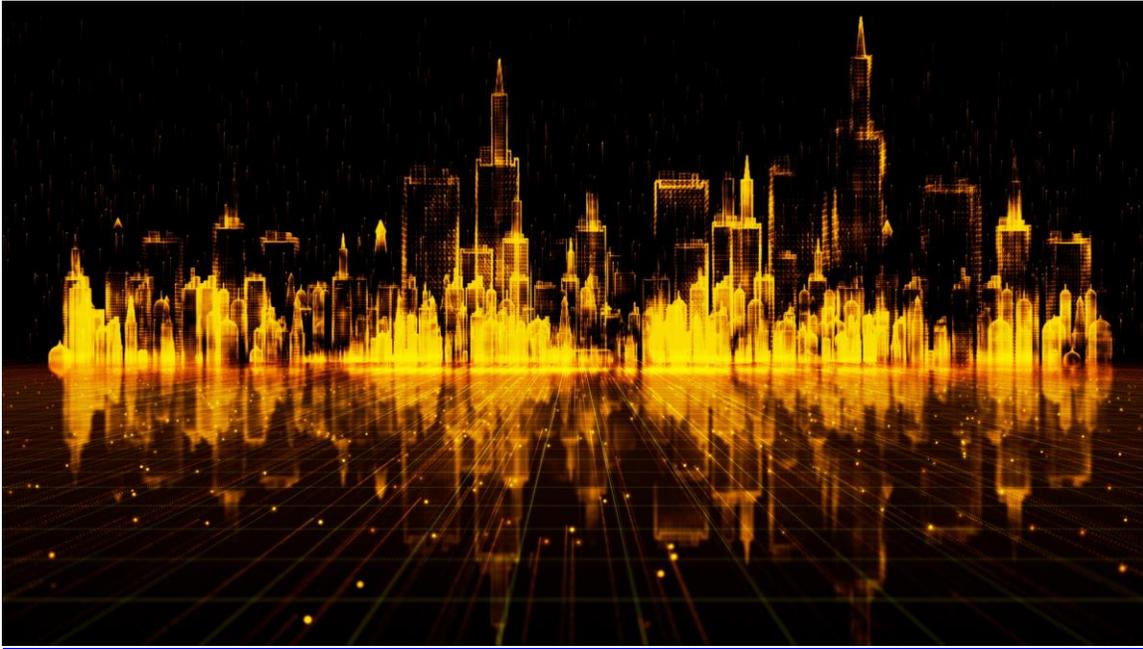


Basel iii Compliance Professionals Association (BiiiCPA)  
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## *Basel iii News, September 2021*

Dear members and friends,

The BIS 90 Years exhibition and Open Week showcases the Bank's unique role in the global financial system, looking at its history since 1930 and with a particular focus on the BIS today and tomorrow.



The interactive, multimedia BIS 90 Years exhibition was developed and designed in collaboration with Basel design agency berger + Co. The exhibition will be displayed over three levels of the iconic BIS Tower building in Basel, including the 18th floor with its bird's eye view over the city and the surrounding area.

BIS 90 Years will introduce visitors to the BIS's role and activities in an accessible way and cover some of the major issues facing central banks, such as the digital revolution in finance.

Interactive installations will bring to life the role money plays in our modern society. Visitors will also be able to map financial flows around the world in times of crisis and learn about the BIS's 63 member central banks.

The BIS is a forum for dialogue and international cooperation and a meeting place for central bankers and financial regulators, and hosts several standard setters for the international financial system.

It also promotes responsible innovation and knowledge-sharing, acts as a think tank for the central bank community and serves as a bank for central banks and international financial institutions.

BIS 90 Years will run from 26 October to 4 November, with a media preview on 22 October. Entry is free. Further details can be found on the dedicated website: [www.bis90.org](http://www.bis90.org)

BIS 90 Years was originally planned for 2020, at the time of the Bank's 90th anniversary, but was postponed due to the pandemic. Strict safety measures will apply, in full accordance with official Swiss Covid-19 guidelines and Swiss Museums Association recommendations.

Exhibition information

● **BIS 90 YEARS**

Visitor information

DE / EN



## Basel III implementation in the European Union

Introductory remarks by Pablo Hernández de Cos, Chair of the Basel Committee on Banking Supervision and Governor of the Bank of Spain, Eurofi panel on Basel III implementation in the EU, Ljubljana



Good morning and welcome to this panel on implementing Basel III in the EU.

When I was asked to chair this panel (in my capacity as Chair of the Basel Committee), I must confess that I had somewhat mixed feelings.

On the one hand, I was pleased to see that Eurofi was organising this one-hour panel to discuss what is a crucially important topic. As you know, following the Great Financial Crisis (GFC), the Basel Committee undertook a range of reforms to address material regulatory fault lines in the banking system.

The benefits of the initial set of reforms – which were aimed at addressing the unsustainable levels of leverage in the banking system, insufficient high-quality capital, excessive maturity transformation and lack of a macroprudential overlay – were clear to all of us during this pandemic.

The global banking system has remained broadly resilient to date, and, unlike during the GFC, banks have not exacerbated the economic crisis by sharply cutting back lending. The initial Basel III reforms, alongside an unprecedented range of public support measures, are the main explanations for this outcome.

In many ways, Covid-19 has provided clear and tangible evidence of the benefits to society in having a well-capitalised banking system. We saw that jurisdictions with banks that had the largest capital buffers experienced a less severe impact on their expected GDP growth and better-capitalised banks increased their lending more during the pandemic relative to their peers.

Yet the job of safeguarding global financial stability is far from finished. The outstanding Basel III reforms, which were finalised in 2017, are aimed at addressing significant fault lines in the global banking system. Addressing these fault lines remains as important today as it was pre-pandemic. Indeed, the primary objective of these reforms is to restore credibility in the risk-weighted capital framework. This is to be achieved by

reducing excessive variability in banks' modelled capital requirements and developing robust risk-sensitive standardised approaches which would also serve as the basis of the output floor.

