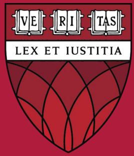

Program on International Financial Systems

Symposium on Building the Financial System of the 21st Century:

An Agenda for Europe and the United States

European Central Bank, Frankfurt - May 10-12, 2023

Final Report

SYMPOSIUM ON BUILDING THE FINANCIAL SYSTEM OF THE 21ST CENTURY: AN AGENDA FOR EUROPE AND THE UNITED STATES

The 21st Europe-U.S. Symposium of the Program on International Financial Systems was held at the European Central Bank in Frankfurt, Germany on May 10-12, 2023. Participants discussed ongoing capital market reforms in Europe, the U.K. and the U.S.; recent stresses in the U.S. and European banking sectors; implications of sanctions against Russia; and the fight against inflation.

Topic 1: Ongoing Capital Market Reforms in Europe, U.K. and the U.S.

In Topic 1, participants addressed the current status of capital markets as well as the progress and prospects for capital market reforms in Europe and the U.S. Much of the discussion focused on the slow progress of the EU Capital Markets Union effort and the ambitious regulatory reform drive by the U.S. Securities and Exchange Commission. Participants also discussed prospects for transatlantic cooperation and how regulators should address the challenges of blockchain and other new technologies. Participants observed that market reforms in Europe and the U.S. seemed to be moving in different directions. While the EU was painstakingly working to surmount challenges of fragmentation and market infrastructure by developing legislation, U.S. regulators were using their discretion to create new rules on a diverse range of financial activities. The U.K., meanwhile, was still trying to chart its future as a global financial center in a post-Brexit landscape.

EU: Capital Markets Union

Participants discussed at length the ongoing efforts to create a Capital Markets Union in the EU. CMU was seen as necessary by many participants as a way of diversifying financial services and improving capital allocation. They noted that financial services in the EU remained bank-dominated, leaving gaps in funding for both venture capital and long-term investments. Participants agreed that deeper capital markets were needed to fund the kind of large-scale, long-term investments in infrastructure and private-sector fixed capital that would be needed to support the green transition, widespread digitalization, and overall economic growth. In addition, many saw well-functioning capital markets as essential for price discovery and efficient allocation of capital.

While participants widely accepted the need for deeper and more efficient capital markets in Europe, participants agreed that EU capital markets were far from meeting that need. Despite efforts to create region-wide capital markets, both equity and fixed income markets remained fragmented across multiple financial centers. Participants noted that, compared to the U.S. and U.K., fixed income markets remained small relative to equities. Liquidity in fixed income markets was low and had been decreasing since the ECB began its asset purchase programs. This had the potential to compound pressure on banks as well. Some participants argued that the most crucial challenge to the functioning and usefulness of capital markets was an insufficient investor base. In terms of provision of long-term capital, there was a lack of large players such as private pension funds and life insurers. The retail investor base was also seen as limited in size and highly risk-averse. Therefore, a key question for many participants was where the capital would come from to fund growth, green transition, and digitalization, especially given governments' budget constraints.

For all these reasons, the EU had embarked on the effort to create a Capital Markets Union in 2015. Despite high hopes and the apparent need to invigorate the regions' capital markets, participants agreed that it was at best an unfinished project. Some participants argued that the EU was making good but incremental progress and that CMU was moving toward completion;

others expressed skepticism, on the basis that practical and political divisions remained too substantial to fully bridge.

Participants noted several practical impediments to the realization of a liquid, unified EU capital market. Trade data was a particular concern. The lack of a consolidated tape made it difficult for market participants to make pricing and trading decisions, especially given the already fragmented nature of European markets. While much of the focus to date had been on equities, some participants made the case that data on the much larger bond markets was a far bigger problem—they noted that most bond trading data was delayed for four weeks, compared to fifteen minutes in the U.S. Some participants raised concerns about the lack of data standardization as well, including in ESG finance. Securitization was hampered by the lack of a unified framework. Volume caps on trading platforms further fragmented trading and liquidity. There remained little institutional infrastructure to support venture capital and early stage investments. And although the EU had made clear that London-based clearing of euro-denominated derivatives would be ending in 2025, there was not yet a viable continental substitute. Taken together, these impediments contributed to fragmentation and reduced liquidity and price discovery. Several participants argued that, as a result, many European companies were shifting their fundraising to the U.S.

Participants identified several political obstacles to cooperation. Most importantly, CMU was meant to be built on the foundations of 27 different national systems, with different traditions, rules, supervisory authorities and cultures, tax systems, and bankruptcy regimes. To come to an agreement on best practices was unsurprisingly difficult, even if efficiencies could clearly be achieved by creating a single system. Although there had been considerable progress made as seen in policies including the Markets in Financial Instruments Directives (MiFID 1 and 2) and the European Market Infrastructure Regulation (EMIR), and Markets in Crypto Act (MiCA), participants noted that common rules were riddled with waivers and exceptions based on the particular preferences of national authorities. In particular, it was argued that smaller local markets feared that they would lose out if union actually occurred, as agglomeration and network effects rewarded scale. Thus, some of the fragmentation of capital markets was by design, even if practices that encouraged it violated the principles of CMU.

Another political obstacle was the resistance of some EU members to fiscal union. Because of concerns about shared fiscal obligation, pan-EU bond issuance remained extremely limited. This meant that, unlike in the U.S. or Japan, there was no deep and liquid market in universally-recognized default risk-free asset; instead, pricing and maturity profiles of national bond issues diverged considerably. Some participants noted that the relatively small number of pan-EU bonds had been oversubscribed among investors and argued that the evident demand for them and the positive experience of the EU in issuing them would lead to much more issuance and thus reduce fragmentation and pricing confusion in fixed incomes. Others were skeptical that pan-EU bonds would ever take their place alongside U.S. Treasury Bills as major global securities, despite the demonstrated demand.

A number of participants made the case that serious progress on CMU would have to wait until European Banking Union had been fully achieved. Due to remaining national differences in bank rules, supervision, and deposit insurance, there was as yet no common framework or market for securitization, which was seen as one of the key gaps in European capital markets.

