

PIFS

Program on International Financial Systems

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

An Agenda for Europe and the United States

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Final Report

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

The 22nd Europe-U.S. Symposium of the Program on International Financial Systems was held at in Washington, DC on April 17-19, 2024. Participants discussed next steps for European and U.S. capital markets, the role of banks and private credit, technological innovation in financial markets, and the impact of changes in the interest rate environment on financial institutions and borrowers.

Topic 1: What's Next for the EU Capital Markets Union & U.S. Capital Markets?

In Topic 1, participants discussed their expectations for the development of capital markets in Europe and the U.S. They recognized the strengths of U.S. capital markets but expressed concern about liquidity in times of stress, as well as the cumulative effects of new regulations. For the EU, participants discussed whether it would be feasible to move from a bank-based financial system toward greater use of capital markets to provide growth capital. In addition, there was considerable discussion of fragmentation and the prospects for progress toward Capital Markets Union (CMU). Participants also considered the potential impact of an emerging generation of investors who were mistrustful of existing intermediaries and institutions.

U.S. Capital Markets

Participants agreed that U.S. capital markets remained the world's largest, most efficient, and most liquid capital markets. While debt markets were roughly equal between the U.S. and EU, equity and M&A markets were much larger in the U.S. Moreover, U.S. financial institutions dominated global league tables and were active globally, whereas the role of foreign financial institutions had declined in the U.S.

Participants attributed the comparative success of U.S. capital markets to several factors. One of these was the global role of the dollar as the world's key currency and most important safe asset. Given the outsized role of the dollar in international finance and transactions of all kinds, financial actors found it beneficial to operate in the U.S., under U.S. laws and regulations and with the backstop of the U.S. Federal Reserve. In addition, the U.S. presented a unified market, supported by the market for U.S. Treasuries, the largest and most liquid asset in the world. The coherence of the U.S. capital markets was also supported by a common set of laws and regulations for trading of financial assets, as well a high level of common information, including access to consolidated provision of post-trade data. Consolidated data also enabled a diverse ecosystem of exchanges and trading venues to operate in a competitive manner but without the downsides of fragmentation.

Despite the acknowledged strengths of the U.S. financial system, however, many participants worried that its success could be threatened in coming years. Thus, they argued, it was important not to be complacent, but rather to continue to encourage innovation and a clear focus on enhancing competition and efficiency.

Participants focused in particular on two issues. First, there was a great deal of concern over recent and ongoing SEC rulemaking. A number of participants identified its current output as the most aggressive expansion of rules since the period immediately after the passage of the Dodd-Frank Act and questioned why such assertiveness was appropriate given how well the U.S.

financial system had weathered severe shocks including the COVID-19 pandemic, Ukraine war, and reemergence of inflation and interest rate hikes. In addition to skepticism that the system was in need of drastic new regulation, many participants expressed concern about the content of new regulations, the process by which they were being rolled out, and the potential interactions among them.

One major concern for many such participants was the lack of cost-benefit analysis and the rushed manner of rulemaking. They felt that there was insufficient consultation with the industry or serious economic analysis of new rules; moreover, some participants noted that some regulations were significantly modified after the processes of public comment and cost-benefit analysis, but that the modified versions were not re-subjected to rigorous cost-benefit analysis. Due to these circumstances, there had been an increase in legal objections to a variety of SEC rules, which was adding to uncertainty in markets.

Another concern about the barrage of SEC rulemaking was that there were so many proposed changes that it was impossible to predict the cumulative effects. Participants noted a number of cases in which new and proposed rules actually contradicted each other. Even where they did not, it was noted that cost-benefit analysis was done on the basis of individual rules and did not take into account how they interacted. Financial institutions and other interested actors also did not always have the time to fully analyze new and proposed rules due to their sheer number and the speed with which the SEC was moving them through. And, depending on how many of the rules were actually finalized and survived legal challenges, the SEC's ambitious regulatory agenda could significantly expand regulatory burden for market players.

While there was general concern over regulatory overreach among participants, some cautioned that it was not necessarily a crisis for the industry. Instead, they argued that there is a political pendulum between moments of liberalization and reregulation. They raised the possibility that a new administration or new leadership at the SEC could moderate the Commission's aggressive approach and reduce possible damage to financial institutions and markets.

A second concern expressed by some participants for the future of U.S. capital markets was what they saw as the fragility of liquidity in the system. They argued that regulatory burdens under Dodd-Frank and Basel III were effectively disincentivizing banks from acting as market-makers, and that this effect would be worsened by implementation of the Basel end-game. In contrast, some participants were not concerned about the withdrawal of banks from market-making, observing that asset managers were providing ample market liquidity in their place. This was not reassuring to all participants, however, with some arguing that asset managers would have less incentive to provide liquidity during times of market stress, since they would be able to temporarily exit markets to avoid market-making losses. In contrast, it was argued, when banks were the main market-makers, they had an incentive to provide the public good of continued liquidity even during market stresses as a service to their customers. Thus, these participants worried that U.S. capital market liquidity could evaporate in moments of stress, with severe implications for markets and investors. It was argued that the Fed would likely step in to manage moments of severe stress, but that raised concerns over the appropriate role of the central bank, particularly in becoming "market-maker of last resort."