Recall how at the peak of the GFC investors lost faith in banks' published ratios and placed more weight on other indicators of bank solvency. Whether due to a lack of robustness in banks' models or an excessive degree of discretion in determining key regulatory inputs, the shortcomings in the risk-weighted asset (RWA) framework underlined the need for a complete overhaul.

Let me just give one example to underline how these fault lines continue to remain a major concern today. In 2013, the Committee's first report on the variability of banks' risk-weighted assets highlighted a worrying degree of variation.

When banks were asked to model their credit risk capital requirements for the same hypothetical portfolio, the reported capital ratios varied by 400 basis points.

Fast-forward to 2021 – eight years later – and despite repeated claims by some stakeholders that banks have already "fixed" this problem, the latest report by the European Banking Authority on banks' modelled capital requirements points to a "significant" level of capital dispersion "that needs to be monitored".

Importantly, these Basel III reforms are not an exercise to increase overall capital requirements at a global level. But equally, to successfully meet our primary objective, "outlier" banks, such as those with particularly aggressive modelling techniques, will rightly face higher requirements.

Given the "exogenous" nature of the Covid-19 shock, these vulnerabilities were not tested during this pandemic.

However, it is clear that, if left unaddressed, they will expose material shortcomings in the banking system in future financial crises. So I am pleased that we will have the opportunity this morning to discuss the implementation of these reforms in the EU.

On the other hand, I remain concerned about the potential to focus the discussion on whether or how to implement Basel III in the EU in the current juncture! These reforms were finalised in 2017, with a globally agreed (revised) implementation date of 1 January 2023. G20 Leaders have repeatedly called for their full, timely and consistent implementation. Now is therefore the time for action.

It is increasingly clear that the outstanding Basel III reforms will complement the previous ones in having a positive net impact on the economy.

For example, a recent analysis by the ECB suggests that the GDP costs of implementing these reforms in Europe are modest and temporary, whereas their benefits will help to permanently strengthen the resilience of the economy to adverse shocks.

It also finds that potential deviations from the globally agreed Basel III reforms – for example, with regard to the output floor – would significantly dilute the benefits to the real economy.

Importantly, the reforms also benefited from an extensive consultation process with a wide range of stakeholders. Indeed, a recent academic study described the Committee's consultation approach as "one of the most procedurally sophisticated" processes among policymaking bodies.

The Committee published no fewer than 10 consultation papers as part of these reforms, with an accompanying consultation period that spanned the equivalent of almost three years!

So the finalised standards agreed at the global level are already a compromise by their very nature, and reflect the different views of Committee members and external stakeholders. Over 35 key adjustments were made to the reforms during this period, with the majority of these reflecting the views of different European stakeholders.

Financial stability is a global public good. It knows no geographic boundaries – the adage that "no one is safe until everyone is safe" applies as much to the pandemic as it does to safeguarding global financial stability.

This is why the Committee designed and calibrated Basel III at a global level, and incorporated enough flexibility through national discretions within the framework.

Approaching these reforms from a different perspective – for example by giving undue attention to the impact on individual banks, jurisdictions or regions – risks missing the forest for the trees.

To be clear: the domestic and democratic transposition of global standards is a very important process and one that should be fully respected. But the focus should now primarily be on the "action" side of things, which means demonstrating how the EU's commitment to multilateralism and to globally agreed decisions endorsed by the Group of Governors and Heads of Supervision, and to which G20 Leaders have repeatedly committed to implementing in a full, timely and consistent manner.

So I hope that our panel discussion today and the active participation of the audience will provide a constructive discussion on these important issues, building on the broad landscape that I have just set out.

## Community Bank Access to Innovation through Partnerships

Federal Reserve Board



Community banks in the United States are increasingly partnering with third-party financial technology companies (fintechs) to access innovation.

The Federal Reserve supports responsible innovation that provides community banks access to new technologies, while ensuring safety and soundness of the institutions and protection of consumers.

Under the right circumstances and with the appropriate guardrails, partnerships with fintechs can provide community banks with this access, enabling them to better serve their customers and deploy innovations that may be too costly to develop independently.

In a 2020 speech, Federal Reserve Board member Michelle W. Bowman stated that “the successful integration of financial technology into the community bank business model is proving to be enormously valuable to enable community banks to enhance the services they’ve already proven they can deliver effectively.

Access to technology and services to meet customer needs is critical to ensuring community banks remain vibrant.”

This paper is intended to serve as a resource for community banks as they embark on responsible innovation. It provides an overview of the evolving landscape of community bank partnerships with fintechs, including the benefits and risks of different partnership types, and key considerations for engaging in such partnerships.

While these lessons may apply broadly to the community bank sector, each institution should evaluate how fintech partnerships fit into their own strategic objectives based on their research, risk profile, and third-party risk management practices.

The insights in this paper are based on engagements with a variety of outreach participants and do not reflect the view of the Federal Reserve Board of Governors, the Federal Reserve Banks, or the staff of the Federal Reserve System.

This paper does not establish new or interpret existing guidance related to third-party risk.

The information in this paper was obtained through conversations held outside of the supervisory process for exploratory purposes and does not contain information that could be used to uniquely identify individual institutions or partnerships.

For further innovation work completed by the Federal Reserve Board of Governors, or to contact Federal Reserve staff about this paper, please visit the Federal Reserve Board's Innovation web page.



To read more:

<https://www.federalreserve.gov/publications/files/community-bank-access-to-innovation-through-partnerships-202109.pdf>

## ENISA threat landscape for supply chain attacks



Supply chain attacks have been a security concern for many years, but the community seems to have been facing a greater number of more organized attacks since early 2020.

It may be that, due to the more robust security protection that organizations have put in place, attackers successfully shifted towards suppliers.

They managed to have significant impacts in terms of the downtime of systems, monetary losses and reputational damages, to name but a few.