On the investor side, participants pointed to the relative lack of institutional investors willing to participate in capital markets. A major goal for some participants was the expansion of private pension funds. They spoke positively about some efforts to support such funds, including the Pan-European Pension Product (PEPP). However, despite having created the necessary legal infrastructure for voluntary, company-based, cross-border pension savings, uptake had been limited outside of the Netherlands and Scandinavia. Most employees continued to rely on public, corporate, and occupationally-based pension funds, which were seen as insufficient sources of long-term capital for Europe. Meanwhile, many participants were frustrated by the lack of participation by EU life insurance companies in capital markets. They placed the blame for this non-participation squarely on regulation—although life insurers naturally have long time horizons, their ability to match the maturity of assets and liabilities had been stifled by Solvency II. Finally, many participants argued that much of Europe lacked a tradition of retail investing. Households often remained risk averse and lacked knowledge about potential opportunities in capital markets. Even investor vehicles like mutual funds (UCITS) remained under-utilized compared to similar offerings in the U.S. or U.K.

Despite continuing challenges, a number of participants expressed optimism about progress toward CMU, with one describing it as a "glass half full." Although CMU had not met the initial target date of 2019, which had always been seen as extremely ambitious, some important advances had been made, including the establishment of the single rulebook, creation of PEPP, and establishment of the Emissions Database for Global Atmospheric Research (EDGAR) to support the development of ESG finance. That said, even most optimists were focused on the future. Several argued that a clear political commitment to progress on CMU had been made by the Parliament, Council, and Commission. They also pointed to elements of the current action package, including the Listing Act, establishment of consolidated tape, and revision of European Market Infrastructure Regulation (EMIR) to improve transparency in derivatives markets. A number of participants also spoke positively about the quality of EU policymaking, including rigorous and methodical cost-benefit analysis, which would help to build political consensus around items in the action package.

Other participants were less sanguine. They noted that the clock was ticking on the current action plan and anticipated that only a few elements could be achieved before the 2024 European Parliament election, at which point a new legislative cycle would begin. Going to the next cycle would mean proposals introduced around 2025 with implementation unlikely before 2028. Given the deliberate pace of EU policymaking, participants argued that policymakers should concentrate on the most urgent and high impact policies. Chief among them for nearly all participants was the need to establish a consolidated tape for both equity and bond markets. Participants strongly advocated that the consolidated tape include both pre- and post-trade data and needed to be made available in a way that would be affordable to market participants. While they recognized that there may be waivers made for some smaller markets, they called for maximizing comprehensiveness and not delaying any further.

U.S.: Everything, Everywhere, All at Once

In contrast to the EU, where policymakers were moving slowly but methodically to fill in gaps in weak capital markets, participants characterized current U.S. capital markets reform efforts as "everything, everywhere, all at once." They noted that the SEC currently had 40-50 materially significant rules under consideration. For public companies, these included proposed rules on climate change disclosures, beneficial ownership, shareholder exclusions, and employee diversity. For asset management, rules addressed liquidity and pricing for money market funds, custody, outsourcing, and preferential treatment of clients, among others. For crypto assets, rules addressed digital engagement and cybersecurity. For trading, various proposals sought to redefine best execution (including restricting payment for order flow), expand central clearing of Treasuries and repos, adopt T+1 settlement of equities, and revise governance of clearing houses.

Many participants were concerned with this expansive agenda, which they characterized as rivaling the early years after passage of the Dodd-Frank Act. At a general level, many felt that U.S. capital markets were actually in very good shape, offering the best trading conditions, market integrity, and liquidity in the world. While they agreed that tweaks in a number of areas would be useful, they did not see an economic justification for such a major change in so many areas. Several participants suggested that the actual motivation was driven by politics rather than actual defects in regulation.

A number of participants also raised procedural concerns. They argued that many proposals were not being subjected to rigorous cost-benefit analysis. Looking more broadly, they made the case that there had been insufficient attention to the cumulative effects of so many regulatory changes, as well as the possible interactions among various proposed changes. Moreover, they worried about the crowded and clashing timelines for completion and implementation, including a compressed timeline for public comment. Some market participants could be affected by dozens of proposed rule changes, and several participants suggested that it would be difficult for any firm or financial institution to provide reasoned responses to so many proposed rules in a short period of time.

All in all, participants were very concerned about the extent of regulatory uncertainty, as well as uncertainty about the mutual effects of so many rule changes. It was argued that, instead of enhancing market integrity and liquidity, this expansive regulatory agenda would create unnecessary costs of compliance and disrupt trading in the world's largest and most liquid capital market.

Two additional elements added to the uncertainty. First, participants predicted that many proposed rule changes would be challenged in court and that some of those challenges would likely be successful. Such challenges could be based either on the grounds that the SEC's rulemaking agenda exceeded its legal mandate or that it had violated procedural requirements through inadequate cost-benefit analysis and consideration of public comment. Uncertainty over whether rules would be upheld and how long they might be delayed through litigation could complicate business decisions for many market participants. Second, the fact that the regulatory agenda was being carried out through agency rulemaking rather than through legislation (in marked contrast to the EU) suggested that much of it could be reversed under subsequent SEC

leadership or a new presidential administration. This raised the prospect of further regulatory instability, which would increase uncertainty and compliance costs for market participants.

U.K.: Managing Divergence and Finding New Markets

Participants saw the challenges facing the U.K., as well as the approach of regulators, to be quite different from those of the EU and U.S. As the largest, most efficient, and most comprehensive financial market center in Europe, the U.K. had previously dominated trading in EU securities and euro-denominated derivatives. However, due to Brexit, aspects of that unrivaled status were being chipped away. EU regulators had made clear that London's role in clearing euro-denominated derivatives would expire in 2025, regardless of whether a satisfactory alternative had appeared within the EU. Trading desks had also been migrating toward EU member states.

Moreover, the U.K. had moved from being a global financial rule-maker due to its position as dominant financial center in the EU, to being a rule-taker. This was seen as particularly true in new areas of regulation including ESG and crypto assets, where there was little pre-Brexit legal framework. Given the global weight of the EU in those areas as well as London's continued reliance on EU business, participants argued that the U.K. had little scope for making its own way.

