perceptions of future risk or reveal new information about the value of assets.

Sudden asset price changes can lead to financial instability when they interact with other vulnerabilities, such as high leverage or correlated exposures.

Scenario analysis is a useful tool in assessing the links between climate-related risks and economic outcomes because it requires assessing the implications for financial stability and individual financial institutions in a systematic way.

The interactions across institutions and market segments must be traced out, and missing data must be identified, acquired, and analyzed, leading to a clearer picture of the transmission of risks.

Scenario analysis should ultimately facilitate estimating the possible effects on individual financial institutions as well as on financial markets more broadly.

By systematically modeling the effects of climate-related risks across the financial system, scenario analysis can help inform risk management at the level of individual financial institutions and more broadly.

Given that this conference is about stress testing, it is worth revisiting some lessons from the first generation of bank stress tests.

Bank stress tests were developed at the height of the 2007–09 financial crisis to provide a more systematic way to assess the effects of complex and interrelated exposures within the financial system.

The first test, known as the Supervisory Capital Assessment Program (SCAP), used simplified models with limited data inputs. Despite substantial uncertainty about the economy's path, the SCAP was broadly viewed as successful. It provided a solid foundation for building out the stress-testing program over the subsequent decade.

The stress test infrastructure and granular models and data that are currently available bear little resemblance to that first stress test.

In parallel, banks have improved their risk-management operations, and large banks now routinely use their own stress tests to assess and manage their risks.

So what are the lessons for scenario analysis? Starting down the path of climate scenario analysis, even with a rudimentary first attempt, will help

with risk identification and suggest useful lessons to inform subsequent improvements in modeling, data, and financial disclosures.

Although we should be humble about what the first generation of climate scenario analysis is likely to deliver, the challenges we face should not deter us from building the foundations now.

To read more:
https://www.federalreserve.gov/newsevents/speech/brainard20211007a.htm

# Regulation, Supervision and Oversight of "Global Stablecoin" Arrangements

Progress Report on the implementation of the FSB High-Level Recommendations


*Executive summary*

This report provides a status update on progress made on the implementation of the FSB high-level recommendations for Regulation, Supervision and Oversight of "Global Stablecoin" Arrangements.

It discusses key market and regulatory developments since the publication of the FSB high-level recommendations in October 2020; takes stock of the implementation of the FSB high-level recommendations across jurisdictions; describes the status of the review of the existing standard-setting body (SSB) frameworks, standards, guidelines and principles in light of the FSB high-level recommendations; and identifies areas for consideration of potential further international work.

While the current generation so-called stablecoins are not being used for mainstream payments on a significant scale, vulnerabilities in this space have continued to grow over the course of 2020-21.

At present, stablecoins are being used primarily as bridge between traditional fiat currencies and other crypto-assets, which in turn are primarily held and traded for speculative purposes.

Increased participation by retail investors could give rise to broader financial stability issues through an erosion of trust in the financial system.

In the event that a stablecoin does enter the mainstream of the financial system as a means of payment and/or a store of value in multiple jurisdictions, with the potential to achieve substantial volume, it could become a global stablecoin (GSC).

The emergence of GSCs would pose greater risks to financial stability than existing stablecoins and may challenge the comprehensiveness and effectiveness of existing regulatory, supervisory and oversight approaches.

Ensuring appropriate regulation, supervision and oversight across sectors and jurisdictions will therefore be necessary to prevent any potential gaps and avoid regulatory arbitrage.

Overall, the implementation of the FSB high-level recommendations across jurisdictions is still at an early stage.

In the first half of 2021, the FSB conducted a comprehensive stock-take of the implementation of the FSB high-level recommendations on the regulation, supervision, and oversight of so-called "global stablecoin" arrangements of October 2020.

48 jurisdictions in the FSB and its Regional Consultative Groups (RCGs) participated in the stock-take covering 21 advanced economies and 27 emerging markets and developing economies.

Several jurisdictions have been reviewing and updating their legal and regulatory regimes to address specific risks arising from the emergence of stablecoins.

Jurisdictions have taken or are considering different approaches towards implementing the high-level recommendations.

As the stablecoin landscape is evolving rapidly and as regulatory and supervisory policies are being developed, the differences among regulatory approaches and classifications could be increasing.

For example, certain jurisdictions are seeking to implement the recommendations through the adoption of new rules and regulations, while others have amended or plan to amend existing rules and regulations in such a way that these are applicable to stablecoins.

Other jurisdictions have relied largely on existing regulatory, supervisory and oversight regimes to address the risks associated with stablecoins or with entities that are part of the stablecoin arrangement.

Differing regulatory classifications and approaches to stablecoins at jurisdictional level could give rise to the risk of regulatory arbitrage and harmful market fragmentation.

Standard-setting bodies are continuing to assess whether and how existing international standards may apply to stablecoin arrangements and, where appropriate, adjust their standards in light of the FSB high-level recommendations.

However, a number of issues may not be fully covered by ongoing work.

Authorities should rely on existing standards and principles relevant to the supervision and oversight of GSC arrangements, where they perform the same economic function as existing regulated activities covered by these standards. Any gaps in existing standards and principles should be addressed holistically and in a manner that is coordinated across sectors.

The FSB high-level recommendations complement the international standards and principles and should inform any potential updates to international sectoral standards and principles.

As jurisdictions are using the FSB high-level recommendations in developing their own domestic regulatory approaches, authorities have identified several issues relating to the implementation of the recommendations that may warrant further consideration and where further work at international level could be useful.

Areas for further consideration that respondents to the stock-take identified as most useful include conditions for qualifying a stablecoin as a GSC; prudential, investor protection, and other requirements for issuers, custodians, and providers of other GSC functions (e.g., wallet providers); redemption rights; cross-border and cross-sectoral cooperation and coordination; and mutual recognition and deference.

Further work on these issues at international level may help to support the effective implementation of the FSB high-level recommendations at the jurisdictional level, to mitigate the risk of regulatory fragmentation and arbitrage, and to address risks to financial stability arising from GSCs.

Efforts by standard-setting bodies to review, and where appropriate adjust their standards can further promote international consistency and reduce the risk of arbitrage or regulatory underlaps. The work on fostering the soundness of GSCs is an integral part of the Roadmap for enhancing cross-border payments endorsed by the G20 in October 2020.

The Roadmap, which the FSB has developed in coordination with relevant international organisations and SSBs, calls for a review by the FSB, to be undertaken in consultation with other relevant SSBs and international organisations, of the FSB high-level recommendations.

This progress report and the underlying stock-takes, as well as ongoing and planned work from SSBs, will inform that review.

The FSB will continue to support the effective implementation of the FSB high-level recommendations and facilitate coordination among SSBs. Starting in January 2022, with an expected completion date of July 2023, the FSB will review, in consultation with other relevant SSBs and international organisations, the recommendations in the FSB report and how any gaps identified could be addressed by existing frameworks.

The FSB will update its recommendations, if needed.

To read more: https://www.fsb.org/wp-content/uploads/P071021.pdf

## Creating a New Model for the Future of Supervision

Governor Michelle W. Bowman, at the Community Banking in the 21st Century Research and Policy Conference, St. Louis, Missouri

Good afternoon. I'm pleased to be able to join you again virtually for this year's Community Banking in the 21st Century research and policy conference. Although I think we would all prefer to be together in person, in the shadow of the St. Louis Arch, I'm optimistic that next year (which will be the 10th anniversary of the conference, by the way) will give us the opportunity to finally gather in person after a two-year hiatus.

For nine years, this conference, which brings together researchers, regulators, and community bankers, has enabled us to hear from top academics around the world who conduct research to help us better understand the community bank business model.