The importance of supply chains is attributed to the fact that successful attacks may impact a large amount number of customers who make use of the affected supplier.

Therefore, the cascading effects from a single attack may have a widely propagated impact.

This report aims at mapping and studying the supply chain attacks that were discovered from January 2020 to early July 2021.

Based on the trends and patterns observed, supply chain attacks increased in number and sophistication in the year 2020 and this trend is continuing in 2021, posing an increasing risk for organizations.

It is estimated that there will be four times more supply chain attacks in 2021 than in 2020.

With half of the attacks being attributed to Advanced Persistence Threat (APT) actors, their complexity and resources greatly exceed the more common nontargeted attacks, and, therefore, there is an increasing need for new protective methods that incorporate suppliers in order to guarantee that organizations remain secure.

This report presents the Agency's Threat Landscape concerning supply chain attacks, produced with the support of the Ad-Hoc Working Group on Cyber Threat Landscapes.

**Table 1:** Proposed taxonomy for supply chain attacks. It has four parts: (i) attack techniques used on the supplier, (ii) assets attacked in the supplier, (iii) attack techniques used on the customer, (iii) assets attacked in the customer.

SUPPLIER		CUSTOMER	
Attack Techniques Used to Compromise the Supply Chain	Supplier Assets Targeted by the Supply Chain Attack	Attack Techniques Used to Compromise the Customer	Customer Assets Targeted by the Supply Chain Attack
Malware Infection	Pre-existing Software	Trusted Relationship [T1199]	Data
Social Engineering	Software Libraries	Drive-by Compromise [T1189]	Personal Data
Brute-Force Attack	Code	Phishing [T1566]	Intellectual Property
Exploiting Software Vulnerability	Configurations	Malware Infection	Software
Exploiting Configuration Vulnerability	Data	Physical Attack or Modification	Processes
Open-Source Intelligence (OSINT)	Processes	Counterfeiting	Bandwidth
	Hardware		Financial
	People		People
	Supplier		

The main highlights of the report include the following:

- A taxonomy to classify supply chain attacks in order to better analyse them in a systematic manner and understand the way they manifest is described.
- 24 supply chain attacks were reported from January 2020 to early July 2021, and have been studied in this report.
- Around 50% of the attacks were attributed to well-known APT groups by the security community.
- Around 42% of the analysed attacks have not yet been attributed to a particular group.
- Around 62% of the attacks on customers took advantage of their trust in their supplier.
- In 62% of the cases, malware was the attack technique employed.
- When considering targeted assets, in 66% of the incidents attackers focused on the suppliers' code in order to further compromise targeted customers.

- Around 58% of the supply chain attacks aimed at gaining access to data (predominantly customer data, including personal data and intellectual property) and around 16% at gaining access to people.
- Not all attacks should be denoted as supply chain attacks, but due to their nature many of them are potential vectors for new supply chain attacks in the future.
- Organizations need to update their cybersecurity methodology with supply chain attacks in mind and to incorporate all their suppliers in their protection and security verification.

To read more:

<https://www.enisa.europa.eu/publications/threat-landscape-for-supply-chain-attacks>

**Table 2:** Attack techniques used to compromise the supplier in the chain. Each technique identifies how the attack happened, and not what was attacked. Several techniques may be used in the same attack.

ATTACK TECHNIQUES USED TO COMPROMISE A SUPPLY CHAIN		
	<b>Malware Infection</b>	e.g. spyware used to steal credentials from employees.
	<b>Social Engineering</b>	e.g. phishing, fake applications, typo-squatting, Wi-Fi impersonation, convincing the supplier to do something.
	<b>Brute-Force Attack</b>	e.g. guessing an SSH password, guessing a web login.
	<b>Exploiting Software Vulnerability</b>	e.g. SQL injection or buffer overflow exploit in an application.
	<b>Exploiting Configuration Vulnerability</b>	e.g. taking advantage of a configuration problem.
	<b>Physical Attack or Modification</b>	e.g. modify hardware, physical intrusion.
	<b>Open-Source Intelligence (OSINT)</b>	e.g. search online for credentials, API keys, usernames.
	<b>Counterfeiting</b>	e.g. imitation of USB with malicious purposes.

## BIS Bulletin No 45, Regulating big techs in finance

Agustín Carstens, Stijn Claessens, Fernando Restoy and  
Hyun Song Shin



### *Key takeaways*

- Big tech firms entering financial services can scale up rapidly with user data from their existing business lines in e-commerce and social media, and by harnessing the inherent network effects in digital services.
- In addition to traditional policy concerns such as financial risks, consumer protection and operational resilience, the entry of big techs into financial services gives rise to new challenges surrounding the concentration of market power and data governance.
- The current framework for regulating financial services follows an activities-based approach where providers must hold licences for specific business lines. There is scope to address the new policy challenges by developing specific entity-based rules, as proposed in several key jurisdictions – notably the European Union, China and the United States.

The centrality of data in the digital economy has enabled the entry into financial services and rapid growth of big tech firms.

Big techs have existing businesses in e-commerce and social media, among others, from which they can expand into finance.

Their business model revolves around the direct interactions of users and the data generated as an essential by-product of these interactions.

The distinguishing feature of big techs is that they can overcome limits to scale by utilising user data from their existing businesses to scale up rapidly by harnessing the inherent network effects in digital services.

In turn, the greater user activity generates yet more data, reinforcing the advantages that come from network effects.

In this way, big techs can establish a substantial presence in financial services very quickly through the so-called “data-networkactivities” (DNA) loop.

This gives rise to concerns about the emergence of dominant firms with excessive concentration of market power and a possibly systemic footprint in the financial system.

The rapid growth of big tech firms in financial services presents various policy challenges.

Some are variations of familiar themes that lie squarely within the traditional scope of central banks and financial regulators, such as the mitigation of financial risks and the oversight of operational resilience and consumer protection.