Nonetheless, many participants were complimentary of the U.K. approach. They argued that U.K. financial policy makers had made a rational decision to serve new markets outside the EU, by making itself attractive to investors and fundraisers in Asia, the Middle East, and elsewhere. Given its continuing reliance on the EU as well as the legacies of EU rules within the U.K., however, its scope for remaking its capital markets regulation was limited. In other words, rather than fundamentally revising its regulatory system, the task of U.K. policymakers would be to intelligently manage incremental divergence. A number of participants argued that U.K. policymakers were doing exactly that, taking on a methodical review of regulations from a cost-benefit perspective, while also seeking to maximize efficiency and effectiveness of market supervision.

Looking Forward: Technology and Capital Markets Reform

Looking to the future, participants recognized that technological developments would continue to drive shifts in capital markets, necessitating new regulations and supervisory practices. In particular, there was considerable discussion of the potential of blockchain technology to transform capital markets.

A number of participants argued that blockchain applications were well on their way to transforming capital markets, not only through the growth of crypto assets but also through the back-end of improving settlement, custody, clearing, asset transfer, and data disclosure. (However, it was agreed that blockchain would not be an efficient way to do trading, given the time required for verification, as compared to current trading technologies that operated in milliseconds.) Advocates of this perspective noted that not only technology firms but also many major established financial institutions were already experimenting with blockchain applications. Moreover, blockchain was increasingly widely and successfully used in other areas of business, such as supply chain management, which they saw as proof of concept.

Two aspects of blockchain technology in particular were seen as driving its usefulness in capital markets. One was its use in self-executing contracts, which would allow for instantaneous transfer of assets. This could allow for considerable disintermediation, with settlement time going from T+1 to T+0 and, at least for some customers, removing the need for custody. The second was its transparency. By allowing a complete and verifiable record of all transactions, it was argued, blockchain could revolutionize data disclosure to any relevant party, giving markets and supervisors rapid, inexpensive, and comprehensive trading data.

Other participants were more skeptical. While acknowledging widespread experimentation with blockchain among financial institutions, they questioned whether there was a real use-case to be made for it. They noted that the functions that blockchain could offer were already provided at low unit cost by existing technologies and that the fixed cost of changing over to blockchain would be enormous. Moreover, they predicted that regulators and supervisors would require extensive testing and consultation before allowing key functions to be moved to the blockchain. The most likely use of blockchain from this perspective would be recordkeeping.

There was some discussion of whether crypto assets or tokenization would necessarily accompany the advance of blockchain technology in capital markets. Some participants argued that the two were not logically linked, and each function could easily be pursued separately. Others argued that it would not be possible to have digital processes without digital assets. They made the case that tokenization would enable faster settlement, better recordkeeping and transparency surrounding trading, and frictionless cross-border transactions. All of these would be attractive to investors, even if pure crypto assets like bitcoin remained peripheral to capital markets. It was also noted that crypto assets and digital tokens have proven popular among young investors and in some parts of the world, suggesting that they had staying power.

Finally, participants identified several challenges that would need to be surmounted for blockchain to transform capital markets. While some pilot programs had shown promise, participants agreed that those programs were scalable. A number of participants also expressed concern about environmental sustainability, given the energy required to verify public blockchain transactions. It was also noted that supervisors would require convincing evidence of the security of blockchain-based finance—not only the potential for cybercrime, but also the fact that self-executing contracts could make it impossible to correct erroneous transactions. There were also concerns about the potential effects on financial stability. In particular, the notion of frictionless trading and no intermediaries raised fears that a blockchain-based financial system would be much more susceptible to crises and contagion than the current system.

Topic 2: Recent Stresses in the U.S. and European Banking Sectors

In Topic 2, participants addressed recent stresses in the U.S. and European banking sectors, including bank failures in the U.S. and Switzerland. They discussed the potential for further contagion, the role of the central banks as lender of last resort, the operation of resolution procedures, and more generally whether current regulations and supervisory practices are sufficient to ensure financial stability and banking system stability in Europe and the U.S.

Idiosyncratic Failures or Portent of Crisis?

Participants considered alternative accounts of recent bank failures in the U.S. and Switzerland. One account focused on idiosyncratic factors including mismanagement of risk and overconcentration at the failed banks, in which case there was limited likelihood of a broader crisis. An alternative account was that they reflected a failure of regulation and supervision, which would be an ongoing cause for concern for the banking system. A third account was that banks were not properly prepared for rising interest rate hikes or the likelihood of rising non-performing loans. Finally, there was considerable concern about the rapidity with which bank runs had occurred.

Discussion of failed banks focused particularly on U.S.-based Silicon Valley Bank. Participants agreed on a range of management mistakes that had led to the failure. Ongoing issues had included overconcentration in a particular geography and industry. Moreover, SVB's poor risk management surrounding rising interest rates had caused the value of its portfolio of U.S. Treasury Bonds to fall considerably in market value.

While all of these factors had created conditions for loss of value of assets, participants agreed that SVB's greatest risks were to be found in its deposits. They noted that SVB carried an inordinately large share of uninsured deposits—approximately 97%, which was double the average in the banking system. Signature Bank was also over 90%, while First Republic was 68%. Moreover, such deposits were highly concentrated. While management apparently expected the depositor base to be quite stable, since it was made up primarily of local companies that used the bank for a variety of services, that did not turn out to be the case. Rather, once rumors started that the bank was in trouble, uninsured depositors had an incentive to withdraw their funds, creating a self-fulfilling prophecy. In the case of SVB in particular, many participants also blamed the speed with which information and misinformation moved among depositors and via social media, which took bank management and supervisors by surprise. Uninsured deposits had also played a role in the failure of Credit Suisse, albeit mostly in the form of private banking customers who had withdrawn deposits in response to news of scandals and losses.