EU Capital Markets

Participants discussed EU capital markets at length, speaking both about the importance of developing those markets to support investment and economic growth and about a number of challenges that they saw as retarding capital market development. This meant not only a lack of investment opportunities for European investors, but also that U.S. and other foreign investors were more wary of investing there.

They agreed that one of the enduring features of continental European financial systems was the tradition of bank-based finance. Unlike the U.S., where commercial and investment banking had been separated for many years under Glass-Steagall, the continental European system was dominated by universal banks. However, participants argued that reliance on banks had constrained the development of venture capital and private equity due to their weaker exit options. This in turn was seen to have reduced access to growth capital, particularly for start-ups and for small and medium-sized enterprises in general. This was seen by many participants as a serious problem for growth, employment, and innovation in the EU. Thus, they argued that it would be important to enable and encourage savers to shift their holdings from bank deposits to capital markets.

However, EU capital markets retained characteristics that made them unattractive to potential investors. One of these was low liquidity in secondary trading. This meant larger spreads and less efficiency of entering and exiting positions. Similarly, the weaknesses of the public markets made them less attractive as an exit opportunity for venture capital and private equity; meanwhile, the lack of a good public market exit option had the further effect of suppressing initial investment in venture capital and private equity. SMEs also faced limited securitization and private credit options. With few financing options for new, growth-oriented companies, participants argued that the underdeveloped nature of European capital markets was stymying innovation and growth overall.

A number of participants made the case that much of Europe, other than the UK, lacked a culture of investing. Retail investors were seen as risk averse and lacking financial literacy concerning their choices outside of bank deposits. They were also hesitant to invest across borders, even within the EU. Moreover, while individual retirement accounts and defined-contribution plans had been an important entry point for retail investors into capital markets in the U.S. since the early 1970s, those opportunities in Europe were newer and much smaller than their U.S. equivalents. The institutional investor base was likewise smaller and more constrained than in the U.S. For example, life insurers were highly constrained in their investment practices by Solvency II. Meanwhile, most countries (with some exceptions such as Germany and the Netherlands) continued to rely on pay-as-you-go defined-benefit pension systems as opposed to large institutional pension funds.

Some participants expressed optimism that investing culture would improve. They noted the increasing availability of individual retirement accounts such as Pan-European Pension Products (PEPP) as one vehicle to give retail investors the means and incentive to shift resources into capital markets. Also, younger generations of savers appeared to be less attached to banks and more willing to make use of app-based investment products. However, most participants agreed

that it would be a long road to see a big shift in the savings and investment behavior of households. Thus, they called for more efforts to develop the institutional investor base—and some saw revision of Solvency II as most effective way to empower insurance companies to move a lot of money quickly into capital markets.

Managing Competition and Fragmentation in the EU

Participants identified fragmentation as one of the major problems facing EU capital markets. While the authorities recognized the importance of reducing disincentives to the movement of capital and information across borders and trading venues, progress toward CMU had been much slower than proponents had hoped. Moreover, while EU policies to encourage competition had led to a large number of diverse venues, a number of participants argued that the actual effect had been segmentation and fragmentation rather than competition. This was seen as an unfortunate contrast to the U.S. where the existence of diverse venues had led to competition among them and greater efficiency as a result.

Several causes had contributed to capital market fragmentation in the EU. One of the most important was the lack of a consolidated tape with instantaneous publication of post-trade pricing. The lack of a consolidated tape made it more difficult for investors (particularly retail investors) to track market prices for securities, reducing the scope of secondary market trading. It also tended to restrict any given investor's trading to a small number of venues, contributing to fragmentation. Fortunately, after years of study and deliberation, ESMA was moving forward with the process of introducing a consolidated tape, starting with equities in 2026 and proceeding to bonds and OTC derivatives later. (The UK, meanwhile, would introduce its own equity and bond consolidated tapes in 2025.) Participants expressed enthusiasm for the proposals and looked forward to their implementation.

Immediate and affordable access to market information across the EU would remove one of the most important barriers to capital market development and to CMU, but participants agreed that other significant challenges would still remain in place. One of the most important of these was that, unlike in the U.S., there was no EU-wide public debt market. Instead, public debt was issued almost entirely at the national or subnational level. While the EU had issued some collective bonds that had been very attractive to investors (e.g., through NextGenerationEU, an initiative to support EU-wide priorities like green transition and digitalization) , these remained limited and national governments were still unwilling to advance toward a fiscal union, although some participants expressed optimism that there would be an expansion of EU safe assets.

National-level policies were a further impediment to reducing fragmentation. For example, a number of participants noted that many smaller or more peripheral EU economies were promoting the use of local exchanges in order to support their own businesses and to draw financial services to their territories. They expressed skepticism that those governments would be supportive of policies to promote CMU if it meant losing their own local exchanges. More fundamentally, participants noted that key aspects of financial law and supervision remained at the national level. Perhaps the most important of these was bankruptcy and resolution regimes, which diverged considerably among EU members. Some participants argued that one reason for

home bias on the part of institutional investors was that they were uncertain about the terms and timing of recovery of assets in the event of a bankruptcy or default. Moreover, participants agreed that this diversity of bankruptcy regimes was unlikely to change in the foreseeable future—bankruptcy law was woven into member-states' private law systems, and the EU was powerless to enforce harmonization of them without amending the EU treaty.