Assessing big techs' resilience through a financial cycle will necessitate more systematic monitoring and understanding of big tech business models on the part of the authorities, for instance on whether learning algorithms may inject systematic biases to the detriment of financial stability.

As well as issues that arise from traditional financial stability concerns, there are new and unfamiliar challenges stemming from the potential for excessive concentration of market power, as well as broader issues concerning data governance.

These new challenges lie outside the traditional scope of the central bank's remit, but they can nevertheless impinge on the central bank's core mission of ensuring sound money as well as the integrity and smooth functioning of the payment system.

While some central banks' oversight authority includes the competitive functioning and efficiency of the payment system, their mandates do not normally encompass the broad range of competition and data privacy issues that arise in relation to the activities of big techs in financial services.

Nevertheless, since the central bank issues the unit of account in the economy, trust in the currency rests ultimately on the trust placed in the central bank itself.

Any impact on the integrity of the monetary system arising from the emergence of dominant platforms ought to be a key concern for the central bank.

This Bulletin reviews the policy challenges for central banks and financial regulators in their oversight of the activity of big tech firms in financial services, especially as it relates to the payment system.

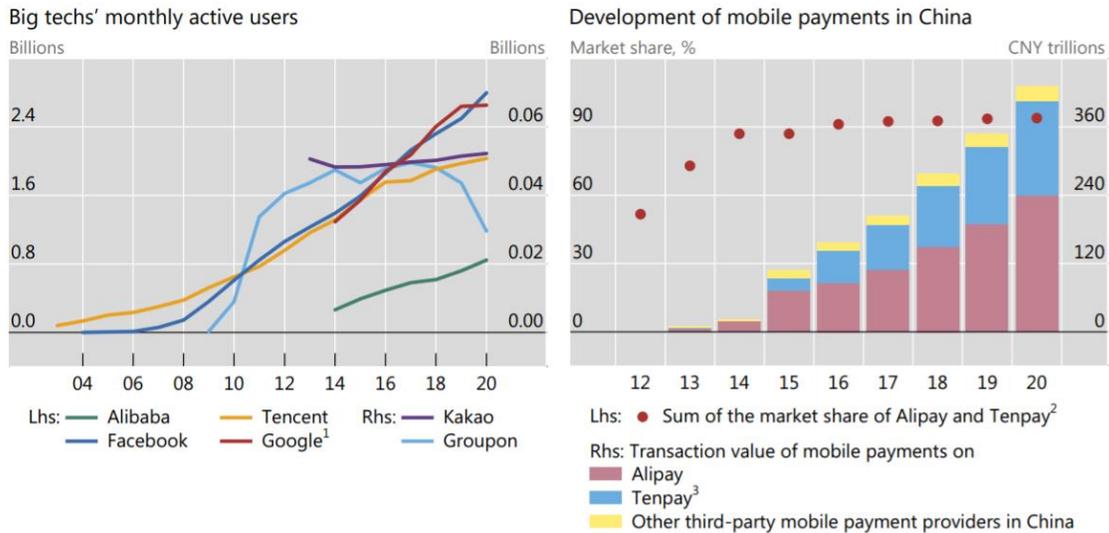
Traditional demarcations that separate the roles of financial regulators from those of competition authorities and data privacy regulators may become blurred in the case of big techs in finance.

Rules that were formulated with specific financial stability risks in mind (credit and liquidity risk, market risk etc) may be inadequate for addressing the unique combination of policy concerns to which big techs give rise.

These concerns bear on the central bank's core mission to maintain the integrity of the monetary system. In this regard, the central bank should work more closely with competition and data privacy authorities.

Big techs' rapid growth in users underpins their dominance in some markets

Graph 1



<sup>1</sup> The number of Chrome users is used as a proxy for Google's number of active users. <sup>2</sup> Market shares for 2012 are estimated based on market evidence. <sup>3</sup> Tenpay includes WeChat Pay and QQ Wallet.

Sources: BIS (2019); Enfodesk; S&P Capital IQ, company reports, analysys.cn; Statista, Industries; BIS calculations.

To read more: <https://www.bis.org/publ/bisbull45.pdf>

## Committee on Payments and Market Infrastructures publishes work programme for 2021-22



- Committee on Payments and Market Infrastructures (CPMI) publishes its work programme for the first time.
- The 2021–22 work programme focuses on shaping the future of payments and addressing risks in financial market infrastructures.
- CPMI's priorities include: enhancing cross-border payments; addressing policy issues arising from innovations in payments; evaluating and addressing risks in financial market infrastructures that emerged or were accentuated during the pandemic.

Shape the future of payments	Evaluate and address risks in FMIs
<ul style="list-style-type: none"> <li>+ <a href="#">Enhance cross-border payments</a></li> <li>+ <a href="#">Analyse and address policy issues arising from innovations in payments</a></li> <li>+ <a href="#">Monitor changing trends in payments</a></li> </ul>	

Shape the future of payments	Evaluate and address risks in FMIs
	<ul style="list-style-type: none"> <li>+ <a href="#">Analyse issues related to central clearing</a></li> <li>+ <a href="#">Address and advance on issues relevant to the resilience of FMIs</a></li> </ul>

The CPMI has published its work programme for 2021–22, which will focus on shaping the future of payments and addressing risks in financial market infrastructures.

The annual work programme has been publicly released for the first time as part of the CPMI's commitment to increased transparency. The work programme outlines the strategic priorities for its monitoring and analysis, policy, and standard-setting and implementation activities, under its two overarching themes:

Shaping the future of payments will include enhancing cross-border payments and addressing policy issues arising from digital innovations in payments (such as central bank digital currencies and stablecoins), while monitoring changing trends in payments.

Evaluating and addressing risks in financial market infrastructures will work on issues related to central clearing and others that emerged or were accentuated over the course of the Covid-19 pandemic.