It's not an accident that this conference is sponsored by three agencies involved in the supervision of banks—the Federal Reserve, the Conference of State Bank Supervisors, and the FDIC—as the work of this conference has informed, and will continue to inform, how we think about the supervision of our nation's community banks.

Our conference sponsors entered this partnership with the belief that what we learn here will deepen our understanding of the benefits of, and the challenges facing, the community bank business model, which, in turn, helps to make us better bank supervisors.

It's natural then to ask: What have we learned from this conference that is applicable today? What might we apply in the future to the supervision of community banks?

To answer that question, or quite frankly, to answer many questions that pertain to the regulation and supervision of banks, it's instructive to first go back a bit in history. In this case, I'd like to take you all the way back to...2019.

Seems like a lifetime ago.
Way back then, we were concerned about liquidity. Banks were concerned about a potential run-off of deposits as consumers found new, more

technology-centric ways to manage their money, often outside of the insured banking system.

Although we also saw a decline in technology costs that enabled banks of all sizes to offer a wider array of digital products and services to their customers, the innovation taking place outside the banking sector was often seen as outpacing the innovation in the banking sector.

Consumers seemed to increasingly weigh convenience over safety, as a number of non-banks increased their market share. To a lesser degree, but still concerning, was that of the convenience factor. It drove some small business borrowers to move away from lenders with whom they had longstanding relationships.

In some cases, those borrowers were even willing to pay much more for credit for the sake of convenience. Unfortunately, some borrowers learned the hard way that convenience does not always outweigh a banking relationship—particularly when a business or community experiences a significant hardship such as a natural disaster.

I regularly heard stories of how small businesses that borrowed from an online lender were unable to reach anyone to discuss their situation during a crisis and ultimately had their loans called because of missing a payment. In these situations, I also heard stories of how the local community bank that understood the local situation and wanted to see the business and the community survive, would step in, and refinance the original loan to help the small business return to more normal operations.

I also heard about challenges with core processors and how legacy contracts and a lack of competition for core processing services was stifling innovation. We saw several fintechs become "mainstream" nationally, and we saw a proliferation of technology solutions targeted at helping community banks become nimbler in adding new products and services.

From a supervisory perspective, the Federal Reserve actively explored ways to reduce regulatory burden and provide greater transparency into the work of bank supervisors.

Using research presented in prior years at this conference, we applied findings showing the disproportionate regulatory burden borne by our smallest institutions and looked across our processes to find ways to tailor our supervisory model to more accurately reflect the risk posed by these smaller financial institutions.

And then came March 2020 and the arrival of the COVID-19 pandemic in the U.S.

Despite the many choices consumers have for managing their money and purchases outside of the traditional banking system, we witnessed a systematic flight to the safety of FDIC-insured deposits in state or nationally chartered banks.

Specifically, total deposits at all FDIC-insured institutions increased by 22 percent when comparing deposit data from 2019 to 2020.1 Small business lending also increased significantly. From the end of 2019 to the end of the second quarter of 2020 alone, small loans to businesses at community banks, a proxy for small business lending, increased by 39 percent.

*The Impact of the PPP during the Pandemic*

One driver for the increase in small business lending was, of course, the Small Business Administration's Paycheck Protection Program or PPP. The PPP was funded by the U.S. Treasury Department through forgivable loans that enabled small businesses to maintain payroll, retain employees who may have been laid off in response to the social distancing protocols that went into effect in April 2020, or to cover other overhead costs.

To support the PPP, the Federal Reserve provided a liquidity backstop to PPP lenders through its Paycheck Protection Program Liquidity Facility or PPPLF.

In recognition of the evolution in the banking landscape that I referenced a few moments ago, the PPPLF was designed to not only provide a liquidity backstop to banks and credit unions, but also to serve non-bank fintechs, community development financial institutions, and agricultural finance companies that participated in the PPP.

Given the important role minority-owned banks play in the allocation of credit in their communities, the Federal Reserve also actively engaged minority depository institutions to ensure they had the tools they needed to benefit from the Fed's emergency liquidity programs.

To be sure, the PPP and the PPPLF will provide significant research material for years to come. I understand from reviewing the papers accepted into this year's proceedings that it has already driven the work of several economists you'll be hearing from over this two-day conference.

In reviewing the data on these programs, however—and here I must credit the Federal Reserve Bank of New York's "Supervision Transformational Trends" program—we see that a substantial majority of PPP loans, nearly 73 percent, were made by insured depository institutions. These loans also accounted for nearly 90 percent of the aggregated loan amount for all PPP loans.

Getting a bit more granular, we can see that community banks made 32 percent of all PPP loans while large banks made 35 percent of all PPP loans, with credit unions and savings banks accounting for the rest of the loans made by banking institutions.

Fintechs accounted for approximately 13 percent of all PPP loans and more than half of those were made as a result of a partner bank relationship.

A recent working paper from the National Bureau of Economic Research (NBER) offers additional detail on the roles these different types of lenders played in allocating credit through the PPP during the pandemic. The authors found

- Community banks originated the majority of PPP loans when the program first launched, while large banks were the majority lender during the second phase of the program.

- Community banks provided more loans to middle income borrowers while large banks provided more PPP loans to upper income borrowers.

- Community banks and large banks made loans to lower and moderate-income borrowers in approximately equal proportions.

- Fintech firms, on the other hand, made more loans in zip codes with fewer bank branches, lower incomes, and larger minority populations.5

- The authors also found that fintech lending, instead of taking market share from traditional banks, mostly expanded the overall supply of credit and other financial services.

From my perspective, these findings offer evidence of the continuing importance of community banks to our economy during both "normal" times as well as during times of extreme financial stress. Or, to paraphrase Mark Twain, "reports of the demise of community banks are greatly exaggerated."

The NBER paper also highlights how new entrants to banking can meet an unmet need.

The experiences of banks and bank supervisors during the pandemic also offer insights into how we should think about the Federal Reserve's approach to supervision in the future.

For the remainder of my talk, I will offer my thoughts on a key principle that I believe should guide our thinking: The future of community banking and the future of banking supervision are deeply interconnected.

My earlier comments should not be interpreted as suggesting that there aren't real challenges facing the community bank business model. But I am suggesting that new technologies, new entrants into banking, and changes in customer preferences that have led to predictions about the end of the community banking business model simply have not been substantiated.

If anything, this conference has highlighted that the diversity in business models of small financial institutions is an essential part of our economy.

There is strength in being small that enables institutions to know their customers on a much deeper level. Small financial institutions can quickly customize products and services to address their customers' needs and, in some cases, they can leverage the flexibility of their business models to take advantage of new business opportunities.

This flexibility allows banks to maintain strong relationships with customers—particularly those customers who don't fit a "typical" borrower profile. It also explains why community banks have a long history of providing essential financial services to households, small businesses, and small farms in communities across the country.

During the pandemic, I personally began speaking to the leaders of the more than 650 state member community banks in the Federal Reserve's supervisory portfolio.

The conversations to date have provided important regional insights and perspectives that can only be gleaned from leaders who know their markets and customers at a very deep level.

While I heard that lobby traffic was down and that lending opportunities were not as robust as they once were, I mostly heard optimism. I heard that the value proposition of the traditional community bank was on full display in many communities, urban and rural.

I heard that bank business customers needed bankers who truly knew them and their businesses, and who could work with them to provide the customized support they needed during that time of great uncertainty.
As banks changed to meet the challenges of the pandemic, we asked ourselves at the Federal Reserve, do bank supervisors need to change?