Digital Finance and Capital Markets

Participants discussed the potentially transformative effects of digital finance for both U.S. and European markets. Blockchain and tokenization were seen as providing new opportunities for financial markets and institutions, while also raising the possibility that younger generations of investors would approach markets in fundamentally different ways from their elders.

A number of participants identified blockchain as an important financial technology whose implications reached far beyond crypto assets like Bitcoin. They noted a variety of experiments among fintechs and established financial institutions to manage trading and settlement on permissioned blockchains, on the promise that it would allow for cheaper and more accurate recordkeeping while also enabling instantaneous settlement and removing the need for intermediaries in transferring value. Some participants also argued that public blockchains could improve price transparency and empower regulators and supervisors, although AML and KYC regulations would require a system of digital identifiers or other forms of on-ramps and off-ramps that could be observable by regulators and supervisors. Others worried that reliance on public blockchains could introduce new problems such as making it impossible to reverse fraudulent transactions.

Many participants argued that tokenization would become ubiquitous. One usage would be to provide an alternative way of trading existing securities or currencies, but with instantaneous settlement (also known as "atomic settlement") and without affecting pricing. This could be particularly useful for trading of large blocks. More importantly, tokenization could facilitate trading in assets that would otherwise be difficult to carry out, such as fractional ownership of real assets. Atomic settlement could also reduce the need to lock up assets in escrow, reducing costs for some trading strategies. At the moment, stablecoins were the most prevalent form of token, but participants anticipated much more diverse uses over time.

To enable innovation and usefulness of digital finance, participants agreed that a robust system of regulation and supervision would be essential. Many lauded the EU's Markets in Crypto-Assets Regulation (MiCA), which entered into force in 2023, as a model of a rational system of regulation that would provide for consumer protection while also allowing for innovation in assets and functions. The UK similarly put in place rules for crypto trading in 2023 and was continuing to enhance regulation in 2024 with new rules on stablecoins. In contrast, participants saw U.S. regulation as woefully inadequate and haphazard. They noted that no legislation had been passed on any aspect of crypto. Meanwhile, even though the CFTC and SEC were trying to regulate crypto activities under their jurisdictions, their approaches were quite different from each other and some aspects of crypto assets and trading potentially fell under the jurisdiction of neither. This had led to some legal pushback by crypto firms against the SEC, which had taken a

more aggressive approach to regulating crypto. Participants urged U.S. lawmakers to create a clear legal basis for crypto regulation. Beyond legislation and rules, a number of participants also called for development of greater regulatory and supervisory expertise, as traditional financial market regulators might not be equipped to understand and monitor new business models surrounding crypto, tokenization, and blockchain.

Finally, there was considerable discussion of how generational change and digital financial technologies might interact to change U.S. and European capital markets. Participants noted that the newest generation of investors was more likely to start investing via a different route from previous generations. They were more likely to start with crypto, to use app-based trading platforms (including for complex products like derivatives), and to rely on social media such as YouTube for data and advising. It was argued that this pattern was reflective of a broader mistrust of established institutions including government and financial institutions. Some participants made the case that this was leading to a fundamentally different approach to investing—whereas previous generations' trust in capital markets had been premised on regulation, disclosure, and regulated intermediaries, Gen Z was more likely to prioritize disintermediated finance. There was some debate as to whether this would persist, as several participants argued that blow-ups like the failure of FTX would likely increase young investors' appetite for legal protection. In addition to the challenges of preventing fraud and mismanagement of funds in a world of unregulated exchanges and instantaneous settlement, a number of participants expressed concern over how to ensure that information would be accurate and not manipulated by influencers for their own benefit. They noted that it would be hard to regulate financial information on social media, since it did not constitute financial advising per se. They worried that the new financial information landscape would contribute to market volatility and to losses and rising mistrust among young investors.

Lessons for Invigorating Capital Markets

Participants sought to derive some general lessons for their discussions of U.S. and European capital markets. One point made by a number of participants was that, while rules do not create markets, they can facilitate or hinder capital market development. In the case of the EU, the multiplicity of national bankruptcy rules and supervision agencies created costs and obstacles to investment across borders. Moreover, many participants argued that the long-time U.S. mandates for disclosure, transparency, and publication of trade data had been a huge boon to its capital markets; while the EU was late to the game, they expressed hope that the consolidated tape would encourage more efficient markets and offer more confidence to investors when it was introduced in 2026. At the same time, there were concerns that authorities in both the U.S. and Europe might be tempted to increase the costs for financial market participants by imposing bank-like regulation on non-bank financial intermediaries, which would likely reduce market liquidity and availability of growth capital.

Still, better rules alone were seen as unlikely to invigorate European capital markets. Participants discussed several ways in which capital markets might be better promoted. For example, some participants advocated better financial literacy and planning tools for retail investors. Also, the EU had sought to promote capital markets by linking them to popular goals such as ESG and

digital infrastructure (although some participants argued that the link to ESG goals might be a disincentive for investors as well, as it could reduce the focus on shareholder value and returns).