The programme was drawn up under the direction of CPMI Chair Sir Jon Cunliffe in consultation with the Governors of the BIS Economic Consultative Committee.

### *About the Committee's work*

The CPMI carries out its mandate through the following activities:

- monitoring and analysing developments to help identify risks for the safety and efficiency of arrangements within its mandate as well as resulting risks for the global financial system;
- sharing experiences related to arrangements within its mandate, to the performance of oversight functions and to the provision of central bank services in order to promote common understanding, and developing policy advice or common policies for central banks;
- establishing and promoting global standards and recommendations for the regulation, oversight and practices of arrangements within its mandate, including guidance for their interpretation and implementation, where appropriate;
- monitoring the implementation of CPMI standards and recommendations with the purpose of ensuring timely, consistent and effective implementation;
- supporting cooperative oversight and cross-border information-sharing, including crisis communication and contingency planning for cross-border crisis management;
- maintaining relationships with central banks which are not members of the CPMI to share experiences and views and to promote the implementation of CPMI standards and recommendations beyond CPMI member jurisdictions, either directly or by supporting regional bodies as appropriate; and
- coordinating and cooperating with other financial sector standard setters, central bank bodies and international financial institutions.

To read more: [https://www.bis.org/cpmi/cpmi\\_work.htm](https://www.bis.org/cpmi/cpmi_work.htm)

## EBA consults on new Guidelines on the role of AML/CFT compliance officers



The European Banking Authority (EBA) has launched a public consultation on new Guidelines on the role, tasks and responsibilities of anti-money laundering and countering the financing of terrorism (AML/CFT) compliance officers.

The Guidelines also include provisions on the wider AML/CFT governance set-up, including at the level of the group. Once adopted, these Guidelines will apply to all financial sector operators that are within the scope of the AML Directive.

This consultation runs until **2 November 2021**.

The draft Guidelines comprehensively address, for the first time at the level of the EU, the whole AML/CFT governance set-up.

They set clear expectations of the role, tasks and responsibilities of the AML/CFT compliance officer and the management body and how they interact, including at group level.

AML/CFT compliance officers need to have a sufficient level of seniority, which entails the powers to propose, on their own initiative, all necessary or appropriate measures to ensure the compliance and effectiveness of the internal AML/CFT measures to the management body in its supervisory and management function.

Without prejudice to the overall and collective responsibility of the management body, the draft Guidelines also specify the tasks and role of the member of the management board, or the senior manager where no management board exists, who are in charge of AML/CFT overall, and on the role of group AML/CFT compliance officers.

As information reaching the management body needs to be sufficiently comprehensive to enable informed decision-making, the draft Guidelines set out which information should be at least included in the activity report of the AML/CFT compliance officer to the management body.

Where a financial services operator is part of a group, the draft Guidelines provide that a Group AML/CFT compliance officer in the parent company should be appointed to ensure the establishment and implementation of effective group-wide AML/CFT policies and procedures and to ensure that

any shortcomings in the AML/CFT framework affecting the entire group or a large part of the group are addressed effectively.

Provisions in the draft Guidelines are designed to be applied in a proportionate manner, taking into account the diversity of financial sector operators that are within the scope of the AML Directive.

They are also in line with existing ESA guidelines, in particular:

- the revised Guidelines on internal governance under the capital requirements Directive (CRD);
- the revised Joint ESMA and EBA Guidelines on the assessment of the suitability of members of the management body;
- the draft Guidelines on the authorisation of credit institutions; and
- the draft Guidelines for common procedures and methodologies for the supervisory review and evaluation process (SREP) and supervisory stress testing.

### *Consultation process*

Comments to the draft Guidelines can be sent by clicking on the "send your comments" button on the EBA's consultation page. The deadline for the submission of comments is 2 November 2021.

All contributions received will be published following the close of the consultation, unless requested otherwise.

The EBA will hold a virtual public hearing on the draft Guidelines on 28 September 2021 from 10:00 to 12:00 Paris time. The dial-in details will be communicated to those who have registered for the meeting.

### *Legal basis and background*

The EBA drafted these Guidelines in line with its legal mandate to lead, coordinate and monitor the EU financial sector's fight against ML/TF.

In drafting these guidelines, the EBA fulfills a request by the Commission's request in its Supra-National Risk Assessment (SNRA) of 2019 to develop guidance that 'clarifies the role of AML/CFT compliance officers in credit and financial institutions'.

To read more:

[https://www.eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Consultations/2021/Consultation%20on%20draft%20Guidelines%20on%20the%20role%2C%20tasks%20and%20responsibilities](https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Consultations/2021/Consultation%20on%20draft%20Guidelines%20on%20the%20role%2C%20tasks%20and%20responsibilities)

[%20AML-CFT%20compliance%20officers/1018277/CP%20GLs%20on%20AML-CFT%20compliance%20officer.pdf](#)

## Project Dunbar: international settlements using multi-CBDCs



Project Dunbar brings together the Reserve Bank of Australia, Bank Negara Malaysia, Monetary Authority of Singapore, and South African Reserve Bank with the Bank for International Settlements Innovation Hub to test the use of central bank digital currencies (CBDCs) for international settlements.

Led by our Singapore Centre, it aims to develop prototype shared platforms for cross-border transactions using multiple CBDCs, allowing financial institutions to transact directly with each other in the digital currencies, eliminating the need for intermediaries and cutting the time and cost of transactions.

The project will focus initially on the development of a common platform for multi-CBDC settlement (Model 3 – mCBDC arrangements based on single multi-currency system) that fulfils the needs and requirements of central banks and financial institutions. You may visit:

<https://www.bis.org/publ/bppdf/bispap115.htm>

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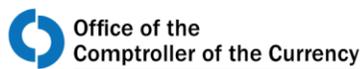
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The project will work with multiple partners to develop technical prototypes on different distributed ledger technology platforms. It will also explore different governance and operating designs that would enable

central banks to share CBDC infrastructures, benefitting from the collaboration between public and private sector experts in different jurisdictions and areas of operation.