By necessity, the immediate answer, of course, was "yes." The Federal Reserve did so by pausing all on-site exams and using technology that enabled us to remotely supervise the safety and soundness of our institutions as well as monitor their compliance with relevant consumer compliance laws and regulations. To be sure, we adjusted our supervisory expectations accordingly based on the guidance we were providing banks.

We also greatly expanded our outreach and engagement with financial institutions. We deployed the full range of communications tools that we've developed over many years to provide banks with real-time information on supervisory expectations as well as the emergency lending programs that were put in place to forestall any systematic deterioration in the health of our financial system.

As evidenced by the continued strength of bank balance sheets and the general absence of bank failures during the pandemic, I think we can confidently say that the actions of banks, bank supervisors, and policymakers during the pandemic allowed us to avoid the challenges that plagued our banking system during 2008 financial crisis. The pandemic heightened our awareness of this important linkage between banking and supervision.

Had we not tailored our supervisory approach during the pandemic, I believe the impact on our banks, our economy, and on consumers would have been much more severe.

From the beginning, we worked closely with our federal and state counterparts—many of whom are represented at this conference—to develop a sense of joint action and to agree to work together in a holistic way.

I knew from my experience as both a community banker and a state bank regulator, that we needed to avoid overreacting and instead approach supervision in a more measured way that allowed banks the flexibility to work with their customers. We needed to empower banks to manage those key relationships in their loan portfolios in a way that was beneficial to their customers without exposing the banks to risk.

What we saw, as a result of this approach, is that the industry made responsible decisions that kept credit flowing throughout the pandemic and enabled businesses across the U.S. to continue operating.

But the question remains: how should supervisors, and banking supervision itself, apply what we learned going forward? During the pandemic, we changed our supervisory approaches based on necessity, but now we need to look ahead and make sure that we're adjusting our supervisory model in ways that allow banks greater flexibility to innovate to compete in today's quickly evolving banking environment—without sacrificing important consumer protections or the health and safety of our banking system.

*The Future of Supervision*

To start, we must acknowledge the interconnectedness of the future of banking and the future of bank supervision. Supervision has to evolve because the banking industry is evolving. Available technology, analytical capabilities, and customer and workforce preferences are driving this evolution in how financial sector products and services are delivered. We recognize that our workforce, processes, and technology must align with these changes to ensure that an effective, transparent, and timely supervision program is maintained.

Therefore, the Federal Reserve is embarking on an initiative to investigate the implications of these changes for the Federal Reserve's Supervision function.

The goal of this initiative is to ensure our supervisory approaches accommodate a much broader range of activities while ensuring we don't create an unlevel playing field with unfair advantages, or unfair disadvantages, for some types of firms versus others. This will include investigating technology and innovative business practices that increase our agility and efficiency.

Innovation is a way of life for banks, it should be for supervisors as well.

But we must do this in a way that also preserves what we know works and what we learned can work during the pandemic.

Before sharing my views on the underlying principles that need to guide our thinking on our future supervisory approaches, I'll first offer some thoughts on a few aspects of Federal Reserve supervision that I believe must be preserved even as we think expansively about the future:

- The first being the Federal Reserve's Supervisory structure. Although the Fed's supervision and regulation of banks is the responsibility of the Board of Governors, the day-to-day supervision of banks is delegated to the Reserve Banks. This distributed system ensures we have most of our examination workforce living and working in the same communities served by our community banks. This structure, perhaps more importantly, gives our examiners deep insights into thousands of local economies across the U.S. and helps us understand the local industries that are vital to the long-term health and success of these communities. This local knowledge is what enables our examiners to tailor our supervision of institutions based not only on the complexity of the bank but based on the unique characteristics of the industries they support.

- The second is the Federal Reserve's direct outreach and engagement with banks and financial institutions. Since the 2008 financial crisis, the Federal Reserve has built an extensive communications infrastructure—through national programs, such as Ask the Fed®, and

though hundreds of local Reserve Bank programs—to share important supervisory and regulatory information with banks.

The goal was simple: provide a mechanism that enables us to quickly share information and perspectives with institutions outside of the exam process, provide timely and accurate responses to questions, and give the banks the tools they need to meet our supervisory expectations. I believe supervision works best when supervisors clearly communicate their expectations with banks—there shouldn't be any "surprises" about our expectations during an exam.

In my calls with bankers, I'm reminded that one of the biggest sources of regulatory burden is regulatory and supervisory uncertainty. By clearly communicating our expectations, by engaging the industry directly to understand the impact of these expectations and, when appropriate, providing banks with tools and resources to meet those expectations, we reduce uncertainty for banks.

We continued to expand our communication approach this past July with the launch of the Federal Reserve's Scaled CECL Allowance for Losses Estimator or SCALE tool. SCALE gives community banks a tangible tool to help with their calculation of loan loss allowance under the Current Expected Credit Losses methodology. Our effort to identify simple and practical ways to implement CECL that would help reduce costs and complexity for smaller community banks was supported by the Financial Accounting Standards Board. The launch of SCALE represents a significant cultural shift in how we intend to supervise in the future: when there is significant uncertainty around a new regulation, supervisory expectation, or practice, we will look beyond our traditional communications tools to find innovative ways to reduce that uncertainty.

So, what will this new approach to supervision look like and what principles will guide us?

- First, we must maintain a firm commitment to preserving the stability, integrity, functionality, and diversity of our banking system.

- Second, we must maintain consumer protection as we innovate and ensure that banks can safely offer financial products and services that consumers demand and are uniquely tailored to their circumstances and goals.

- Third, as we adjust our supervisory approach, we must avoid adding new burdens on banks, particularly on those that maintain a more traditional business model. We must be consistent in how we view similar activities at similar institutions, but our approach must also

allow for de novo banks and allow for greater innovation at our nation's banks. And we need to continue to provide examiners with the ability to tailor their expectations based on the risks posed by individual institutions. We must move even further beyond the "one size fits all" supervisory model that defined our approach in the past.

- Fourth, we must enhance transparency around our supervisory expectations for safety and soundness and consumer compliance matters and be timelier in our feedback to banks. We must fully leverage our distributed structure to delegate decision making to our Reserve Banks, without diminishing the Board's important policymaking and oversight role over the supervision of banks.

- And fifth, we must ensure that we are always able to adjust our supervisory expectations effectively and efficiently as conditions warrant to enable banks to be more flexible in serving their communities and in providing credit to the areas of our economy that most need it.

When I spoke at this conference in 2019, I discussed a number of very practical problems that we needed to solve. These included understanding how technology, competition, regulation, and other factors drive industry consolidation, quantifying the benefits community banks provide to their communities, and defining the full economic effects a community bank has on its community.

As we move forward with modernizing our supervisory approach, these questions remain at the forefront of our thinking. But, based on our experiences of the past few years, we also have a number of new questions that we'll need to address if we are to be successful.
For example, what do banks see as the most transformative technological innovations that will drive changes to their business models? How do banking institutions prefer to interact with their supervisors, and what do they think makes for a successful relationship between the supervisor and the supervised?

The factors that are identified through this initiative as having the greatest potential influence on future bank business models will vary based on several factors, including size, complexity, geography, staff capacity, and business strategy, but, taken together, they will give us important insights into how we, as bank supervisors, might need to evolve our supervisory practices as the bank business model evolves.

And as we consider our own evolution in the face of these changes, we will need to ask ourselves:

- What changes to the Federal Reserve System Supervision function's workforce, processes and technology are necessary to execute our supervisory activities given the factors affecting the industry?

- How should the Federal Reserve structure its supervisory activities across its portfolios of supervised firms?

- Where are we aligned across the Supervision function in conducting our work? Where might we be out of alignment?

