Summary: Enhancing the Functioning and Resilience of Commercial Paper and Negotiable Certificates of Deposit Markets

Overview

This summary provides an overview of the FSB's report on the commercial paper (CP) and negotiable certificates of deposit (CD) markets. It delves into the market structure, functioning, and identified vulnerabilities, as well as the potential reforms that could improve market resilience. The document also examines the role of money market funds (MMFs) in these markets and the effectiveness of central bank interventions during periods of liquidity stress.

Section 1: Market structure and functioning

The section on market structure and functioning examines the intricacies of the commercial paper (CP) and negotiable certificates of deposit (CD) markets. It outlines the various elements that constitute the markets' architecture and how they operate under normal conditions and during periods of financial stress. The analysis identifies specific vulnerabilities within these markets, such as liquidity issues and the risk of market disruptions. It also considers the role of money market funds (MMFs) as significant investors and their behavior during liquidity crises. Furthermore, the section evaluates the impact of central bank interventions aimed at stabilizing these markets during times of turmoil. Potential reforms are suggested to bolster the liquidity and resilience of the CP and CD markets, which include enhancing market microstructure, improving transparency, and expanding private repo markets. The interconnectedness of these markets with other global funding markets is also discussed, highlighting the potential for cross-border spillovers that can arise during market disturbances.

Section 1.1: Key aspects of CP and CD markets

Commercial paper (CP) and negotiable certificates of deposit (CD) are key instruments in short-term funding markets, with CP being an unsecured promise to pay by the issuer and CD being a negotiable time deposit with a bank. Both instruments are available in domestic and Eurodollar markets, with variations such as Eurodollar CDs and Yankee CDs. They provide low-cost short-term financing for issuers and high credit quality investment options for investors. The markets for CP and CD are significant, with the US market being the largest globally at USD 4.7 trillion outstanding. In Europe, the markets are segmented with the Euro Commercial Paper (ECP) market being the largest, followed by the NEU CP market in Paris. The Japanese market is entirely JPY-denominated with USD 380 billion outstanding.

The structure of CP and CD markets varies across jurisdictions, with different maturity profiles, issuance sizes, and investor types. In the US, CP is typically up to 9 months, while CDs have maturities generally within 5 years. The ECP and ECD markets allow issuances in any currency, with minimum sizes of USD 500,000. The UK has a domestic CD market, and the NEU CP market in France has standardized documentation and requires issuers to publish ratings or have a rated guarantor.

The STEP label in Europe promotes standardization and transparency, with EUR 427 billion outstanding as of August 2023. The ABCP market is larger in the US than in Europe, with different asset compositions backing the paper. Market activity has increased post-2020, with issuers managing interest rate risk by shortening duration. The US CP market has seen a gradual increase in outstanding notional, while the EU market's reliance on CP and CD decreased after liquidity injections in 2020 but has since increased again. The Japanese market has grown since 2007, but investor appetite for longer-dated CP has not returned to pre-pandemic levels.

Section 1.2: Issuers of CP and CD

Banks are the predominant issuers of commercial paper (CP) and the exclusive issuers of negotiable certificates of deposit (CD) across various markets. In the United States, financial issuers, including domestic and foreign banks, account for over half of the CP outstanding as of Q1 2023. The euro area sees banks responsible for approximately 70% of CP outstanding as of May 2023, with French banks being notably active. In Japan, financial corporates, mainly finance subsidiaries of non-financial corporations, issue nearly 60% of CP. Non-financial corporations, local governments, and public sector agencies also issue CP, with utility firms being significant issuers in Europe.

Asset-backed commercial paper (ABCP) in the US is primarily issued by conduits sponsored by banks and non-banks, with auto finance companies being large issuers. The euro area's ABCP is almost entirely issued by financial entities, and in the UK, foreign banks often issue sterling CP and CD for funding or arbitrage purposes. Japanese CP and CD issuance is dominated by domestic entities, with CDs issued by deposit-taking banks.

Issuers may use CP and CDs for short-term funding in foreign currencies, with non-US financial issuers accessing US dollar funding through USD-denominated CP or CDs. The US CP market, being more liquid, is a preferred avenue for such funding compared to the smaller USD-denominated ECP segment. In the euro area and UK markets, EUR and USD-denominated CP and CD make up about 80% of the outstanding amounts.