In retrospect, many of the problems of the failed banks, from Credit Suisse to SVB, were clear to participants. This raised the question of who was to blame for the failures. Some participants put the blame squarely on bank management, which had been responsible for poor risk management and for not making arrangements to shore up liquidity in advance of the crisis. Others blamed supervisors. Some cited the Fed report of April 28 on the failure of SVB, which found that Fed supervisors "failed to take forceful enough action" to deal with what it called a "textbook case of

mismanagement.” The report criticized supervisors for not having pushed bank management to fix its problematic management of interest rate and liquidity risk. A number of participants agreed that supervisors needed both to improve their monitoring and modeling of interest rate risk and to mandate quicker solutions to major issues. Others were less critical of supervisors, arguing that there was no *a priori* reason to mandate urgent action because the primary problem had been depositors’ herd behavior rather than the quality or quantity of assets, capital, and liquidity. To these participants, the failure of SVB and other U.S. banks was unnecessary, and could have been avoided by prompt provision of liquidity from the central bank. In this sense, they were most critical of the crisis management of both bank management and the Fed in its role as lender of last resort. Credit Suisse was seen by many as a different case, in which ongoing poor decisions and by bank management had been allowed by supervisors who were dealing with a bank that was too big to fail.

Finally, some participants cautioned that the financial system should not yet heave a sigh of relief. They noted that many banks would be adversely affected by rising interest rates and the likelihood of recession and failures in commercial real estate in both Europe and the U.S. Moreover, some predicted that with rising interest rates, it was likely that more depositors would shift their money from bank deposits to money market funds, exacerbating the potential problem of deposit runs. Participants cautioned that a large number of U.S. regional banks were exposed to those challenges, as well as geographic and sectoral concentration of assets and deposits. Even in the EU, where banking supervision had so far appeared to be highly effective in maintaining stability in the banking system, it seemed likely that some banks would not be adequately prepared for losses due to macroeconomic conditions. For those participants, the real test of bank management and supervision was still to come.

Managing Bank Failures

In light of the recent bank failures, participants discussed whether supervisors and central banks had the necessary tools at their disposal to manage bank runs and bank failures.

One key dimension of the debate was about the role of central banks as lender of last resort. Several participants argued that some of the U.S. bank failures were unnecessary, even given their errors in risk management and business models. Instead, some participants argued, the problem was that the Fed was not properly fulfilling its role as lender of last resort. They made the case that in the event of a run on deposits, there was no level of capital or liquidity that would reassure uninsured depositors that they would get their money back. Even for a solvent bank (which SVB was before the run), rapid deposit outflows could force fire sales of assets that would cause substantial losses and push it into insolvency. For these participants, it was clear that only the central bank in its role as lender of last resort could stop a run.

These participants pointed to Silicon Valley Bank as an example. Due to the rapidity of depositor withdrawals, it had been forced to sell off some of its U.S. Treasury Bonds that had been intended to be held to maturity, leading to a substantial loss. It was argued by some that, if the Fed had stepped in as lender of last resort, SVB would not have had to take that loss and may have been able to remain solvent. Moreover, the speed with which deposits had been withdrawn did not allow for alternative solutions such as a takeover or recapitalization.

Several issues were put forward as problems that needed to be addressed in order to improve the Fed's ability to function as lender of last resort. Some blamed the Fed, arguing that leaders were unnecessarily cautious about discount window lending due to fears of making a mistake or of political blowback. Others raised concerns about the function of the discount window itself, and the need to improve speed, process, and availability. Participants were particularly critical of the fact that the discount window was only open during traditional banking hours; they agreed that in a world of mobile money, the lender of last resort needed to be available 24/7. There were also questions raised about the process by which discount window loans were approved—originally, those decisions were made by the president of the relevant reserve bank, but while that authority had been shifted to the Board, no clear chain of authority had been established for reserve banks to notify the board and to get a decision.

A number of participants argued that the problem was at least as much about banks' reticence to access the discount window as about the attitudes or procedures of the Fed. While many participants agreed that using the discount window should be a routine liquidity operation for a solvent bank, bank managers worried that disclosure of such borrowing would give depositors, lenders, and counterparties the impression that the bank was in trouble, exacerbating whatever problem it was facing. The "stigma" of discount window lending had made banks delay going to the Fed until it was too late. To try to encourage banks to access emergency liquidity despite the discount window stigma, the Fed had actually created a new facility under 13(3) that would allow borrowing at par. However, use of 13(3) requires Treasury approval, raising the issue as to whether the Fed would use its independent authority under the discount window in the future to stem bank runs.

An added challenge was the difficulty of distinguishing between liquidity and solvency crises. By tradition and in some cases by law, central banks are only allowed to lend to solvent institutions. However, participants observed that in a funding crisis this distinction was not always clear. Moreover, without quick action, liquidity crises could turn into solvency crises if banks were forced to sell assets. Some participants also questioned whether current accounting practices might exacerbate the challenge for a bank facing a run. They noted that as soon as any hold-to-maturity assets are sold, banks are required to mark all such assets to market. They noted that this had been one of the reasons SVB had been declared insolvent. While one possible solution would be to mark all securities to market, most participants were against the idea, on the basis that it would reduce banks' ability to carry out maturity transformation and made no sense if the securities were actually intended to be held to maturity. The real alternative, they argued, was to use these securities (valued at par) to access repos or the Fed discount window.

While much of the discussion focused on crisis liquidity, participants also discussed bank resolution. They recognized that, depending on the circumstances, several different approaches could work, ranging from government takeovers and bridge banks to private sector takeovers to insolvency. They gave good evaluations of the role of the FDIC in taking over or facilitating private sector takeovers of failing institutions, although some expressed concern that uninsured deposits had been guaranteed in the recent failures. There was also strong support for the EU's Single Resolution Mechanism for systemically important banks, although it was noted that national resolution mechanisms were more varied in their powers and capacity.

A question of particular concern for participants was whether the Credit Suisse failure had been handled appropriately. While they expressed relief that the resolution had gone smoothly (albeit not according to its resolution plan), two issues were raised. One was that the takeover by UBS meant that the merged bank would be much too big to fail or perhaps even to supervise. The other was over the treatment of Credit Suisse's AT1 bonds. Several participants were adamant that it had been wrong to wipe out AT1 bondholders while not doing the same for equity owners. They argued that in all cases equity holders should be the first to lose value, and they expressed concern that the Swiss authorities' decision would significantly raise the price of bail-inable debt for other banks. Thus, they were supportive of official statements suggesting that the SRM would not have done it that way. Others disagreed, noting that Credit Suisse's AT1 bonds had a write-down feature in which their value would be written down when capital dropped below 5.1%, whereas there was no such provision for equity holders. Thus, they argued, the bonds worked exactly as designed and investors should have been aware of the risk they were taking.