- Should innovations in technology, such as artificial intelligence, be used to better accomplish supervision?

In the future, I look forward to sharing our progress on this initiative and providing specific examples of how our supervisory practices are evolving alongside those of the industry.

Times of crisis, such as the COVID-19 pandemic, provide us a unique opportunity to see how our banking system operates under stress—and to see both the strengths of our current system of supervision as well as opportunities for improvement.

The lessons we learned over the past 18 months, supported by research from this conference and from other sources, offer important lessons on how we can appropriately evolve our supervisory approaches.

What we learn over the next two days from the researchers, policymakers, and community bankers presenting during this year's conference proceedings will factor into our overall thinking as we embark on this journey to modernize our supervisory practices and develop new supervisory approaches that can meet the needs of today, and the challenges of tomorrow.

# ESRB risk dashboard

ESRB European Systemic Risk Board
European System of Financial Supervision
EUROPEAN CENTRAL BANK
EUROSYSTEM

The ESRB risk dashboard is a set of quantitative and qualitative indicators of systemic risk in the EU financial system.

The composition and presentation of the ESRB risk dashboard were reviewed in the fourth quarter of 2019.

Unless otherwise indicated, all EU indicators relate to the 27 Member States of the EU (the EU 27), excluding the United Kingdom.

In addition, all data series cover the 19 countries in the euro area for the whole time series.

For statistics based on the balance sheet of the monetary financial institution (MFI) sector, as well as statistics on financial markets and interest rates, the series relate to the composition of the EU/euro area in the period covered (changing composition).

Statistics based on the balance sheet of the MFI sector are unconsolidated.

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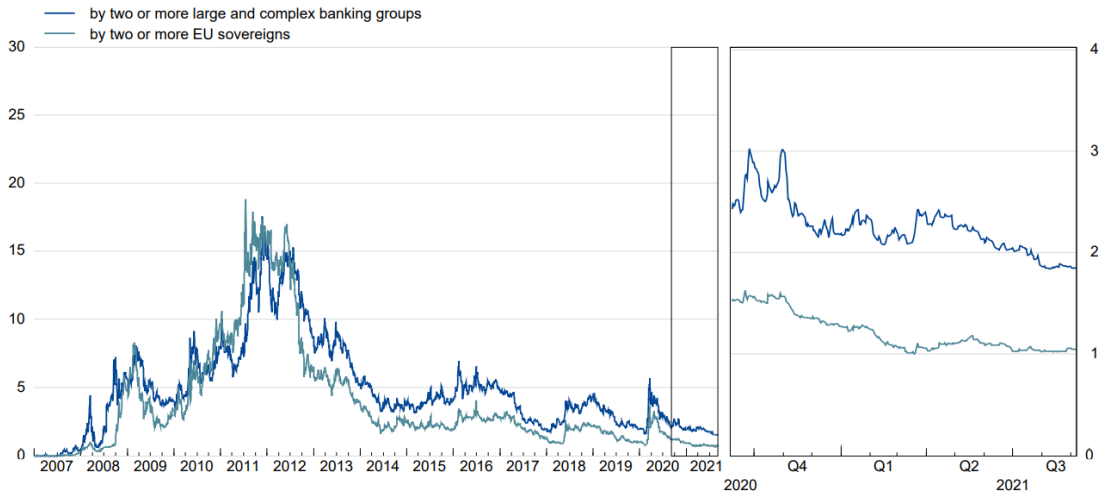
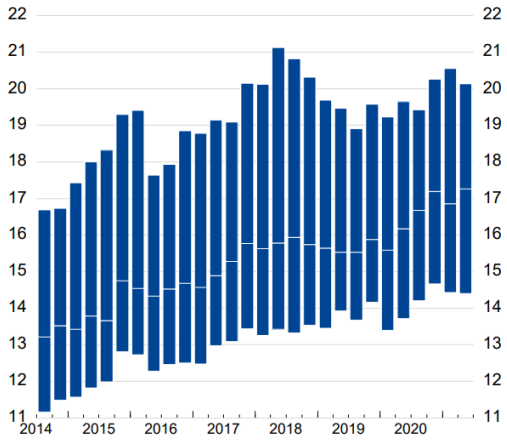
To read more:
https://www.esrb.europa.eu/pub/pdf/dashboard/esrb.risk_dashboard210924~addd11ae6f.en.pdf

1.2 Probability of a simultaneous default
(Percentages; last observation: 6 Sep. 2021)



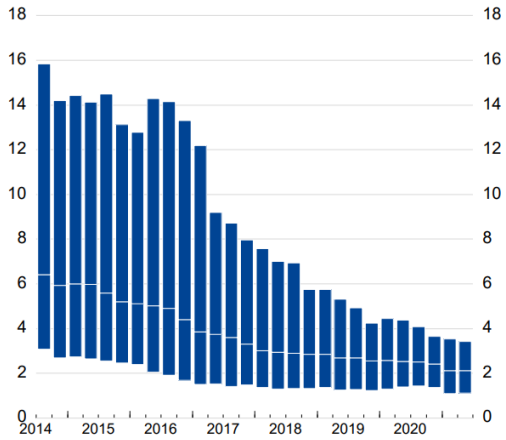

Sources: Bloomberg, Thomson Reuters and ECB calculations.
Note: See Box 8, Financial Stability Review, ECB, June 2012.

a. CET1 to risk weighted assets ratio
(EU; percentages; interquartile range and median; last observation: Q2 2021)




Source: EBA.

b. Non-performing loans to total gross loans and advances
(EU; percentages; interquartile range and median; last observation: Q2 2021)




Source: EBA.

# The hard yards

Andrew Bailey, Governor, Bank of England

I am going to speak this evening about the state of the economy and about monetary policy as the recovery from Covid unfolds. The title of this speech, The Hard Yards, is I think a saying that originated in sailing, though I associate it more with forward play in rugby.

I remember saying, around a year ago when the recovery looked rapid, that the hard yards were yet to come, and while I don't want to claim any great prescience, it appears to be turning out that way. Nor do I have any claim to originality – Milton Friedman and Anna Schwartz wrote in their monetary history of the US that the most notable feature of the revival of the US economy after 1933 was not its rapidity but its incompleteness.

I, and other MPC members, have also used the analogy of a bridge to describe the role of economic policy in the age of Covid, the bridge to the other side of Covid. We are still on that bridge.

The rate of recovery has slowed over recent months, and that slowing is continuing. Relative to the fourth quarter of 2019, on the latest data to July, the level of GDP was 3.5% lower. That's around one percentage point below the level consistent with the August Monetary Policy Report. There is a crucial distinction here between growth rates and levels of activity. It is inevitable in a bounce-back that the growth rate will slow as the recovery nears its end-point. It is not though inevitable – or desirable – that the previous level is not regained.

Recovery in some consumer-facing services appears to have been delayed. We had seen a recovery in activities such as eating in restaurants, but activity is levelling off, notwithstanding our contribution this evening. Consistent with the impact of supply bottlenecks and disruption, construction output fell in July, and manufacturing output stalled. Surveys and the reports of the Bank's Agents, suggest the impact of these supply-chain issues is broadening out.

Pulling this together, the recovery has slowed and the economy has been buffeted by additional shocks. The switch of demand from goods to services, as Covid has faded in terms of its economic impact, has not taken place to date on the scale expected. Meanwhile, supply bottlenecks and labour shortages have weighed on output, and are continuing. Indeed the number of high profile supply bottlenecks appears to be increasing. I must

say that when I heard that we were suffering a shortage of wind to generate power, I was tempted to ask, “and when are the locusts due to arrive”.