This work will explore the international dimension of CBDCs design and support the efforts of the G20 roadmap for enhancing cross-border payments. Its results, expected to be published in early 2022, will inform the development of future platforms for global and regional settlements.

## Model Risk Management



The Office of the Comptroller of the Currency’s (OCC) Comptroller’s Handbook booklet, “Model Risk Management,” is prepared for use by OCC examiners in connection with their examination and supervision of national banks, federal savings associations, and federal branches and agencies of foreign banking organizations (collectively, banks).

Each bank is different and may present specific issues. Accordingly, examiners should apply the information in this booklet consistent with each bank’s individual circumstances.

This booklet aligns with the principles laid out in the “Supervisory Guidance on Model Risk Management” conveyed by OCC Bulletin 2011-12, “Sound Practices for Model Risk Management: Supervisory Guidance on Model Risk Management” (MRM Supervisory Guidance).

This booklet:

- is designed to guide examiners in performing consistent, high-quality model risk management examinations.
- presents the concepts and general principles of model risk management.
- informs and educates examiners about sound model risk management practices that should be assessed during an examination.
- provides information needed to plan and coordinate examinations on model risk management, identify deficient practices, and conduct appropriate follow-up.

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# Comptroller's Handbook

## Safety and Soundness

Capital  
Adequacy  
(C)

Asset  
Quality  
(A)

**Management  
(M)**

Earnings  
(E)

Liquidity  
(L)

Sensitivity to  
Market Risk  
(S)

Other  
Activities  
(O)

You may visit:

<https://www.occ.treas.gov/publications-and-resources/publications/comptrollers-handbook/files/model-risk-management/index-model-risk-management.html>

## Joint Committee Report on Risks and Vulnerabilities in the EU Financial System – September 2021



JOINT COMMITTEE OF THE EUROPEAN SUPERVISORY AUTHORITIES

After over a year since the COVID-19 pandemic started, the financial sector has largely proved resilient in the face of its severe economic impact.

A range of fiscal, monetary and prudential response measures as well as the availability of capital buffers have been essential in dampening the impact of the crisis.

As the recovery begins, the appropriate phasing out of exceptional crisis measures plays a key role.

Despite the positive outlook, the expectations for economic recovery remain uncertain and uneven across member states. Vulnerabilities in the financial sector are increasing, not least because of side effects of the crisis measures, such as increasing debt levels and upward pressure on asset prices.

Also, expectations of inflation- and yield growth, as well as increased investor risk-taking and financial interconnectedness issues, might put additional pressure on the financial system.

Next to economic vulnerabilities, the financial sector is also increasingly exposed to cyber risk and information and communication technology (ICT) related vulnerabilities.

Financial institutions have to rapidly adapt their technical infrastructure in response to the pandemic, and the crisis has acted as a catalyst for digital transformation more generally.

The reliance of the financial system on technology and the scope for cyber vulnerabilities have further increased.

The financial sector has been hit by cyber-attacks more often than other sectors, while across the digital economy cyber-criminals are developing new techniques to exploit vulnerabilities.

In light of the above-mentioned risks and uncertainties, the Joint Committee advises the ESAs, national competent authorities, financial institutions and market participants to take the following policy actions:

1. Financial institutions and supervisors should continue to be prepared for a possible deterioration of asset quality in the financial sector, notwithstanding the improved economic outlook.

In light of persisting risks and high uncertainties, supervisors should continue to closely monitor asset quality and provisioning in the banking sector, in particular of assets under support schemes. This includes identifying possible practices of under-provisioning.

Such monitoring is an important prerequisite when coordinating the unwinding of the various support measures.

2. As the economic environment gradually improves, the focus should in particular shift to allow a proper recognition of the consequences of the pandemic on banks' lending books, and that banks adequately manage the transition towards the recovery phase.

Banks may need to withstand possibly increasing credit risk losses, as a consequence of expiring payment moratoria and other public support measures, while maintaining adequate lending volumes.

Banks and borrowers experiencing financial difficulties should proactively work together to find appropriate solutions for their specific circumstances.

That should include not only financial restructuring, but also a timely recognition of credit losses. Other financial institutions, including investment funds, should monitor their investments in corporate bonds and into private lending.

3. Disorderly increases in yields and sudden reversals of risk premia should be closely monitored in terms of their impacts for financial institutions as well as for investors.

On the investor side, rising valuations across asset classes, massive price swings in crypto assets, and event-driven risks (such as GameStop, Archegos, Greensill) observed in 1Q21 amid elevated trading volumes raise questions about increased risk-taking behaviour and possible market exuberance.

Rising yields could result in higher funding costs for banks and increase default risks for corporates via higher borrowing costs.

Supervisors, policy makers and financial institutions should also continue to develop further actions to accommodate a “low-for-long” real interest rate environment and risks its entails against the background of rising in inflation. This includes addressing overcapacities in the financial sector.

4. Policymakers, regulators, financial institutions and supervisors can start reflecting on lessons learnt from the COVID-19 crisis. While the EU

economy is still subject to high risks, some lessons learnt have, for example, already been reflected in EIOPA's advice on the Solvency II review.

EIOPA recommends in its opinion that supervisors should have additional powers, including a macroprudential toolkit to tackle systemic risk, such as restrictions on distributions of dividends to preserve insurers' financial position in periods of extremely adverse developments.

In the banking sector, the crisis has underlined the need to advance the Banking Union, and to achieve its potential additional benefits of cross-border financial flows, private risk sharing, and exploiting economies of scale in a larger market.

The ongoing crisis also highlighted the critical importance of coordinated approaches among national competent authorities.

5. Financial institutions and supervisors should continue to carefully manage their ICT and cyber risks. They should ensure that appropriate technologies and adequate control frameworks are in place to address threats to information security and business continuity, including risks stemming from increasingly sophisticated cyber-attacks.