The importance of CP and CD in issuers' funding mix varies, with CP outstanding relative to bank credit and outstanding debt securities being stable or marginally increasing in the US and Japan, while it has been declining in the EU since 2019. Issuers view CP and CD as flexible and competitive funding sources, but their use is influenced by factors such as interest rates and the availability and cost of alternative financing. Issuers typically establish lines of credit as a liquidity risk management tool, especially in the US.

Section 1.3: Investors in CP and CD markets

Financial institutions, including money market funds (MMFs), pension funds, insurance companies, and cash-rich non-financial corporations, are the primary investors in commercial paper (CP) and certificates of deposit (CD) markets. MMFs, particularly in the Euro area, are significant investors in CP and CD, with a concentration in French and Irish/Luxembourgish funds. In the United States, financial firms hold the majority of CP, while non-financial firms are the main investors in CDs. Japanese CP and CD markets are mostly domestic, with dealers, banks, and securities investment trusts investing in CP, and non-financial corporates, local governments, and the Japanese government investing in CDs.

Investors are attracted to CP and CD for their higher yields compared to short-term government securities, often holding these assets to maturity and reinvesting the proceeds. Central bank collateral eligibility has been an important factor for some investors, particularly during market turmoil. The rising rate environment has increased the attractiveness of these instruments. Investor mandates, including credit rating requirements and limits on holdings, influence the market's capacity to attract new issuers. For instance, in the UK and EU, MMFs are limited to holding no more than 10% of an issuer's total CP issuance, while in the US, non-government MMFs cannot hold more than 5% of their total assets in securities from the same issuer.

The majority of CP and CD issuance in the NEU CP, ECP, and Japanese CP markets is from A1 to A1+ rated issuers. UK corporates, often rated below A1/P1, tend to issue in Euros to accommodate the investment criteria of EUR-denominated MMFs, notably French MMFs. Data on non-MMF investors in CP and CD markets is limited, with varying granularity across jurisdictions. This lack of comprehensive data hinders understanding of non-MMF investors' roles and their willingness to intervene during crises. Anecdotal evidence suggests that certain fixed income investors may purchase CP and CD in times of stress if yields are attractive compared to short-dated bonds.

Section 1.4: Dealer relationships with issuers and investors

Dealers are crucial in the primary markets for commercial paper (CP) and certificates of deposit (CD), handling over 80% of CP trading volume, with their role expanding during periods of market stress. Secondary market activity for dealers is significantly less. The majority of CP issuance involves dealer intermediation, with variations between bank and non-bank issuers. In the US, direct CP issuance is relatively low, averaging 20% from April 2013 to August 2022, with financial issuers predominantly self-issuing. Despite operational challenges, there is a trend towards disintermediation, with issuers increasingly engaging directly with investors.

The Federal Reserve's research indicates that direct transactions in the US primary CP market offer investors a yield advantage of approximately 2 basis points annually. Market intermediation is highly concentrated, with the top three dealers in the ECP and US markets holding about 40-50% market share, and fewer than 20 dealers, mostly in France, dominating the NEU CP market. This concentration can lead to liquidity issues, particularly during market stress, as it limits issuers' access to the primary market.

Dealers operate on thin profit margins, which contributes to the concentration of intermediaries and fosters a relationship-based business model. Dealers earn between 1-6 basis points on primary issuance intermediation, with higher spreads for issuers with less access to private placements. The low profitability encourages dealers to act more as brokers, which can further impact liquidity in both primary and secondary markets.

Section 1.5: Market microstructure

Commercial paper (CP) and negotiable certificates of deposit (CD) markets exhibit varying degrees of standardization across jurisdictions, with differences in instrument parameters such as issuance, maturity dates, and denominations. Settlement systems for CP are generally standardized, with Japan using the centralized JASDEC system since 2002, and Europe benefiting from the STEP label to facilitate use as collateral in central bank operations, although adoption is limited. The U.S. relies on the Depository Trust Company for settlement services, while Europe has two International Central Securities Depositories (ICSDs), Clearstream and Euroclear, and domestic markets typically use local branches.