A number of these supply bottlenecks are not obviously a product of Covid, though others are. It is also possible that the economic fragility created by Covid has amplified the impact of other shocks – either that or the gods really are against us. I think it is more likely Covid amplifying at work.

I want now to turn to the labour market, because here we appear to have a big puzzle. Let’s start with the very good news. So far we have not seen a major upturn in unemployment or substantial corporate distress, despite one of the largest economic downturns in history. That is a notable success for economic policy all round. Put simply, if the authorities have the tools and the credibility, they can do a lot to help. And, it follows, that in such a situation they should do just that, they should not hold back.

But we are left with a puzzle in the labour market. Data from HMRC suggest that there were around 1.7mn jobs covered by the furlough scheme in July, and as a reminder it comes to an end later this week. The number of advertised job vacancies was at a record level in August of over 1mn. The number of people unemployed in the three months to July was 186,000 higher than immediately pre-Covid, and the number of inactive people was 634,000 higher. Now, of course, it is possible to reconcile these numbers, but to do so involves a lot of movement of people from furlough, unemployment and inactivity, in ways not so far seen.

There are a number of possible outcomes to this puzzle, which have different implications for the labour market. The first is that the furloughed workers will largely be re-absorbed into their old jobs, and so even with a further reduction in unemployment and inactivity, we are left with an excess of job vacancies.

If these excess vacancies are associated with shortages of workers in particular sectors, this may push up on wages. This could also happen if furloughed workers do not return to their old jobs, but are not suitable for those jobs and sectors where there are a high number of vacancies. In other words, there is a mismatch in the labour market. Such an outcome is likely to raise the rate of unemployment consistent with stable wage growth i.e. the NAIRU.

The second outcome is different. Vacancies may be temporarily higher, and above their steady state level in the short-run, if firms are anticipating that it will be harder to find workers in the future when unemployment falls. In that scenario, demand picks up, the impact of matching frictions in the labour market dissipate over time, and both vacancies and unemployment fall. The NAIRU would be less affected in this scenario.

Another possible explanation is that the level of advertised vacancies is elevated due to employers overestimating the growth of demand to come just as the speed of the recovery falls off. In this case, some of the vacancies turn out not to be jobs as employers change their mind, or at least hiring is put back.

The implications of these labour market outcomes are quite different for growth, inflation, and thus monetary policy, which illustrates the uncertainty we face.

Before turning to inflation, I want to say something on earnings. On the face of it, headline earnings are elevated. Pay growth of around 8% for July (the latest available number) is very high. But there are a couple of Covid-related distortions that have been pushing up on this growth: there is a large base effect from the fall in average earnings last year, and a compositional effect from the pattern of impact of Covid on activity across the economy and how that relates to typical pay rises by type of job.

All of that said, we think the rate of growth of earnings in an underlying sense is probably around the 4% level – higher than we saw before Covid, and somewhat higher than we would expect to see in these economic conditions. But, there is another interesting development. The dispersion of pay growth has risen quite markedly – so for the high numbers we read about, there are also low ones. I am going to come back to this point.

The final piece of the economic picture I want to cover is inflation. Having been well below target last year and into this year, it has risen above rapidly, to 3.2% in August. Much of the latest rise reflects base effects from last year, but we have also seen unusually strong rises in some items, including some foodstuffs, used cars and accommodation. Our forecast in August had inflation rising to 4% by the end of this year, and developments since then mean that inflation is likely to rise to slightly above 4%. The major contributors to the further increase are not base effects but rather the strength we are now seeing in goods and energy prices.

Our view is that the price pressures will be transient – demand will shift back from goods to services, global supply chains are likely to repair themselves, and many commodity prices have demonstrated mean reverting tendencies over time. But, the pressures are very much still with us, and there is still we believe pass-through to retail prices to come, and manufacturers' output prices are still rising rapidly. Added to that is the uncertainty around how the labour market puzzle resolves itself, and how that will affect employment and earnings. Meanwhile, just to remind, the recovery is weakening. A lot therefore turns on how effectively supply capacity is rebuilt and over what time, and how the labour market evolves. These are truly hard yards.

For most of the rest of my time, I am going to turn to the setting of monetary policy. Monetary and fiscal policy have operated independently but consistently – unsurprisingly I would emphasise – to provide the bridge through Covid, supported I should add by the stability of the financial system and macroprudential policy.

We have had to rely on asset purchases to do a lot of the work because of the proximity of interest rates to the lower bound. There is plenty of debate around QE, some parts of that debate are better founded than others. I am not going to cover that in any detail tonight you will be relieved to hear, save to make a few points relevant to the current context.

First, we do think that the impact of QE is most pronounced in conditions of market instability, as we saw in March last year. Second, we think that a larger part of the impact of QE comes from the initial announcement of the stock of assets to be purchased, rather than the subsequent flow of purchases. As a reminder, the current round was announced last November when things looked bleak on the Covid front.

This begs a pertinent question: what impact do you get from continuing purchases in market financial conditions, and particularly at a time when inflation is rising as it is? The reason in my view is that QE does have an effect in stable conditions, and it is an important one, though I should emphasise on the second part of the question that because we regard the current upturn in inflation as transient, our view on the continuing role of QE is conditioned by our forecast in August that had inflation returning to target within an acceptable period of time.

One channel through which QE operates is to keep rates further along the curve down relative to where they would be otherwise. In that sense, the transmission mechanism is somewhat different to a change in Bank Rate, though the outcomes will likewise be seen in activity and inflation. For all the noise about QE, the key thing for me is that it has thereby contributed to keeping stable the cost of finance for companies during the Covid period, and that has been very important both for monetary and financial stability.

QE has also provided insurance against the sort of market volatility and dysfunction that we saw at the outset of Covid. It has therefore helped to prevent any liquidity-driven rise in yields, should such an event have occurred and in particular ensuring that the corporate sector was supported through this crisis. That said, the current programme of asset purchases is currently scheduled to end in December.

It follows that the monetary policy response, if we need to make one, to the inflation pressure should involve Bank Rate not QE. There is no reason to beat about the bush on this point.

Let me turn to that response. The MPC's task is to set monetary policy to meet the inflation target, and in a way that helps to sustain growth and employment. The remit makes clear that it is appropriate to focus on inflation in the medium term, which is appropriate given the lags between changes in monetary policy and the impact on inflation. In our view, there are good reasons why the current above target inflation will be temporary, as I described earlier.

In considering how to use monetary policy, it is also important to understand the nature of the shocks that are causing higher inflation. The shocks that we are seeing are restricting supply in the economy relative to the recovery of demand. This is important because monetary policy will not increase the supply of semi-conductor chips, it will not increase the amount of wind (no, really), and nor will it produce more HGV drivers. Moreover, tightening monetary policy could make things worse in this situation by putting more downward pressure on a weakening recovery of the economy.

But what is crucial here is whether and how expectations of future inflation respond to these supply shocks, and thereby embed rising inflation. The most commonly talked about mechanism goes from higher inflation expectations, to companies feeling able to raise prices and employees asking for higher wages, to wage pressure and more persistent inflation. In this way, what start out as relative changes in price levels for some goods and services can become generalised and turn into persistent inflation. I take this risk very seriously, it has form so to speak.

That's a world where people expect further price rises and thus seek to hold lower money balances relative to income than they otherwise would. But, in a world where people expect the price rises to be temporary and reversed, they will delay spending, and hold higher money balances relative to income than they otherwise would, and the growth of demand will be weaker. As a pertinent example, will second hand car prices stay elevated? Now, of course, it all depends on how badly you need that car, and in reality some price levels may stay elevated and some may not.