It will be important for EU financial institutions to achieve a high common level of digital operational resilience, and to swiftly put in place an EU-wide common framework for digital operational resilience.

An important aspect of digital operational resilience is proper management of risks around ICT outsourcing, including chain outsourcing. Additionally, there is increasingly a need for financial institutions to carry out resilience testing in proportion to the risks faced and in a consistent manner.

To read more:

[https://www.eiopa.europa.eu/sites/default/files/joint-committee/jc-2021-45-joint-committee-autumn-2021-report-on-risks-and-vulnerabilities.pdf?fbclid=IwAR1kJp7I\\_WF41wzeot\\_GQAb1P2NbcLB1AnucPdb2eNeuV4167HJVzRB1RZk](https://www.eiopa.europa.eu/sites/default/files/joint-committee/jc-2021-45-joint-committee-autumn-2021-report-on-risks-and-vulnerabilities.pdf?fbclid=IwAR1kJp7I_WF41wzeot_GQAb1P2NbcLB1AnucPdb2eNeuV4167HJVzRB1RZk)

## JOINT COMMITTEE REPORT ON

## RISKS AND VULNERABILITIES IN THE EU FINANCIAL SYSTEM

SEPTEMBER 2021

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## ESAs highlight risks in phasing out of crisis measures and call on financial institutions to adapt to increasing cyber risks



The three European Supervisory Authorities (EBA, EIOPA and ESMA - ESAs) issued their second joint risk assessment report for 2021. The report highlights the increasing vulnerabilities across the financial sector, the rise seen in terms of cyber risk and the materialisation of event-driven risks.

As the recovery begins, the appropriate phasing out of exceptional crisis measures plays a key role. Despite the positive outlook, the expectations for economic recovery remain uncertain and uneven across member states.

Vulnerabilities in the financial sector are increasing, not least because of side effects of the crisis measures, such as increasing debt levels and upward pressure on asset prices.

Expectations of inflation- and yield growth, as well as increased investor risk-taking and financial interconnectedness issues, might put additional pressure on the financial system.

The financial sector is also increasingly exposed to cyber risk. The financial sector has been hit by cyber-attacks more often than other sectors, while across the digital economy, cyber-criminals are developing new techniques to exploit vulnerabilities.

Financial institutions will have to rapidly adapt their technical infrastructure in response to the pandemic, and the crisis has acted as a catalyst for digital transformation more generally.

Finally, the materialisation of event-driven risks (such as GameStop, Archegos, Greensill), as well as rising prices and volumes traded on crypto-assets, raise questions about increased risk-taking behaviour and possible market exuberance.

Concerns about the sustainability of current market valuations remain, and current trends need to show resilience over an extended period of time for a more positive risk assessment.

In light of the above-mentioned risks and uncertainties, the ESAs advise national competent authorities, financial institutions and market participants to take the following policy actions:

- financial institutions and supervisors should continue to be prepared for a possible deterioration of asset quality in the financial sector, notwithstanding the improved economic outlook;

- as the economic environment gradually improves, the focus should shift to allow a proper assessment of the consequences of the pandemic on banks' lending books, and banks should adequately manage the transition towards the recovery phase;
- disorderly increases in yields and sudden reversals of risk premia should be closely monitored in terms of their impacts for financial institutions as well as for investors;
- financial institutions and supervisors should continue to carefully manage their ICT and cyber risks.

The ESAs also consider that policymakers, regulators, financial institutions and supervisors can start reflecting on lessons learnt from the COVID-19 crisis.

To read more:

[https://www.eba.europa.eu/sites/default/documents/files/document\\_library/Publications/Reports/2021/1019147/JC%202021%2045%20-%20Joint%20Committee%20Autumn%202021%20Report%20on%20Risks%20and%20Vulnerabilities.pdf](https://www.eba.europa.eu/sites/default/documents/files/document_library/Publications/Reports/2021/1019147/JC%202021%2045%20-%20Joint%20Committee%20Autumn%202021%20Report%20on%20Risks%20and%20Vulnerabilities.pdf)

## ESMA Report on Trends, Risks and Vulnerabilities



### Risk summary

EU financial markets continued their recovery during the first half of 2021 with valuations at or above pre-COVID-19 levels, as the global economic outlook improved, with COVID-19 vaccine roll-outs and amid sustained public policy support.

Fixed income valuations, notably for HY corporate bonds are now far above their pre-COVID-19 levels in a context of increasing corporate and public debt.

Increased risktaking behaviour has led to volatility in equity (e.g. GameStop related market movements) and crypto asset markets, as well as to the materialisation of event-driven risks such as in the case of Archegos or Greensill.

Going forward, we expect to continue to see a prolonged period of risk to institutional and retail investors of further – possibly significant – market corrections and see very high risks across the whole of the ESMA remit.

Current market trends will need to show their resilience over an extended period of time for a more positive risk assessment to be made.

The extent to which these risks will materialise will critically depend on market expectations on monetary and fiscal policy support, as well as on the pace of the economic recovery and on inflation expectations.

ESMA remit	Level Outlook	Risk categories	Level Outlook	Risk drivers	Outlook
Overall ESMA remit		Liquidity		Macroeconomic environment	
Securities markets		Market		Interest-rate environment	
Infrastructures and services		Contagion		Sovereign and private debt markets	
Asset management		Credit		Infrastructure disruptions	
Consumers		Operational		Political and event risks	

Note: Assessment of the main risks by risk segments for markets under ESMA's remit since the last assessment, and outlook for the forthcoming quarter. Assessment of the main risks by risk categories and sources for markets under ESMA's remit since the last assessment, and outlook for the forthcoming quarter. Risk assessment is based on the categorisation of the European Supervisory Authorities (ESA) Joint Committee. Colours indicate current risk intensity. Coding: green=potential risk, yellow=elevated risk, orange=high risk, red=very high risk. Upward-pointing arrows indicate an increase in risk intensity, downward-pointing arrows a decrease and horizontal arrows no change. Change is measured with respect to the previous quarter; the outlook refers to the forthcoming quarter. ESMA risk assessment based on quantitative indicators and analysts' judgement.