CP and CD instruments are predominantly traded over-the-counter (OTC), with transactions often conducted via phone or chat, relying on dealer relationships. Electronic platforms are used mainly for primary market issuance due to limited secondary market activity, and while they automate negotiation and issuance processes, their adoption is not widespread. These platforms vary in their capabilities, such as integration with order or execution management systems and support for straight-through processing. However, operational inefficiencies and fragmentation across platforms hinder broader investor adoption. In Europe, there are multiple trading platforms, but no electronic trading platforms are used in Japan.

All-to-all trading platforms, which connect issuers, dealers, and investors for secondary market trading, are not common in CP and CD markets due to concerns about anonymity, currency availability, and reliance on dealer intermediation for liquidity. Attempts to introduce centralized electronic trading platforms in the EU have failed, with the STEP+ initiative in 2015 not gaining traction due to perceptions of unsecured markets' activity and the existence of well-functioning markets like the NEU CP market.

Barriers to standardization of instruments also exist, with legal frameworks and settlement standards varying across Europe and the U.S. The 2016 reform in France aimed to modernize the market and expand issuer access, resulting in the creation of the NEU CP market, which allowed for more efficient post-market infrastructure and expanded the list of acceptable credit rating agencies. Despite these reforms, the average amount outstanding per issuer decreased, although the number of issuers increased, particularly among corporates and public entities.

Section 1.6: Transparency (reporting and disclosures)

Coverage of commercial paper (CP) and certificates of deposit (CD) market data is inconsistent across jurisdictions, with some authorities providing more comprehensive information, including aggregated investor holdings and prices, than others. The frequency of data publication also varies, with certain authorities like the Federal Reserve Board and Banque de France offering daily updates. There are notable data gaps, particularly in the secondary market and investor information, with issues such as potential double-counting in the European Commercial Paper (ECP) market. Commercial data providers offer additional details, including price, investor types, and sector-specific issuance information, which are accessible through subscription services. Efforts to improve market transparency are ongoing, with the UK planning to expand its Bank of England debt issuance data collection to include CDs in 2024, and the US Securities and Exchange Commission (SEC) implementing reforms to enhance monthly reporting by US money market funds (MMFs) on secondary market sales of CP and CDs, effective June 2024. These initiatives aim to provide greater clarity on trading activities within these markets.

Section 2: Vulnerabilities

Commercial paper (CP) and negotiable certificates of deposit (CD) markets are prone to illiquidity during stress due to their market structure, with limited secondary market activity and dealer intermediation. Dealers, facing low trading margins and capital costs, often do not hold overnight positions and have non-binding commitments to buy back paper. The markets lack standardization in documentation, terms, and dealer processes, contributing to fragmentation. Concentration among investors and dealers, along with non-bank intermediaries' limited presence, exacerbates the risk of liquidity shortages during stress. The investor base, often comprising money market funds (MMFs) subject to correlated redemption requests, can lead to one-directional market behavior.

The March 2020 market stress highlighted these vulnerabilities, with investors unwilling to roll over CP and CD, leading to central bank interventions to support liquidity. In contrast, during the March 2023 banking sector stress, CP and CD markets showed resilience, with investors active in the secondary market. The US CP market, with a more diversified investor base, may be better positioned to handle stress, with hedge funds and asset managers potentially stepping in. However, operational and infrastructure limitations, along with market opacity, can deter investor participation.

Post-March 2020, authorities have taken steps to enhance the resilience of MMFs and the overall functioning of short-term funding markets. Measures include the establishment of repo facilities by the Federal Reserve, SEC reforms for MMFs, and consultations by the Financial Conduct Authority and the European Commission to address MMF vulnerabilities. Japan also took actions to strengthen MMFs and Money Reserve Funds. Despite these efforts, CP and CD markets remain susceptible to severe stress, and further structural changes may be necessary to improve market resilience.

Section 3: Potential market reforms

The section on potential market reforms examines various strategies to bolster the liquidity and stability of the commercial paper and negotiable certificates of deposit markets. It suggests enhancements to market microstructure and transparency, as well as the expansion of private repo markets, to mitigate vulnerabilities and improve resilience, especially during periods of financial stress. These reforms aim to address the issues identified in the analysis of CP and CD markets across core funding jurisdictions, including the EU, Japan, the UK, and the US. The section also acknowledges the significant role played by money market funds as investors in these markets and considers the effectiveness of central bank interventions in maintaining market stability during liquidity crises. Additionally, it highlights the interconnectedness of CP and CD markets with other global funding markets and the potential for cross-border spillovers in times of market turmoil.