Perhaps most important was nurturing the investor base. A number of participants strongly advocated for the EU and UK to follow the U.S. lead by vastly expanding defined contribution plans for retail investors. This was also seen as important to people's standards of living because of the vulnerability of many national pension systems in an era of aging society and declining population. Participants also saw the institutional investor base in the EU as limited. A number of participants therefore called for the expansion of private and public pension funds (as opposed to pay-as-you-go), with fewer restrictions on investments outside of government bonds. And many participants argued that the EU was unnecessarily restricting insurance companies—potentially the largest group of private institutional investors—with Solvency II and other regulations that restricted their ability to invest for better returns.

Topic 2: The Role of Banks in Lending and Economic Growth and the Rise of Private Credit

In Topic 2, participants discussed the rise of private credit in the U.S. and Europe. In recent years, private credit had become an increasingly important factor in lending. This was particularly evident in the U.S., where—although small in comparison with total bank lending—it had surpassed new syndicated loans in total amount and had become by far the primary source of debt capital in the LBO market. Private credit was much less significant in the EU financial system, but was growing relatively quickly there as well. Participants considered the reasons for these developments, including the business models of both private lenders and banks. In addition, they discussed the potential positive and negative impacts of the rise of private lending on the real economy as well as private lenders' relationship with banks.

Benefits of Private Credit

Many participants were enthusiastic about the rise of private credit. They argued that private credit added valuable diversity to the credit options for borrowers, which could benefit borrowers and the economy as a whole.

Participants agreed that there was a diversity of business models among private lenders, including degrees of leverage, investor base, specializations, and risk. Indeed, many participants were skeptical of efforts either to define private credit as a single industry or to lump all private lenders under the category of "non-bank financial institutions" (NBFIs). Many private lenders were seen to have very stable funding bases, including through closed-end funds and insurance companies. Some banks also have private credit affiliates. At the same time, there was considerable variation in terms of leverage, despite the common generalization that private lenders made money on the basis of high levels of (often short-term) leverage. This was seen as an important element in thinking about potential for systemic contagion. Business models in private credit varied considerably as well. Private lenders often specialized in particular areas of business finance (such as SMEs or auto loans) or in particular types of deals, while other players in private credit specialized in purchasing of other lenders' loan portfolios.

Despite this diversity, participants identified a few factors that they saw as common to private credit and as advantageous for borrowers. Private credit was seen to fill an important intermediate niche between bank lending and capital markets Perhaps most importantly, private credit was not constrained by bank regulation. This meant that they could follow their own risk analysis and preferences rather than being constrained by strict rules of risk-weighting and quantitative requirements for capital, leverage, and liquidity. This meant more speed and flexibility in putting together loans, which was seen as particularly attractive to borrowers such as SMEs, start-ups, and ones with needs for complex deals. Similarly, the process of deal-making was less onerous for such companies than borrowing through capital markets.

Second, many participants agreed that the funding models of private credit, where investor gains were prioritized rather than having to focus on the demands of depositors and regulators, allowed for better alignment of interests between funders and borrowers' risk profiles. In many cases, this implied a higher risk appetite than banks could afford, either due to leverage, longer time horizons (e.g., for insurers and closed-end funds), or both. Even when leverage was involved, it was argued, the funding model was fundamentally different in that private credit was not dependent on short-term depositors. This also would make failures among private lenders less likely to reverberate through the financial system and threaten financial stability.

The rise of private credit was driven not only by what some participants characterized as a superior business model due to the alignment of risk appetite with lending decisions. Participants also emphasized that private credit filled important market niches, especially in the U.S. These included middle-market lending, infrastructure, real estate, and M&A. Some players in the private lending market also specialized in purchasing portfolios of distressed assets, which would otherwise stay on banks' and other financial institutions' books. With the reticence of banks to lend to such borrowers due to lower risk tolerance, capital charges, and regulatory compliance challenges, private credit was seen as performing an important function in supporting the real economy.

For this reason, a number of participants encouraged the EU to try to nurture the growth of private credit. Given continental European economies' reliance on bank credit as well as European banks' traditions of conservatism and relationship-based lending, they argued that a greater role for private credit would be necessary to fund fast-growing SMEs, especially those seeking to invest heavily in information technology and/or research, as well as supporting societal priorities like green or resilient infrastructure.

Concerns about Private Credit

Although many participants considered the growth of private credit to be a positive development for financial systems and economies, some participants also raised concerns about it from the perspective of both borrowers and financial stability.

Participants noted that interest rates on private lending tended to be higher than on bank loans. Some saw this as an indication that borrowers were being exploited and expressed concerns about excessive market power in the private credit sector. Others countered that higher interest rates reflected the fact that banks were constrained by risk-weighted capital requirements from lending to some borrowers, the higher risk profile of borrowers, and borrowers' willingness to pay more for faster and more flexible deal-making. They argued that borrowers were making rational decisions based on their own interests and preferences. Moreover, they pointed out that the market was already quite competitive and becoming more so, making it infeasible for private lenders to take advantage of borrowers.

A more common concern was over the potential impact on financial stability, based on several key points. One was that there was a paucity of information on private credit, including not only loan terms and quality, but also lenders' leverage and interconnections with other parts of the financial system, including banks, insurers, and private equity. To date, the main sources of

information for regulators was reporting from banks on their lending to NBFIs. Insurance regulators also had some visibility into the activities of private lending by insurers or their subsidiaries, but there was as yet no mechanism to consider interconnections and liabilities through the financial system in a holistic manner. A number of participants worried that financial system supervisors' lack of visibility into the sector could allow for the build-up of systemic risk and could also complicate the management of any financial crises or stresses that arose from the sector.