Challenging Conditions Still Ahead

While participants generally felt that supervisors had managed recent bank failures effectively, participants identified additional challenges for banks in Europe and the U.S.

A common challenge for banks in Europe and the U.S. was rising interest rates. On the bright side, rising interest rates were seen as offering some benefits to banks by allowing for greater spreads between deposits and loans. At the same time, however, rising rates reduced the value of banks' lending and securities portfolios. This would particularly affect banks with large shares of mark-to-market securities. Rising rates also would challenge banks (as well as non-banks) with high shares of short-term funding rather than stable deposit bases. Although the risks of such business models had been widely known before interest rates began to rise, participants observed that many banks had failed to reduce these risks when interest rates were low, leading to greater vulnerability to rising rates. A number of participants made the case that this negligence had been tolerated by supervisors, allowing it to be a more widespread issue. For example, Fed stress test scenarios had focused on recessionary shocks followed by interest rate cuts that would make bonds a buffer to losses rather than a source of losses in an inflationary period.

Rising interest rates also created indirect risks for banks. Many participants anticipated that recessions, or at least substantial slowdowns, were likely in Europe and the U.S. as a result of anti-inflationary policies. Those economies with the highest and most persistent inflation, like the U.K., were seen as especially likely to suffer recession. The risk of recession was seen as likely to increase non-performing loans and capital charges, challenging many banks. Regardless of whether recessions materialized, participants anticipated significant weakening of commercial real estate, raising the likelihood that banks with high direct or indirect exposure to commercial real estate would experience significant losses for which they might not be prepared. It was expected that the second-order effects of interest rate hikes would take up to two years to fully materialize.

A final challenge that was discussed was the increasing speed of bank runs, and the implications for banks and supervisors. A number of participants argued that digital runs were the wave of the future, with withdrawals happening instantaneously and at any time. Some participants countered that the ability to move large amounts of money quickly was not a new phenomenon, and that the

real innovation seen in SVB's rapid demise had been the rapidity with which information or misinformation had traveled among depositors and investors. They called for better communications by banks, central banks, and supervisors to reassure depositors. There was also strong agreement that the rapidity of digital bank runs required better crisis management by central banks—in particular, being more proactive about pushing banks toward the discount window before a run materialized, allowing the discount window to be accessed at any time of day or night, and establishing clearer standards and procedures for emergency lending. Nevertheless, some participants remained skeptical that the potential speed of digital-age runs carried significant implications for supervisors and central banks. They noted that, even though that was one of the apparent lessons of SVB, other banks including First Republic had failed despite having enough time to gain moral support of regulators and even large-scaled deposits from major banks. They argued that getting the fundamentals of risk management right remained more important.

Implications for Regulation

Participants considered several implications of the recent crises for banking regulation and supervision. These included increasing existing requirements for capital, liquidity, and supervision as well as expanding deposit insurance.

Participants showed little appetite for increasing capital and liquidity requirements. They noted that, once a run had begun, there was no amount of capital that could save a bank, as liquidity would be the binding constraint. They also disagreed with the notion of expanding the liquidity coverage ratio, for two reasons. One was that no matter how high the liquidity coverage requirement was, a run on deposits would always breach the regulatory limit, exacerbating fears of depositors and counterparties. In other words, bank runs were fundamentally caused by lack of confidence. Second, they argued that trying to force ever-higher levels of liquidity buffers threatened the whole idea of banks as mechanisms for maturity transformation, which they saw as an essential function in the financial system. There was thus a strong consensus against the notion of narrow banks.

With regard to supervision, participants addressed two points. One was the claim that U.S. legislation to raise the asset minimums for enhanced supervision had contributed to recent bank failures. Several participants denied this was the case. They noted that of the failed banks, only SVB would have been subject to enhanced supervision under the previous standards and that in any event the bank's capital and liquidity actually met SIFI capital and net stable funding ratio requirements. Moreover, supervisors had pointed out a variety of concerns over a year prior to its failure. Others disagreed, making the case that if SVB had been classified as systemically important, supervisors would likely have demanded more prompt action to address flagged concerns such as lack of interest rate risk management.

A second point regarding supervision was the need to reassess whether supervisors were focusing on the right issues. It was noted, for example, that the 2021 report on SVB had included a laundry list of matters requiring attention with no clear prioritization among them. Several participants argued that supervisors needed to prioritize issues that could lead to failures rather than just taking a checklist approach. Among the lessons of recent bank failures in the U.S. and Europe, they pointed to the need to focus in particular on liquidity risk, stability of depositor

base, and concentration of assets and deposits. Some participants felt that this was particularly true for the U.S., arguing that EU banks typically had more traditional business models, for which existing supervisory practices were well-equipped. They also pointed to improvements in EU supervision since the Banking Union, including the ways in which the rigor and consistency of the Single Supervisory Mechanism had raised the quality of supervision among national authorities.

Several participants suggested that one element in improving the stability of banking systems should be expansion of deposit insurance, noting that one of the commonalities of the recent bank failures in the U.S. and Switzerland had been the extent of uninsured deposits. There was discussion of addressing this issue through raising deposit insurance limits or creating a separate category of particular business accounts with higher or perhaps unlimited guarantees. There were differing opinions as to whether this was a good idea; while some participants saw it as an effective way of reducing the likelihood of deposit runs, others felt that it could create moral hazard and that the wiser way of addressing the issue would be to encourage banks to diversify their deposit bases. Regardless of the advantages and disadvantages of these approaches to deposit insurance, however, few felt that it would be politically feasible, at least in the U.S., where it would require Congressional authorization to establish any of those policies.

Topic 3: The Fight against Inflation

Topic 3 addressed the emergence of inflation in the U.S. and Europe from 2021 and ongoing efforts to contain it. There was considerable discussion of the causes of inflation, central banks' responses, the prospects for returning to price stability, and implications for fiscal policy and financial stability.