Monetary policy should not respond to supply shocks which do not become generalised through their impact on inflation expectations. In more modern times, and certainly in the life of the MPC, supply shocks have tended to be temporary in terms of their impact on inflation. But if that is not likely to be the case in our assessment, we will step in and adjust policy as needed. Nothing has changed in our approach.

To illustrate this approach, let me briefly summarise the announcement we made at the end of our meeting last week, drawing out the differences of view, which are very reasonable differences. The MPC emphasised that the inflation target applies at all times, with a clear focus on medium-term prospects for inflation rather than transient factors. The judgements

required by this medium-term focus are particularly important and challenging at a time like this of very large shocks to the economy.

For most members of the MPC, the outlook for the labour market – as I described earlier – is highly uncertain and to some degree likely to be resolved in fairly short order, and this justified a wait and see approach on policy in view of the continuing belief that higher inflation will be temporary.

Within this view, some members put more emphasis on the continuing shortfall in the level of GDP relative to pre-Covid, while others emphasised the continuing direction of travel towards closing that gap and the evidence of cost pressures accompanying the closing. But all of this group were of the view that the stimulus to monetary policy enacted in response to Covid would need to start to unwind at some point, that unwind should be enacted by an increase in Bank Rate, and if appropriate would not need to wait for the end of the current asset purchase programme.

The other view places more weight on current evidence of cost and price increases and accompanying signs of labour market and capacity pressures, leading to more persistent excess demand and higher inflation. Moreover, a policy change now would contribute to ensuring medium-term inflation expectations remain well anchored.

From this, I would draw out a number of important points. The great strength of the MPC process is that nine reasonable and I would say well informed people can differ on these interpretations, and we do so transparently. But, all of us believe that there will need to be some modest tightening of policy to be consistent with meeting the inflation target sustainably over the medium-term. Recent evidence appears to have strengthened that case, but there remain substantial uncertainties and we are monitoring the situation closely.

Let me finish with a thought which builds on the whole area of supply shocks. As I mentioned earlier, we are seeing currently a much greater dispersion of wage settlements. What if this is the beginning of a more far-reaching structural change in the economy which alters relative pay across occupations? To be clear, I am making no prediction here, but rather asking the question in the context of monetary policy.

The first thing to say is that such changes do happen. Since the 1980s, we have seen a structural increase in the pay gap between higher and lower earners. We have also seen more structural changes in retirement ages over a longer time. So, structural changes can happen. It is not the job of monetary policy to prevent such changes, but rather to ensure that they do not have negative consequences for monetary stability, such as dislodging inflation expectations. On this point, it is worth remembering that an

important reason why we have a positive rather than zero inflation target is to enable such changes in relative earnings to happen in a world of downward nominal wage rigidities.

I started by quoting Friedman and Schwartz, and so I will end by doing the same. They emphasised the need to distinguish a change in price (or wage) levels from a persistent increase in the rate of changefootnote[3]. In my view, drawing this distinction is a crucial issue that we will be dealing with for some time. And of course, since it involves predictions of the future, for policymakers the task will not be easy.

In conclusion, the yards will be hard I'm afraid, and we must stick to the task.

I am grateful to Nishat Anjum, Jamie Bell, Justin Beresford, Ben Broadbent, Alan Castle, Pavandeep Dhami, Jonathan Haskel, Andrew Hauser, Karen Jude, Catherine Mann, Dave Ramsden, Fergal Shortall, Sophie Stone and Silvana Tenreyro for their assistance in helping me prepare these remarks.

## Goodbye to All That: The End of LIBOR

Vice Chair for Supervision Randal K. Quarles, at The Structured Finance Association Conference, Las Vegas, Nevada

Now that business travel has started to pick back up as we emerge from the COVID event, a prosaic but insistent problem has reappeared: what to read on a long plane flight.

Like most of you, I try to get some work done—but, also like most of you, out of an amalgam of security concerns and indolence, I often don't succeed.

Something must improve the hours, but Kant is a little heavy, P.G. Wodehouse a little light, and T.S. Eliot looks like you're just showing off.

So, over the last few weeks, I've been re-reading Joan Didion while making my way from point A to point B: Slouching Toward Bethlehem, The White Album, and Where I Was From.

As it turns out, Joan Didion is a particularly apt author to be reading on the way to this conference—not because the conference is being held in Las Vegas, although her four-page summation of this "most extreme and allegorical of American settlements" is a classic.

But rather, because a nearly constant theme of her writing is change: how hard it is to recognize that things have changed; how hard it is to come to terms with it once recognized; how insistent people can be that surely, they will be OK.

And given that introduction, I'm sure you have now guessed what I intend to talk to you about today: LIBOR, the benchmark formerly known as the London Interbank Offered Rate.

LIBOR was the principal benchmark used to set interest rates for a vast number of commercial loans, mortgages, securities, derivatives, and other products.

For a number of years—certainly at least since July of 2017, and really for several years before—it has been clear that LIBOR would end, but some believed it was not clear exactly when LIBOR would end.

And, as a result, many market participants have continued to use LIBOR as if that end date would surely be in some indefinitely distant future, as if LIBOR would remain available forever.

Earlier this year, however, things changed, and changed significantly. Two things happened which together make clear that LIBOR will no longer be available for any new contracts after the end of this year, just 86 days from now.

First, the United Kingdom's Financial Conduct Authority (FCA), which regulates LIBOR, and ICE Benchmark Administration (IBA), which administers LIBOR, announced definitive end dates for LIBOR. No U.S. dollar LIBOR tenors will be available after June 30, 2023.

So, now there was a definitive and immovable date fixed for the end of LIBOR. However, the second thing that happened made clear that long before that end date in 2023, LIBOR would not be available for any new contracts after the end of this year.

Following the FCA and IBA announcements about the end of LIBOR, the Federal Reserve and other regulators published guidance making clear that we will focus closely on whether supervised institutions stop new use of LIBOR by the end of this year—86 days from now.

If LIBOR will not be available for new contracts, what is the point of IBA continuing to provide USD LIBOR quotes until mid-2023? Those LIBOR quotes will allow many existing contracts to mature according to their terms, thus greatly reducing the costs and risks of this transition.

Otherwise, many banks would have had to re-negotiate hundreds of thousands of loan contracts before December 31, an almost impossible task. But the whole process only works if no new LIBOR contracts are written while the legacy contracts are allowed to mature. So, those new LIBOR contracts will not be made. Change is difficult, but it is inescapable.

*What is LIBOR, and Why is it Going Away?*

LIBOR was intended to be a measure of the average interest rate at which large banks can borrow in wholesale funding markets for different periods of time, ranging from overnight to one month, three months, and beyond. LIBOR is an unsecured rate, which means that it measures interest rates for borrowings that are made without collateral and therefore include some credit risk.

At first blush, it may seem peculiar that a borrowing rate for banks in London has been used so widely.

Why, for example, are more than $1 trillion of residential mortgages in the United States tied to LIBOR?

The answer is that, over time, LIBOR's pervasiveness became self-reinforcing.

Lenders, borrowers, and debt issuers relied on LIBOR because, first, everyone else used LIBOR, and second, they could hedge their LIBOR exposures in liquid derivatives markets.

Today, USD LIBOR is used in more than $200 trillion of financial contracts worldwide.

Federal Reserve officials have described LIBOR's flaws on numerous occasions.

The principal problem with LIBOR is that it was not what it purported to be. It claimed to be a measure of the cost of bank funding in the London money markets, but over time it became more of an arbitrary and sometimes self-interested announcement of what banks simply wished to charge for funds.

That might not have become such a debacle had it been clear to everyone what the ground rules were, but the ground rules for LIBOR were anything but clear.