There was some discussion about how much and what type of information supervisors needed regarding private credit. Some participants felt that it was sufficient to focus on bank reporting, as they saw NBFI defaults on bank loans as the most likely conduit for contagion to the broader financial system. Others were more skeptical, especially given the large footprint of private credit in the U.S. Nonetheless, many participants were ambivalent about creating new regulations for data reporting. One reason was that there was still little clarity as to what information would be most relevant to macroprudential supervisors—in particular, many participants argued that it would be inappropriate to demand the same data as for banks, since private lenders were not involved in either maturity transformation of in maintaining the payments system. Moreover, they argued that private credit was an umbrella term for many different funding models, with some very stable and others less so due to reliance on leverage or being structured as open-ended funds, and with very different risk profiles in terms of lending practices and concentration. Thus, there was a call for more differentiated disclosure. Some participants suggested that, rather than moving directly to imposing new regulations, voluntary data disclosure by the biggest players would be the right first move. It was also suggested that supervision should precede regulation—i.e., that supervisors could request more data based on existing authorizations rather than codifying new requirements that could raise costs unnecessarily.

Finally, some participants questioned how private credit would weather a serious downturn. They noted that the sector had grown during a mostly benign economic and credit environment, so risk models and possible contagion effects had not been tested. Given that private credit tended to carry higher interest rates and lighter covenants, a number of participants anticipated that lenders could see large increases in non-performing loans in a downturn. These participants argued that private lenders' generally higher appetite for risk, as well as some lenders' concentrated holdings, could put them in serious jeopardy in a downturn. To the extent that these lenders were connected to the broader financial system through leverage or ownership by banks or insurers, this could lead to contagion. Some participants worried that in such a scenario, central banks would be forced to provide emergency liquidity; since private lenders do not face the same prudential regulation as banks, they felt that this would in effect transfer the cost of private lender's rsik-taking to society as a whole and thus create moral hazard.

Relations with Banks

One of the major concerns for many participants as well as outside analysts was the nature of the relations between private credit and the banking system. In discussing these relations, participants emphasized the need for a nuanced and comprehensive analysis. They argued that, depending on particular circumstances, banks and private lenders could be described variously as

complements, competitors, or partners. Even where banks and private lenders competed, it was argued that this competition could promote greater efficiency and beneficial innovation. Thus, participants were wary of describing private credit as purely a threat to banks.

The greatest concerns about the effects of private credit on banks were based on competition. Banks had good reason to fear competition from private lenders, since they were less constrained by regulation, particularly regarding capital adequacy and risk management, as well as compliance costs. Private lenders could use their own risk models, did not have to mark assets to market, did not have to hold regulatory capital, did not have onerous reporting requirements, and could design bespoke conditions for loans quickly and nimbly. While some banks considered this to be unfair competition, a number of participants argued that it was appropriate that private credit faced lighter regulation since it was not systemically important, due to the prevalent structure of closed-end funds with no immediate withdrawal rights. Some also argued that bank regulation was too costly and restrictive, and should be dialed back to allow banks to compete more effectively.

Participants emphasized that private lenders were not just competitors to banks, but also complements and/or partners. Due to regulations and business models, banks were not able to satisfy loan demand from some sectors, but those sectors still needed access to credit. Conversely, banks benefited from broader relationships with their clients, who would therefore prefer to borrow from them than from private lenders. In such cases, banks and private lenders were not directly competing at all. Participants also noted ways in which banks and private credit were able to benefit from each other as partners. Some private lenders relied on access to bank lending, for example. Also, private credit had proved in a number of cases to be willing to purchase distressed assets or loan portfolios, increasing the ability of banks to move unwanted assets off their books at a fair price.

Looking Ahead

Participants agreed that private credit was likely to continue to expand its role within the financial system, particularly in the U.S. In the EU, participants also anticipated continued expansion, but stipulated that its growth would be constrained unless regulation were more encouraging. Looking ahead, they focused on four main issues: how to regulate private credit, how to reduce risk migration from banking to private credit, how to address gaps in real economy funding, and whether and how retail investors should be able to participate in private credit.

One general point of agreement was that authorities should not impose bank regulation on private credit. While the two types of institutions do compete with each other in some respects, the point was made repeatedly that they differ in important respects. Participants noted that banks provide key public goods in the form of deposit-taking, maturity transformation, and the payments systems, and as such they are backstopped by society in the form of central bank liquidity and deposit insurance; in exchange, they are required to accept regulation that can be onerous and costly. Private credit, which operates on a completely different funding basis, has no intrinsic role in financial stability and thus operates without public backstops.

Nonetheless, one major concern for some participants was that the growth of private credit was driven by regulatory arbitrage and would create a build-up in risk outside of the reach of financial regulators and supervisors. Participants acknowledged that there could be circumstances under which the sector or particular NBFIs could be systemically important, so they should not go completely unregulated. In particular, participants agreed that it would be important to increase regulators and supervisors' visibility into their activities. Some also noted that if a particular private lender got big enough and interconnected enough with the other parts of the financial system, it could be designated as systemically important and made subject to enhanced supervision even if the sector as whole remained mostly outside of the regulatory perimeter.