Causes of Inflation

Participants discussed at length the causes of the current inflation, as well as the seemingly slow response by monetary authorities to its emergence. While supply and demand shocks driven by the COVID-19 pandemic and Russian invasion of Ukraine were seen as the original impetus for inflationary pressure, the actions of monetary and fiscal authorities also came under scrutiny as exacerbating those pressures and potentially extending inflation's duration and negative effects.

Participants agreed that there had been significant exogenous economic shocks since 2020. The pandemic had disrupted both supply and demand. On the supply side, restrictions on movement and gathering in many countries had reduced production of goods and disrupted shipping. Meanwhile, demand for goods in the U.S. and Europe fell much less than expected, largely due to fiscal support for households—and in some sectors, such as automobiles and electronics, demand actually rose as more people avoided public transportation and worked from home. Meanwhile, demand for in-person services and travel plummeted, leading companies to defer investment and retire capacity and leading many service workers to leave the sector. As pandemic restrictions were lifted, demand rose sharply again but labor was slow to return in enterprises ranging from restaurants to airlines. Overall, labor force participation had still not fully recovered in the U.S. and Europe as of 2023. The Russian invasion of Ukraine compounded the problem of rising prices, by creating a supply shock in energy and food. While the spikes in energy and food prices had mostly abated by the end of 2022, secondary effects were still working their way through the system.

High demand had been driven partly by fiscal policies that had been put in place to support households during the pandemic. While it was recognized that these policies had prevented severe recession, a number of participants argued that they had subsequently led to overheating. The U.S. pandemic package of early 2021, which was put in place as the economy was emerging from the worst effects of the pandemic, was cited as an example of a policy that created excess demand.

Monetary Policies and Inflation in Europe and the U.S.

Many participants blamed monetary policies in the U.S. and Europe for the situation. They argued that central banks had been too slow to recognize inflationary pressures that had begun to emerge with rising prices in fresh food and energy price spikes in mid-2021 at the same time as already tight labor markets. According to this interpretation, by the time the Bank of England and Fed began raising interest rates in late 2021 and early 2022 (respectively), wages had begun to rise rapidly and inflationary expectations had already become well-entrenched. The ECB had waited even longer to act, despite the earlier evidence from the U.K. and U.S. These participants

worried that, by waiting too long to act resolutely against inflation by dampening excessive demand, central bankers had created a wage-price spiral that would be painful and time-consuming to reverse.

If central banks had indeed been slow to recognize inflationary pressures, an important question was why. Some participants blamed mindset. Three main explanations were given for how that mindset had become entrenched in central banks.

One was the rise of the theory of "secular stagnation," which held that low growth potential among aging societies was holding down consumption and the natural rate of return. With low natural rates of return, advanced economy central banks had been operating on the basis of low or negative interest rates combined with quantitative easing since the Global Financial Crisis without encountering inflation. For those who expected that natural rates of return would remain low into the future, it seemed reasonable to anticipate that temporary supply and demand shocks would not be amplified by knock-on effects and wage-price spirals, leading them to believe that inflation was transitory in nature and did not call for monetary policy response.

A second interpretation was that central banks, while recognizing the potential risk of persistent inflation, were still much more concerned about downside risks to their economies. Having just come through the pandemic, facing new supply shocks, and expecting the reduction of fiscal support, they worried that the economy was still vulnerable. In this interpretation, central banks had chosen the lesser of two evils, although their predictions about the entrenchment of inflation turned out to be incorrect.

A third explanation was that central banks, especially the ECB and Bank of England, had relied excessively on complex dynamic stochastic general equilibrium (DGSE) models and had therefore discounted the incoming data that showed higher than expected price rises. Existing models, which had been built on the basis of the previous decades' price stability, were not equipped to deal with a changed world. Critics claimed that when real-time data conflicted with model predictions, the models often won out, slowing the response time and allowing inflationary pressures to grow unabated. In the case of the ECB, for example, it was argued that too much credence had been given to market expectations in the form of futures prices; however, they proved to be overoptimistic about the course of inflation.

Some participants were less critical of central banks. Some pointed out that monetary policy is generally not the first line of defense against supply shocks, as interest rate hikes can compound the negative effects on real demand caused by exogenous price hikes. Others pointed out that, despite apparently tight labor market conditions, total employment in the U.S. and Europe still had not fully recovered to pre-pandemic levels; thus, it was reasonable for central banks to expect that labor force participation would continue to rise and hold down wage increases. Finally, several argued that what had really shifted inflation from transitory to entrenched was the Russian invasion of Ukraine, which occurred just as food and energy prices were returning to trend. Had that not occurred, they felt that the policy shifts of the Fed, BOE, and ECB from starting in late 2021 would have sufficient to prevent wage-price spirals and inflationary expectations from forming.

Returning to Price Stability

A key set of questions for many participants was when and how economies in Europe and North America would return to price stability.

Participants noted that there was already divergence in inflation among those economies, despite having faced a common set of supply shocks. The Fed had moved most aggressively in raising interest rates and had seen the most significant reduction in inflation. In contrast, the U.K. was experiencing stubbornly high inflation even though the BOE had started its tightening cycle earlier than other central banks and had raised interest rates almost as fast as the Fed. The ECB was seen as not as far along in raising interest rates, partly due to its starting point (negative interest rates and large balance sheets) and partly because it had relied on models that had proved overoptimistic about the transitory nature of inflation.

The divergence among economies suggested that inflation would be stickier in the Eurozone and especially in the U.K. than in the U.S. Several participants argued that this meant that the U.K. in particular was facing the likelihood of persistent inflation and therefore the need for higher interest rates, less fiscal flexibility, and a significant slowdown or possibly recession. Expectations were more mixed for the U.S. and Eurozone, with predictions split as to whether they would need to experience recession in order to wring out inflationary expectations and prevent wage-price spirals. Participants recognized that there was likely to be considerable variation within the Eurozone as well, the effects of which would be exacerbated by the lack of fiscal transfers between countries.