As a result of subsequent changes to the process, LIBOR panel banks now provide evidence of actual transactions where possible.

A fundamental problem, however, is that LIBOR has been unable to separate itself from its perception as a measure of bank funding costs, yet the market on which LIBOR is based—the unsecured, short-term bank funding market—dwindled after the 2008 financial crisis.

This means that, for many LIBOR term rates, banks must estimate their likely cost of such funding rather than report the actual cost.

Many LIBOR panel banks are uncomfortable estimating their funding costs in producing a benchmark perceived by many to measure actual funding costs.

As a result, the great majority of the panel banks have determined that they will not continue participating in the process. This is why the FCA and IBA have announced definitive end dates for LIBOR.

I should note here that regulators have warned about LIBOR-related risks for many years. Beginning in 2013, the U.S. Financial Stability Oversight

Council and the international Financial Stability Board, which I currently chair, expressed concern that the decline in unsecured short-term funding by banks could pose serious structural risks for unsecured benchmarks such as LIBOR.

To mitigate these risks and promote a smooth transition away from LIBOR, the Federal Reserve convened the Alternative Reference Rates Committee (ARRC) in November 2014.

As I will describe further in a moment, the ARRC has worked to facilitate the transition from LIBOR to its recommended alternative, the Secured Overnight Financing Rate (SOFR).

To read more:
https://www.federalreserve.gov/newsevents/speech/quarles20211005a.htm

# PLI Broker/Dealer Regulation and Enforcement 2021

Gurbir Grewal, Director, Division of Enforcement, Washington D.C.


Thank you for that introduction and for having me here today. At the Division of Enforcement, ensuring that broker-dealers and associated individuals follow our laws and regulations is critical to our mission, so it's only fitting that my first speech as Director is at this event.

While I just referred to it as "our mission" at the Division of Enforcement, what I'd like to talk to you about today is how we all share the responsibility to maintain market integrity and enhance public confidence in our securities markets. But first I must provide the disclaimer that my remarks today express my views, and do not necessarily reflect those of the Commission, the Commissioners, or other members of staff.

- SEC Charges Broker Who Defrauded Seniors Out of Almost $1 Million

- SEC Charges Ernst & Young, Three Audit Partners, and Former Public Company CAO with Audit Independence Misconduct

- SEC Charges Disbarred New York Attorney and Florida Attorney with Scheme to Create False Opinion Letters

- Merrill Lynch Admits to Misleading Customers about Trading Venues

- SEC Charges U.S. Congressman and Others With Insider Trading

These are not headlines from some bygone era of market participants behaving badly; these are all from cases the Commission has brought since 2018. In fact, here's one from just last week: "SEC Charges Investment Bank Compliance Analyst with Insider Trading in Parents' Accounts."

Nearly a dozen years ago, one of my predecessors held a press conference to announce charges against more than twenty defendants, including "Wall Street professionals, corporate insiders, analysts and lawyers," in a pair of alleged insider trading schemes.

In explaining the importance of the cases, Director Khuzami said: "There is a basic principle that governs our capital markets, and that is that there is one set of rules, and everyone is expected to play by that one set of rules. That principle gives investors confidence that the markets are fair."
He was right then, and his words remain true today: Enforcement is, in significant part, animated by the idea that we will pursue potential violations by any market participant, and, in so doing, attempt to shape the behavior of all participants going forward.

But I believe more is required. Because despite all of the strong enforcement actions the SEC has brought over the years and despite all the speeches that SEC Chairs, Commissioners, Enforcement Directors, and others have given at events like this one, the types of behavior described in the headlines I read to you persist, and as a result, a significant part of the public continues to feel that our markets are essentially a game that is rigged against them.

So rather than issue warnings about how aggressively we will pursue you or your clients if you misbehave—which we, of course, will—I want to invite each of you—the lawyers, counselors, and gatekeepers who have such influence over market behavior—to join me.

By working together, we can dispel the notion that the deck is stacked in favor of the few and powerful, promote better conduct among market participants, and ensure that the markets work fairly for all. This, after all, should be our shared mission.

I see three key steps towards achieving this mission, and the first starts with each of you. In a speech he gave in May, Chair Gensler said: "[I]f you're asking a lawyer, accountant, or adviser if something is over the line, maybe it is time to step back from the line. Remember that going right up to the edge of a rule or searching for some ambiguity in the text or a footnote may not be consistent with the law and its purpose." This is a critical point and let me explain why.

This morning you heard discussions on a number of topics, including SPACs, ESG investments, and Regulation Best Interest, or "Reg BI". I defer to your able presenters as to the best substantive takeaways from each of those sessions.

But what you should not take away from them is that, if regulators are particularly focused on issues "X" or "Y" in a given area, that means you or your clients may be able to push the envelope on issue "Z" – or the grey areas around X or Y. That approach is a surefire way to foster misconduct and, potentially, lead to an enforcement action.

You should be thinking, instead, about modeling excellence in your compliance efforts, as you do in your performance. This means that firms need to think rigorously about how their specific business models and products interact with both emerging risks and Enforcement priorities, and tailor their compliance practices and policies accordingly.

For example, with respect to Reg BI, firms should recognize that the new regime draws upon key fiduciary principles, and is intended to enhance previous broker-dealer standards of conduct significantly beyond the suitability obligation.

Armed with this recognition, firms should then give their registered representatives the tools and information that will enable them to identify, disclose, and mitigate conflicts prohibited under Reg BI.

Let me be clear here: I am talking about more than putting together a stock policy and giving a check-the-box training. This requires proactive compliance, and this type of approach has never been more important than today— a time of rapid and profound technological change.

This change is exciting; it can help amplify the dynamism of our markets and increase access for investors. But at the same time it also creates new avenues for misconduct, and new responsibilities for compliance.

Recordkeeping violations may not grab the headlines, but the underlying obligations are essential to market integrity and enforcement. Take for example an enforcement action the Commission brought last year against a California broker-dealer for failing to preserve business-related text messages.

The SEC's order found that some of the firm's registered representatives used their personal devices when communicating with each other, with firm customers, and with other third parties concerning, among other things, the size of orders, the timing of trades, and the pricing of certain securities. These messages were potentially responsive to a records request SEC staff made to the firm in an unrelated investigation and the firm's failure to retain and produce them directly impacted that investigation.

Unfortunately, this is not an isolated example. We continue to see in multiple investigations instances where one party or firm that used off-channel communications has preserved and produced them, while the other has not. Not only do these failures delay and obstruct investigations, they raise broader accountability, integrity and spoliation issues.

A proactive compliance approach requires market participants to not wait for an enforcement action to put in place appropriate policies and procedures to preserve these communications and anticipate these emerging challenges.

Listen, many of these are not even new technological advances. After all, my 75 year-old mother has been texting my 13-year-old daughter for years, and I am certain many in this room have sent or received professional communications on personal devices or unofficial communications channels.

You need to be actively thinking about and addressing the many compliance issues raised by the increased use of personal devices, new

communications channels, and other technological developments like ephemeral apps.

Let me turn to the second part of our shared mission, which I'll call proactive enforcement. While this falls primarily on us, each of you have a role to play here as well.

I'm from Jersey, and I know a thing or two about the Turnpike, and the Garden State Parkway, and about enforcement of my State's laws, having served as a County Prosecutor and as Attorney General.

And one thing I know is that if you post a 65 mile-per-hour speed limit and don't enforce it, people drive 75. Not me, of course, but other people. And they eventually do so with a sense of impunity. And then after a while they will drive 80 or faster, with a growing sense of confidence.