Beyond questions of regulation and systemic risk, participants expressed hope that private credit could prevent what some called the "barbell effect," in which middle-market lending was squeezed while households and large firms had easy access to credit. They argued that this was happening in the banking sector due to consolidation of mid-sized and regional banks, as well as the disincentives to SME lending under risk-weighted capital adequacy rules. Unlike in the U.S., private credit had not rushed in to provide SME credit to nearly the same extent in Europe. Thus, while while consolidation among middle-market banks had not progressed as far in Europe as in the U.S., SMEs' access to loans was effectively more constrained. A number of participants encouraged European regulators to remove obstacles to private credit fulfilling that role.

Finally, there was considerable discussion of access for retail investors. For the most part, retail investors remained excluded from investing directly in private credit due to high standards for qualified investors, as well as the need in most cases to invest via closed-end funds from which it was difficult to redeem investments. (There were exceptions to that generalization, including opportunities to invest directly through publicly traded business development companies (BDCs) such as the Blackstone Secured Lending Fund and indirectly by owning shares of financial institutions with direct lending affiliates.) Participants held mixed opinions as to whether retail access would be beneficial or not. Some argued that retail investors could benefit from exposure to private credit (as well as to private equity), since returns were high and they could take gain the upside of the rapid-growth phase of SMEs and start-ups. Others worried that long lock-ins, complex business models, and limited disclosure could endanger retail investors who may not be able to fully understand and hedge against risks. Proponents countered that retail investors were already able to invest in volatile assets and extremely risky bets in the form of risky public companies, crypto assets and derivatives through retail trading platforms; in contrast, they saw private credit and private equity as likely to be less volatile and having business models that were easier for retail investors to understand .

For those participants who advocated access for retail investors, the key question was how to do so in a way that offered investor protection and redemption opportunities for investors while also preserving the characteristics that made private credit so effective. It was noted that a secondary market for private fund shares ("secondaries") was already developing and that it could be applied to private credit in the same way that it was already being used extensively for private equity. From the perspective of investor protection, much of the discussion focused on disclosure and valuation, especially since one of the major benefits of the model was that private lenders did not have to conform to the disclosure and accounting rules of either banks or bond issuance.

Redemption was another major concern. Tetail investors were likely to value some degree of liquidity, which a closed-end fund clearly did not offer. BDCs were seen as one viable model to address these trade-offs. Also, a number of participants made the case that diversity of funding models would be ideal—thus, some private lenders could choose to rely on institutional investors and qualified investors via closed-end funds, whereas others could open themselves up to retail investors either directly or indirectly.

Topic 3: Enabling the Next Generation of Financial Markets and Innovation

In Topic 3, participants discussed emerging financial technologies and how they should be regulated and promoted. There was considerable discussion of opportunities and challenges for financial markets and regulators of crypto assets, other uses of blockchain, and the rapidly rising use of artificial intelligence in finance. Participants called for regulators and supervisors to upgrade their technological expertise. In addition, they recognized a need to develop a consensus on how to assess risks to financial stability as well as how to assign responsibility for investor protection, market integrity, and data security.

Regulatory Principles and Practice

Technological innovation and new products and services clearly introduced new challenges for regulators in ensuring the classic principles of regulation, including consumer protection, market integrity, and AML/KYC. One participant characterized the new reality as "regulating at speed," but without the tools to keep up.

Regulators had sought to balance innovation and financial stability by allowing financial institutions to experiment with new products and technologies at limited scale through regulatory sandboxes and innovation hubs. However, not all participants were convinced that the sandbox approach worked, with some complaining that they had the effect of transferring the responsibility and cost of justifying innovations from firms to regulators. Moreover, many participants agreed that regulators and supervisors would need to vastly expand their technological expertise in new areas of knowledge, as well as acquire new tools such as supervisory AI, to be able to keep up with the rapidly changing demands of emerging financial technologies.

One point of contention among participants was whether the often-repeated principle of "same risk, same regulation" should still apply to emerging financial technologies. This was raised, for example, with regard to crypto assets, which were built on a fundamentally different architecture than financial products with similar characteristics. Thus, it was argued that a better formula would be "same risk, same regulatory outcome." Others worried that this could let providers of such products and services avoid conforming to the same standards as their competitors. Another objection was that, as difficult as it was to assess whether new products had the same risk as existing ones, it would be even more difficult to create a separate set of rules that would lead to a common outcome. Thus, they advocated continuing process- and product-based regulation rather than outcome-based regulation.

Finally, participants agreed that it would be essential to have clear standards for responsibility and liability for problems that arose due to new technologies or outsourcing of core functions. For example, providers of cloud storage would need to be subject to regulation and supervision

as deemed necessary by financial authorities, but fiduciary responsibilities would still lie with financial institutions rather than data services providers.

Future of Crypto Assets

There was considerable discussion about crypto assets, including whether and how they should be integrated with traditional financial markets and what regulations would be needed to ensure basic objectives such as investor protection, market integrity, AML/KYC, and cyber security. While participants held varied views on the utility and intrinsic value of crypto assets, there appeared to be a general consensus that investors should have safe and efficient ways of investing in them if they chose to do so.