In both the U.S. and Europe, there were questions of what the return to price stability would look like. Some participants cited studies suggesting that Eurozone inflationary expectations had moved back to 2%, whereas those in the U.S. and U.K. remained higher. Several argued that it was unreasonable to push for a return to 2% too quickly in any of the jurisdictions, in order to avoid recession. Instead, they broached the possibility of resetting inflation targets at 3%, at least for the medium-term. Others expressed concern, arguing that it was essential to reassure economic actors that central banks were committed to price stability so as to prevent a wage-price spiral from being locked in. Several suggested that several years of wage-driven inflation were already inevitable for the U.K., and possibly for the U.S. as well.

In the end, however, participants recognized that much of the future course of inflation was unpredictable. There remained considerable uncertainty about the course of the war in Ukraine, which could lead to renewed volatility of energy and food prices. Meanwhile, the rapidity of interest rate hikes meant that their effects had still not moved their way through economies and financial system, given that monetary policy typically operates with a lag of 9-18 months. With central banks increasingly paying attention to current data rather than economic models, it seemed likely to many that inflation and monetary policy among the U.S. and European economies would be less predictable and less consistent across countries, at least until 2% price stability could again be achieved.

Implications of Inflation in Europe and the U.S.

In addition to addressing the causes and course of inflation itself, participants also discussed the ways in which inflation would affect other aspects of the economy, including fiscal policy, financial stability, and asset management.

There was considerable interest in the likely effects of rising inflation on fiscal policy, in particular with regard to fiscal space at a time of high debt-GDP ratios. Inflation was seen to have at least three potential direct and indirect effects. Participants noted that a direct effect of inflation was that it would reduce the debt-GDP ratio, if nominal debt remained constant while nominal GDP grew quickly. This had the potential to reduce some of the debt pressures facing governments. Despite the logic and many historical examples of inflating away government debt, however, a number of participants were skeptical. One major concern was that, as central banks raised interest rates, debt service burdens for governments would become more difficult, as was already happening in a number of developing economies. A third concern was that the return of inflation had reduced flexibility on the part of monetary policy makers in managing aggregate demand. This would leave management of business cycles purely in the hands of fiscal policy, at a time when concerns about political gridlock in the U.S. and concerns about fiscal deficits and debt in both the U.S. and Europe were reducing flexibility.

Participants also expressed concerns about financial stability. While post-crisis banking regulation and supervision had been designed to reduce the vulnerability of banks to exogenous events like interest rate hikes and large-scale defaults, the failures of Credit Suisse in Switzerland and three major regional banks in the U.S. raised serious questions of how effectively banks had adjusted their risk management to deal with rising interest rates and potential recessions. As noted above, most participants felt that a banking crisis was not likely and that resolution and deposit insurance schemes would be able to manage any failures that did occur, although others saw warning signs in the recent failures. However, there was more concern about other parts of the financial system, as participants noted that credit losses or illiquidity of financial instruments or failures of non-bank financial institutions might reverberate throughout the financial system due to counterparty and securities lending relations. Several participants noted that such risks remained murky even a decade and a half after the advent of the Global Financial Crisis.

Topic 4: Implications of Sanctions against Russia

In Topic 4, participants discussed the implications of the multilateral sanctions against Russia that had been imposed by the U.S., EU, U.K., Japan, and others in response to its invasion of Ukraine. They assessed the current situation, coverage and leakages, effectiveness, and sustainability of maintaining sanctions on Russia.

Current Situation

Participants noted that the U.S., EU, U.K., and other partners had been working together on sanctions for 16 months. These sanctions had been extensive, if not fully comprehensive. They included sanctioning a range of Russian financial institutions, corporations, media, and individuals. They also included bans on regional imports of Russian energy resources, exports of military and dual-use technologies, and innovative policies such as the oil price cap.

U.S. and European sanctions on financial activities had been particularly aggressive. Most Russian banks had been barred from SWIFT and all transactions with the Russian Central Bank had been prohibited. Moreover, the sanctions had frozen hundreds of billions of dollars of assets of Russian entities and individuals, including the central bank.

Multilateral sanctions had also extended to third countries, with governments taking innovative steps to freeze assets of companies and institutions regardless of location. It was noted, for example, that Iranian companies that had sold unmanned aerial vehicles (“drones”) to Russia had been sanctioned by the U.S. and U.K.

Participants agreed that one of the most striking aspects of the Russia sanctions was the extent of multilateral cooperation. In addition to the U.S. and European economies, Japan, South Korea, and other economies in the Asia-Pacific had signed onto all or a portion of the sanctions, covering nearly all advanced economies and most major financial centers. This significantly restricted the capacity of Russian financiers and traders to do business, and in particular access to high-tech chips and sensors. Despite some concerns about the political sustainability of costly sanctions, it was also noted that there had so far been very little political traction for removing them. This was seen as essential to their effectiveness, as well as to ensuring cooperation regarding when, how, and under what conditions to wind them down.

Coverage and Leakages

While the multilateral sanctions regime was certainly extensive, participants acknowledged that it was not comprehensive. This was partly by choice. For example, sanctions purposely excluded food and energy (with the partial exception of the oil price cap) in order to avoid global price spikes and shortages. In general, sanctioning governments had sought to focus on restricting Russian access to products and services that were most closely linked to its war effort, while trying not to create excessive costs to their own companies and citizens.

Most importantly, many countries had not chosen to comply with sanctions, including much of the Global South. Participants expressed particular concern about the role of China in subverting

sanctions, but also noted a variety of other countries that were continuing to trade extensively with Russia, including India (a major oil importer) and military suppliers like Iran and North Korea.

There was considerable discussion of the role of China in undermining the sanctions regime. While a number of participants expressed concern that China was still doing business with Russia at a significant level, others countered that much of that business was not in violation of sanctions. Even to the extent that some Russia-China trade was in violation of sanctions, some argued that it made sense not to try to punish China as long as it was not directly supporting Russian war capability through exports of military materials. Several participants also noted that it would be very difficult to comprehensively monitor Chinese transactions with Russia because of the large number of corporations and banks involved in cross-border trade, many of whom could not be reached by sanctions because they did not do any business with the U.S., Europe, or other members of the multilateral sanctions coalition.