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### The report:

[https://www.esma.europa.eu/sites/default/files/library/esma50-165-1842\\_trv2-2021.pdf](https://www.esma.europa.eu/sites/default/files/library/esma50-165-1842_trv2-2021.pdf)

## Central bank digital currency: the future starts today

Benoît Cœuré, Head of the BIS Innovation Hub, at The Eurofi Financial Forum, Ljubljana



Distinguished guests, ladies and gentlemen.

Thank you for inviting me to speak here today. We all experienced how the pandemic accelerated the shift to virtual events, but I am pleased that today we are gathering in person.

Yet the world is not returning to the old normal. Payments are a case in point. The pandemic has accelerated a longer-running move to digital.

Mobile and contactless payments are already part of our daily lives; QR codes and "buy now, pay later" options are gaining popularity; gloves, badges and Olympic uniforms with payment functions are being prepared for the Beijing Winter Olympics; and the tech-savvy generation will soon dream about money and payments for the metaverse.

Alongside these developments, the world's central banks are stepping up efforts to prepare the ground for digital cash – central bank digital currency (CBDC). They have a job to do – delivering price stability and financial stability – and they must retain their ability to do it.

Let me explain.

Central bank money has unique advantages – safety, finality, liquidity and integrity. As our economies go digital, they must continue to benefit from these advantages.

Money is at the heart of the system and it has to continue to be issued and controlled by trusted and accountable institutions which have public policy – not profit – objectives.

Central bank money will have to evolve to be fit for the digital future.

So what are the priorities now? Know where you are going – as Dag Hammarskjöld once said<sup>2</sup>, "only he who keeps his eye fixed on the far horizon will find the right road". And get going.

Let me elaborate.

Why do we need to know where are we going? Because today, the financial system is shifting under our feet.

Big techs are expanding their footprint in retail payments. Stablecoins are knocking on the door, seeking regulatory approval. Decentralised finance (DeFi) platforms are challenging traditional financial intermediation. They all come with different regulatory questions, which need fast and consistent answers.

Banks are worried about the implications of CBDCs for customer deposits. Central banks are mindful of these concerns and are working on answers. They see banks as part of future CBDC systems. But make no mistake: global stablecoins, DeFi platforms and big tech firms will challenge banks' models regardless.

Stablecoins may develop as closed ecosystems or "walled gardens", creating fragmentation. With DeFi protocols, any concerns about the assets underlying stablecoins could see contagion spread through a system. And the growing footprint of big techs in finance raises market power and privacy issues, and challenges current regulatory approaches.

Will the new players complement or crowd out commercial banks? Should central banks open accounts to these new players, and under which regulatory conditions? Which kind of financial intermediation do we need to fund investment and the green transformation? How should public and private money coexist in new ecosystems – for example, should central bank money be used in DeFi rather than private stablecoins?

We urgently need to ask ourselves these kinds of questions about the future. This is the far horizon for the financial system but we are approaching it ever faster. Central banks need to know where they want to go as they embark on their CBDC journey.

CBDC will be part of the answer. A well-designed CBDC will be a safe and neutral means of payment and settlement asset, serving as a common interoperable platform around which the new payment ecosystem can organise. It will enable an open finance architecture that is integrated while welcoming competition and innovation. And it will preserve democratic control of the currency.

This brings me to my second message: the time has passed for central banks to get going. We should roll up our sleeves and accelerate our work on the nitty-gritty of CBDC design. CBDCs will take years to be rolled out, while stablecoins and cryptoassets are already here. This makes it even more urgent to start.

In the design thinking methodologies we use in the BIS Innovation Hub, the ideal product stands in a sweet spot at the intersection of desirability, viability and feasibility. When applied to CBDCs, these translate into three dimensions: consumer use cases, public policy objectives and technology.

We have to ask ourselves why consumers would want a CBDC and what would they want it to do? The recent European Central Bank (ECB) public consultation showed that they value privacy, security and broad usability.

In order to meet consumers' expectations, CBDCs need to be made to work most conveniently. Payment data must be protected. Digital functions that are not available with cash can be developed, such as programmability or viable micro-payments.

Then CBDCs should meet public policy objectives. Central banks exist to safeguard monetary and financial stability for the public good. CBDCs are a tool to pursue this through enhancing safety and neutrality in digital payments, financial inclusion and access, innovation and openness. Important questions remain. How can CBDC systems interoperate, and should offshore use be discouraged?

Technology opens up design choices. System design will be complex. It involves a hands-on operational and oversight role for central banks and public-private partnerships to develop the core features of the CBDC instrument and its underlying system. These features are: ease of use, low cost, convertibility, instant settlement, continuous availability and a high degree of security, resilience, flexibility and safety.

Complex trade-offs will be addressed by central banks including how to balance scale, speed and open access with security; and how to balance offline functionality with complexity and security.

Across the world, central banks are coming together to focus on their common mission. Charged with stability, they will not rush. They want to move fast, but not to break things.

Consultations with payment systems and providers, banks, the public and a broad range of stakeholders have begun in some countries. To build a CBDC for the public, a central bank needs to understand what they need, and work closely with other authorities. The BIS Innovation Hub is helping central banks. We already have six CBDC-related proofs of concept and prototypes being developed in our centres, and more to come.

The European Union is uniquely placed to face the future. You can build on a state-of-the-art fast payment system, on the strong protections provided by the General Data Protection Regulation and on the open philosophy of

the Second Payment Services Directive. The ECB's report on a digital euro sets the stage.

A CBDC's goal is ultimately to preserve the best elements of our current systems while still allowing a safe space for tomorrow's innovation. To do so, central banks have to act while the current system is still in place – and to act now.

I thank you for your attention.

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