One key question for participants was the degree to which crypto assets should be incorporated into the traditional financial system. In the U.S., banks were still limited in their interactions with crypto assets, even though crypto had slowly entered mainstream finance in the form of forward and spot ETFs as well as app-based trading platforms. In the absence of formal regulation, U.S. crypto markets had been subject to "regulation by enforcement," with different agencies using their authorities over various aspects of crypto markets and with very different approaches between the SEC and CFTC. Even the legal basis of exchanges was in question, as were legal definitions and requirements for various types of tokens and stablecoins. The EU, in contrast, had passed MiCA in order to create a unified framework for defining and regulating crypto assets and the UK was similarly advancing a clear regulatory regime.

Even in Europe, banks had remained wary of engaging with crypto assets and exchanges. However, a number of participants made the case that this would need to change in order to lower the barriers to investment in crypto assets, as well as to promote widespread tokenization of other assets and use of alternative payment options such as stablecoins. They argued that it would be essential to allow banks to handle crypto assets and exchange them for fiat currency. Others were more cautious, calling for greater clarity about the financial stability effects of lowering those barriers.

One point on which many participants agreed was that, in order to achieve an integration between the crypto and traditional finance worlds, the problem of anonymity would need to be addressed. While some crypto investors highly valued the anonymity of decentralized finance, participants agreed that regulators needed to have a way of preventing crypto investors from using their holdings for illegal purposes ranging from money laundering and tax evasion to terrorist and criminal financing. Some participants argued that the public blockchains used in decentralized finance actually could empower regulators to monitor such activity due to their inherent function end-to-end tracking, as long as investors' identities could be established through "on-ramps" and "off-ramps." Indeed, the EU's MiCA had explicitly mandated tracing of crypto asset transfers.

Participants also discussed at some length the role of custodianship of crypto assets. It was noted that, although much of the original allure of crypto assets was the ability to hold assets in electronic wallets and trade directly with other users, in practice most trading was occurring on exchanges and many other investors were operating through ETFs. Moreover, most investors

were holding at least part of their assets in accounts at crypto exchanges. Some participants were relatively unconcerned with the notion that exchanges were also effectively acting as custodians, arguing that in many cases those assets were only held temporarily while investors were actively trading. However, many others saw this as a conflict of interest, and argued for the need to allow formal, well-regulated custodianship by banks and other financial institutions, the case of FTX was cited as proof of this concern. This raised the question of whether younger-generation investors actually wanted to build up a system of trusted intermediaries. If not, some argued, they should be allowed to take their chances. Others countered that, regardless of what investors thought they wanted *a priori*, they would likely feel differently if and when they lost assets due to fraud, mismanagement, or cyber theft.

Blockchain and Data

Participants considered blockchain technology to carry exciting possibilities outside of crypto assets as well. A number of financial institutions and regulators were already operating pilot projects using permissioned ledgers to store information and to carry out transactions. While the scale remained small relative to the vast number of transactions handled through legacy architecture, many participants felt that the technology had wider potential.

One of the potential benefits of blockchains was the possibility of integrating the trading and tracking of tokenized traditional financial assets with crypto assets in a single platform. Some argued that this could reduce problems of fragmentation and segmentation, although others noted that it could reduce the ability of national monetary authorities to manage capital inflows and outflows. To achieve significant scale, many participants agreed that it would need to be done on public blockchains rather than permissioned ones, which could raise thorny questions about security as well as responsibilities of financial institutions.

Blockchains were also seen as having the potential to transform clearing and settlement. Blockchain-based trades could be executed and cleared instantaneously, allowing for a more frictionless financial system. At the same time, atomic settlement raised important concerns for many participants. In terms of cost efficiency, the benefits of netting would be lost, even though investors could benefit from not having to wait for a trade to go through. Another serious concern was that in a distributed ledger-based system, it would be impossible to halt or reverse transactions that were fraudulent, illegal, or even just mistaken.

Artificial Intelligence

The final technology discussed at length in Topic 3 was uses of artificial intelligence in finance. While some participants expressed concern at its rapid introduction into the financial sector, others argued that recent developments were part of a longer progression that involved algorithmic trading and machine learning. Earlier versions of AI had penetrated many areas of the financial system, from trading to financial analysis to detection of fraudulent transactions. While generative AI and natural language processing constituted significant advances over the previous generations, they argued that financial institutions and regulators had developed effective principles for governing their use. For example, legal responsibility for the

consequences of using AI tools would remain with the financial institution offering the service, creating incentives to use it judiciously.

Other participants expressed deeper concerns, especially given the rapid pace of AI development and the prospects for even more capabilities in coming generations. They noted that the inner workings of AI reasoning were opaque, which raised questions of whether AI-driven decision-making could be trusted. Several participants noted the tendency of generative AI models to make up facts (or "hallucinations") and to make logical and mathematical errors. Moreover, predictive models were highly dependent on the quality of the data on which they were trained—inaccurate or biased data could lead to serious problems, so guardrails and human judgment would remain essential in using AI for important functions.

Participants also saw AI as having important implications for regulators and supervisors. One potential benefit is that AI models could aid in real-time detection of fraud and money laundering. It was noted that such models were already being used by credit card companies, for example, increasing speed and accuracy enormously. At the same time, participants questioned regulators' ability to assess potential risks of uses of the new technologies to financial stability.