Effectiveness

There was a diversity of opinions regarding the effectiveness of sanctions. A number of participants argued that sanctions had damaged the Russian economy far less than anticipated. Russia had continued to find global markets for its major exports, most of which were commodities including energy, food, and minerals. While transaction costs had increased and Russian companies had been forced to find new customers, these participants noted that its ability to earn revenues from exports had reduced the intended effects of asset freezes and sanctioning of Russian companies and banks. Moreover, they argued that the sanctions had had no effect at all on public support for the Putin administration and its war effort. Thus, they questioned whether sanctions were a useful tool of foreign policy or just a costly symbol of disapproval.

Other participants were more positive about the effects of sanctions. They began from the premise that the key goal of sanctions was not to bankrupt Russia but rather to degrade its Russia's ability to continue to wage war. They argued had been degraded by its lack of access to weaponry, semiconductors and sensors, and advanced materials. Even though some weapons and components were able to enter Russia, they pointed to evidence that Russia was running through its most advanced armaments rapidly, without being able to replenish them, and was increasingly relying on older weapons systems or less effective imports from countries like Iran and North Korea. As long as China was not providing direct military assistance, they saw the sanctions as being very important in shaping the battlefield.

One mystery was why extreme financial sanctions had not created more havoc in the Russian economy. Some noted that Russia was for the most part a commodities exporter and an importer of manufactured goods and was not deeply involved in global production networks. While European economies had been among Russia's most substantial trading partners, most of its commodity exports (with the exception of pipeline gas) could be redirected to India, China, and other non-sanctioning economies. Manufactured imports from Europe were more difficult to substitute quickly, but imports from China had stepped in to make up for much of the gap. Given that many Chinese corporations and banks did not do business with European or U.S. entities, there was limited ability for tertiary sanctions to be decisive. It was also noted that the Russian

Central Bank had partially prepared for asset freezes by shifting a significant portion of its reserves to gold and deposits in banks in China and other non-sanctioning economies. Together with capital controls and strong export earnings, the Russian economy had been able to pay for its import needs with current exports.

Some proponents of the effectiveness of sanctions made the case that large-scale macroeconomic effects and potential political backlash against the Putin administration were still possible but would take time to have full effects. They noted that the Russian Central Bank had been forced to carry out extraordinary measures to maintain the value of the ruble and expressed skepticism about the accuracy of inflation and GDP statistics that were being published. Some also suggested that battlefield casualties and the flight of many well-educated military-aged men would likely hamper production and that the drawing down of inventories of a variety of components and intermediate goods would eventually also contribute to supply bottlenecks.

Several participants focused on a different dimension of the effectiveness issue. They noted that sanctions and boycotts created considerable costs for companies and financial institutions in Europe, North America, Japan, and other sanctioning economies. These costs took two forms: foregone business and compliance costs. Foregone business was a particular issue for Europe, which had much more considerable economic ties with Russia than the U.S. European corporations and households, which had been highly reliant on Russian pipeline gas and other energy sources, had been forced to make major changes to manage the discontinuation of energy imports from Russia. European manufacturers such as Germany were also big exporters to Russia. Finally, although sanctions had not required disinvestment in Russia, many European and U.S. companies had chosen to divest from Russia, often at considerable cost.

Compliance costs associated with sanctions were also seen as considerable for some European and U.S. corporations and financial institutions. The enforcement of sanctions largely fell to the private sector, which was responsible for monitoring their customer and supply chains. Although financial institutions and many high-tech firms already had know-your-customer requirements, economic sanctions on Russia had significantly increased the number and variety of affected entities; moreover, the concerted efforts of the Russian state to evade sanctions added new layers of complexity and sophistication to the task.

Some participants questioned whether the benefits of sanctions outweighed the costs to European and U.S. companies and economies. While not advocating the full withdrawal of sanctions, they called for more attention to cost-benefit analysis when imposing new sanctions, in order to reduce costs on home firms, increase costs to the Russian economy, and in particular focus on economic transactions that were of greatest importance to Russia's war effort. Several participants also raised another, longer-term concern about financial sanctions. They worried that the aggressive use of sanctions on banks, government entities, and even the Russian Central Bank might accelerate movement of finance away from the dollar system, which could reduce the economic power of the U.S. and destabilize the global financial system. Of particular concern was what lessons China would take from financial sanctions on Russia, and whether it would invigorate efforts to create a non-dollar-based financial system centered on China's Cross-Border Interbank Payments System (CIPS), a digital RMB, or other systems that would be outside of global regulation and monitoring.

Freezes vs. Seizures and Confiscations

Finally, there was considerable discussion about what to do with frozen assets belonging to the Russian Central Bank and other sanctioned entities and individuals. Several participants noted that there had been calls for using frozen Russian assets to support Ukraine, either in terms of its current war effort or eventual rebuilding or reparations. Participants disagreed on the feasibility and advisability of doing so, however.

A number of participants made clear that there was no legal basis for some of the demands in either Europe or the U.S. to confiscate the frozen assets. For the most part, Russian assets had by law been frozen, not confiscated, and thus remained the property of their Russian owners. While there had been some confiscations of assets, especially by U.S. authorities, these had been limited in value and required successful criminal cases related to the illegal use of those assets.

In order to confiscate frozen assets, new laws would have to be drafted and passed, unless it could be demonstrated that the owners had been engaged in criminal activities that merited asset seizures or fines. The greater concerns were political. Several participants emphasized that it would be unprecedented and potentially a violation of international law to seize the assets of state entities like the Russian Central Bank. Others countered that Russia's violations of sovereignty and international law in invading Ukraine were much worse. Some participants also worried about loss of leverage if U.S. and European authorities did not retain the assets. They reasoned that the possible unfreezing of Russian funds would likely be an important lever in bringing Russia to the negotiating table and agreeing to an end to the war.

Some participants suggested that there could be intermediate options between asset freezes and seizures. One such idea that was already under discussion in Europe would be to transfer profits from the management of frozen assets to Ukraine. Since many frozen assets, such as those held in clearing houses like Euroclear, were generating interest, it had been suggested that the interest could be transferred while holding the principal on behalf of the Russian owners. Despite the appeal to many participants, however, they cautioned that any such action would require careful cost-benefit analysis and coordination as well as a strong legal basis. Many participants were unconvinced that this course of action would be feasible or wise, for the same reasons that they were resistant to the idea of seizing the assets themselves.

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