As speeds climb higher and higher, you eventually have situations where accidents increase and heightened enforcement follows. But for all of the victims, it's too late.

It's a stark analogy, but the point is that we are not waiting for accidents to happen. We are trying to address emerging risks before they cause harm to investors. For example, this summer, the Commission brought enforcement actions against a SPAC, its sponsor, its CEO, the proposed merger target, and the target's founder and former CEO.

The SEC's settled order against everyone but the target's CEO found that the target had made misleading claims about its technology and about national security risks associated with its founder and former CEO, and that the SPAC had repeated those misstatements in public filings and failed its due diligence obligations to investors. By bringing this action prior to consummation of the merger, the Commission protected the SPAC's investors from potential harm.

A similarly forward-looking enforcement initiative this past summer involved the new requirement that firms file and deliver Client or Customer Relationship Summaries, known as "Forms CRS." A Form CRS is designed to help retail investors better understand the nature of their relationships with financial firms and individual professionals.

In July, the Commission brought enforcement actions against more than two dozen firms that had failed to timely file or to deliver their Forms CRS to their clients and customers.

As I said when we announced these cases, they "reinforce the importance of meeting [filing and disclosure] obligations and providing retail investors

with information that is intended to help them understand their relationships with their securities industry professionals."

Providing retail investors that essential information is the point of the Form CRS requirement, and we will continue to ensure that firms are satisfying their obligations to do so because that's what's required to prevent future investor harm.

You also have a key role to play in spotting and addressing emerging risks, and that's both by ensuring that your proactive compliance efforts continue even after violative conduct has occurred and by working with us in addressing that conduct. Firms' cooperation with our investigations, including through voluntary self-reporting of potential violations, benefits all market participants.

Over the last several months, I have heard time and again that we are insufficiently clear regarding our views on cooperation. So let me try and offer some clarity. First, let me be clear about what cooperation is not: cooperation is not the mere absence of obstruction.

We do not recommend that parties receive credit for simply living up to their legal and regulatory obligations. Cooperation—at least the sort of cooperation that results in credit—means more than responding to lawful subpoenas.

It means more than making witnesses available for lawfully-compelled testimony. Any defense counsel who advises that credit may be on the table for taking these standard steps is doing their client a disservice.

Cooperation also means more than "self-reporting" to the SEC only when your violation is about to be publicly announced through charges by another regulator or an article in the news media.

And it certainly means more than conducting a purportedly independent investigation and making a presentation to the staff that does not fairly present the facts, but instead is nothing more than an advocacy piece. The behaviors that can earn cooperation credit are no secret: the Seaboard Report turns 20 years old this month; the SEC's Policy Statement Concerning Cooperation by Individuals was issued in 2010; and the Enforcement Manual includes pages of discussion concerning the relevant tools and analytical frameworks.

And in several recent orders, the Commission has described the kinds of behavior that can garner cooperation credit.

For example, last September, the Commission charged BMW for disclosing inaccurate and misleading sales numbers in connection with a bond offering.

The SEC's order detailed the many steps BMW took during the global pandemic to collect, synthesize, translate where necessary, and present significant volumes of relevant materials to staff.

The order highlighted how "BMW also made multiple current and former employees available for interviews by the Staff, and provided presentations and narrative submissions that highlighted critical facts."

In short, BMW's cooperation "substantially advanced the quality and efficiency of the Staff's investigation and conserved Commission resources," and this was reflected in the Commission's decision to impose a reduced penalty against BMW.

But in case it's helpful, let me also tell you how I specifically think about cooperation. I look to whether the would-be cooperator took significant, tangible steps that enhanced the quality of our investigation, allowed us to conserve resources and bring charges more quickly, or helped us to identify additional conduct or other violators that contributed to the wrongdoing. If any or all of these occurred, then credit may be appropriate.

One last thing on cooperation. If you think you deserve credit, and the staff disagrees, I encourage you take a hard, objective look at your conduct during the investigation before trying to convince me the staff is wrong.

As someone who has served as a federal prosecutor, local prosecutor, and state Attorney General, I firmly believe that frontline staff are best-positioned to assess cooperation with the investigations they conduct.

They know the record and they know whether you meaningfully benefited those investigations. I respect their experience and will not only seek their input on decisions, but will also generally defer to their expertise and judgment.

At the same time, I will not look favorably on attempts to make an end run around staff to present the same, undisputed facts about your conduct to me in hopes of a more sympathetic ear.

Similarly, you should understand that we have a close relationship with our colleagues in EXAMS. If a party or its counsel engage in dilatory or obstructive tactics in an examination that gives rise to a referral, I will take a dim view of arguments that you deserve credit for cooperation with the ensuing enforcement investigation. As I said earlier, a key consideration in

weighing cooperation is whether it conserves Commission resources, and this goes for those of our colleagues across the Commission.

Finally, I want to discuss the third step in our shared mission. This one applies when the first two steps have not worked. In that scenario, all of our enforcement tools are on the table, including monetary penalties.

Penalties are among the most important of our tools, in part because of our ability to tailor them to the violation. When Congress granted the SEC penalty authority in the Remedies Act of 1990, one perceived benefit was the SEC's ability to more finely calibrate its enforcement remedies against regulated entities, including broker-dealers.

By granting penalty authority, the Remedies Act empowered the Commission to impose remedies that were substantially more punitive than a censure, but less draconian than revoking a firm's registration or suspending its operations, and thereby potentially harming its customers.

The factors that guide us as we tailor our penalty recommendations are also no secret—we assess the conduct at issue in light of elements including statutory tiers, Commission guidance and judicial opinions, and resolutions in Commission actions involving comparable facts, violations, and parties.

One crucial question we also try to answer is what penalty will appropriately deter future misconduct? After all, penalties calibrated to both the offense and the offender, serve two interlocking purposes: punishment of the wrongdoer and deterrence of future misconduct, both by the penalized party and by others in the market.

And central to deterrence is proportionality. The worse the conduct, the more strongly we want to disincentivize market participants from engaging in it. We must design penalties that actually deter and reduce violations, and are not seen as an acceptable cost of doing business.

What does this mean for our approach to penalties in enforcement actions? As Commissioner Crenshaw put it earlier this year: "[C]orporate penalties should be tied to the egregiousness of the actual misconduct." I agree wholeheartedly. But this does not mean that roughly equivalent misconduct by comparable offenders should be penalized in the same amount the hundredth time it occurs as the first. Rather, to achieve the intended deterrent effect, it may be appropriate to impose more significant penalties for comparable behavior over time. Doing so will make it harder for market participants to simply "price in" the potential costs of a violation.

As we evaluate the relevant penalty factors, we will also be closely assessing whether prior penalties have been sufficient to generally deter the misconduct at issue.

Where they have not been, you can expect to see us seek larger penalties, both in settlement negotiations and, if necessary, in litigation. Even if a firm or individual hasn't offended before, if they violate a law or rule for which the SEC has previously and publicly charged other actors in their industry, it may be appropriate for penalties or other remedies to be increased in response to the lack of deterrence.

So while penalties levied in the past are certainly a relevant data point for our conversations, you should not expect comparable cases to be the beginning and end of our analysis.

Similarly, one factor that has long weighed in our penalty assessments is the recidivism of the specific offender.

When a firm repeatedly violates our laws or rules, they should expect to be penalized more harshly than a first-time offender might be for the same conduct. This is the essence of specific deterrence.

I am confident that by engaging in proactive compliance and meaningful cooperation, and, where necessary, imposing significant, but appropriate penalties, through our enforcement efforts, we will not only reinforce market integrity, but also enhance public confidence in our markets. I look forward to working with all of you in achieving this, our shared mission.

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