Topic 4: What Does the Future of Interest Rates Mean for Financial Institutions and Borrowers?

In Topic 4, participants discussed the changed interest rate environment and its implications for financial institutions and borrowers. There was a general consensus that the era of low and stable interest rates had ended. However, many participants expressed confidence that this would not necessarily affect financial stability, especially among banks. Still, participants noted that the situation might create new challenges for market liquidity, necessitating responses from central banks.

Higher for Longer

There was broad agreement that the era of low, stable rates and quantitative easing had ended. The reemergence of inflation around the world had shifted the major concerns of central banks and economic forecasters away from managing the effects of secular stagnation and toward controlling inflation and trying to avoid stagflation. Central banks in the U.S. and Europe had not only raised interest rates but had also embarked on a reversal of quantitative easing in response to inflation. While a number of participants anticipated that the ECB would start lowering interest rates in 2024 due to the moderation of inflation, more stubborn inflationary pressures in the U.S. and UK suggested that markets should expect rates in those economies to remain higher for longer than had been previously predicted.

Participants cited several causes for higher inflation rates, some of which they saw as likely to persist. Supply shocks due to the COVID-19 pandemic and the war in Ukraine were one factor—and while the pandemic effects had largely been worked out of the system, participants noted that these events had shown the susceptibility of the international system to both natural and geopolitical shocks. Moreover, it was argued that the neutral interest rate, R*, was rising due to demand for new investment at the same time that labor forces were shrinking. A number of participants laid the blame on monetary policy, arguing that central banks had kept rates low for too long as inflationary expectations had started to take hold. Others were less critical of central banks, noting that for over a decade before the pandemic had occurred, deflation had been a bigger risk, so it was natural for central banks to err in the direction of looseness. Many participants instead attributed the biggest mistakes to fiscal policy, with the massive response to pandemic lockdowns lasting too long, and in the case of the U.S. adding large-scale fiscal stimulus at a time of full employment. Moreover, it was argued that large fiscal deficits would likely continue, especially in the U.S., due to the high demands for defense spending, technology investment, healthcare, and new industrial policy initiatives.

In addition to expecting interest rates to be higher for longer, participants also predicted that they would be more volatile. With diverging inflation among major economies, possible fragmentation in the global economy, and rising unpredictability due to geopolitical tensions and increasing protectionist sentiments, firms and financial institutions would need to adapt to a less stable interest rate and growth environment. Some participants also noted that central banks'

ability to control economy-wide interest rates was in decline due to a less stable relationship between long- and short-term interest rates and possibly due to the reduced role in overall lending of the banking sector, with which central banks affect most directly.

Effects on Financial Institutions and Markets

Participants discussed at length the effects of both higher and more volatile interest rates on financial institutions and markets. Several agreed that the higher interest rate environment was not likely to be as big a problem as often assumed. One reason was that real interest rates were not actually very high given the higher prevailing inflation rates. It was noted that credit spreads remained low and credit was widely available, particularly in the U.S., even though inflation (and therefore higher interest rates) were proving to be stickier than in the Eurozone. Thus, neither borrowers nor lenders appeared particularly stressed by the higher rates.

Moreover, a number of participants argued that concerns over the impact of higher rates on banks were overblown. Post-2008 reforms such as those governing capital and risk management of banks were seen to have increased the soundness of the banking system, despite the failures of a few mid-sized U.S. banks and of Credit Suisse in 2023. While some participants were critical of U.S. regulators for delays in implementing the Basel III endgame, most agreed that banking systems in the U.S. and Europe were well-insulated from crises and that supervisors had the tools they needed to ensure system stability. Some also observed that rising interest rates would actually be beneficial in the near term for many banks since interest income was rising, but default rates had not yet begun to do so. However, they cautioned that if nominal rates stayed high, weaker borrowers would struggle to repay their obligations, leading to rising shares of non-performing loans. In the absence of new capital injections, rising NPLs would constrain banks' ability to provide new lending in coming years.

Participants had more mixed interpretations of the likely impact of higher rates on private lenders. Some argued that the funding model of many private lenders, as well as not being required to mark assets to market prices, allowed for a long-term perspective that was well-suited to surviving a rise in interest rates and potentially of non-performing loans as well. Particularly for lenders with low leverage, there would be very little pressure for fire-sales or for contagion to the broader financial system. While some private lenders might lose money due to non-performing loans, participants did not anticipate systemic effects.

While participants were relatively sanguine about the impact of higher interest rates on the economy and financial institutions, there was more concern about interest rate volatility. In particular, they worried about effects on market liquidity. This was partly related to what many saw as the withdrawal of banks from market-making as a result of post-financial crisis capital and liquidity requirements. Greater interest rate volatility raised the prospects of liquidity disappearing at moments of stress, leading to the potential for funding challenges even in government bond markets. A number of participants predicted that central banks could be forced to step in to maintain the smooth operation of markets for bonds and derivatives, effectively creating a new ongoing role for them as "market-makers of last resort." While they had effectively already done so *in extremis* during the global financial crisis and COVID-19 pandemic, participants feared that this would become an ongoing feature of the financial system

that primarily supported lightly regulated non-banks. This prospect was troubling to many participants, who worried not only that central banks were not set up for that role, but also that it could create moral hazard and potentially increase the likelihood and severity of future financial stresses.

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