Section 3.1: Potential market reforms and their assessment

The report outlines potential reforms to improve the liquidity and resilience of commercial paper (CP) and negotiable certificates of deposit (CD) markets. These reforms include enhancing regulatory reporting to better monitor investor behavior and risks, improving publicly available databases with detailed information on CP and CD markets, and encouraging adjustments in market microstructure to facilitate more efficient market activity. Additionally, the report suggests that enabling the use of CP and CD as collateral in private repo markets could mitigate liquidity issues during market stress.

The proposed reforms are evaluated using a high-level framework that considers their impact on addressing structural vulnerabilities in short-term funding markets (STFMs), such as illiquidity during stress, investor and dealer concentration, information asymmetry, and interconnectedness. The framework also assesses the reforms' potential effects on investor behavior, the role and composition of intermediaries, issuers' access to funding, and overall market stability and functioning. This includes considering the impact on market resilience, the shifting of activities and risks within the financial system, and the effectiveness of central bank interventions during periods of stress. The assessment compares the potential effects of these reforms to the current market conditions, both in normal times and during periods of stress without extraordinary government interventions.

Section 3.2: Considerations from the high-level assessment of potential market reforms

The section assesses potential reforms for the commercial paper (CP) and negotiable certificates of deposit (CD) markets to enhance their liquidity and resilience, especially during periods of stress. It considers improvements in market microstructure and transparency, as well as the expansion of private repo markets. The role of money market funds (MMFs) as major investors in these markets is also examined, alongside their behavior in times of liquidity crises. Additionally, the section reviews the effectiveness of central bank interventions in stabilizing the markets during stress and discusses the interconnectedness of CP and CD markets with other global funding markets, highlighting the risk of cross-border spillovers in times of turmoil.

Section 3.2.1: Market microstructure

Enhancements to market microstructure aimed at improving market functioning and resilience include standardization efforts, particularly in digitization and settlement processes. Digitization of documents, such as information memoranda, is seen as beneficial, although it is not yet widespread, with only the NEU CP and Japanese markets having implemented market-wide digitization. Expanding digitization could expedite the sharing and access to documents, thus streamlining the issuance process and potentially enabling faster settlement times, such as T+0, which is more prevalent in the US and available in the NEU CP market.

The European Securities and Markets Authority (ESMA) has explored the possibility of shortening settlement cycles, which could simplify operations for issuers outside the US by allowing quicker access to funds and reducing the complexity of treasury operations. However, the transition to T+0 settlement may be hindered by operational risks and the need for increased automation to mitigate these risks.

Variations in post-trade processes, particularly in obtaining an International Securities Identification Number (ISIN), present challenges. While technology like E-PIM/eNEU CP can significantly reduce the time needed for ISIN generation, inefficiencies persist due to the fragmentation of European markets and the manual authorization required by International Primary Agents (IPAs).

Standardizing processes could benefit market participants, especially those not connected to advanced technologies or in domestic European markets. Improved trade processing could enhance transparency and facilitate the growth of private repo markets. However, while these improvements could increase efficiency, particularly in primary markets, they may not substantially broaden market participation or change issuance characteristics, and their impact on market resilience during stress periods remains uncertain.

Section 3.2.2: Transparency

The analysis of commercial paper (CP) and negotiable certificates of deposit (CD) markets focused on three data categories: amount outstanding, investor profile, and post-trade transparency, including pricing. The 'amount outstanding' refers to the total nominal value per issuer, while 'investor profile' relates to the aggregated investor base within market segments. 'Post-trade transparency' encompasses generic pricing curves for CP and CD market segments.

Access to comprehensive data sets varies among national authorities, with the most complete held by International Central Securities Depositories (ICSDs) and through regulatory reporting. Gaps in data collected and published by authorities have led to reliance on commercial data providers, which may not always be accurate.

Increased regulatory reporting could improve authorities' market monitoring, identifying trends and vulnerabilities. Enhanced public disclosures could reduce information asymmetry and potentially increase market participation and disintermediation, although some intermediaries doubt it would attract more intermediaries.

The benefits of increased transparency in normal market conditions are recognized, but its effectiveness during market stress is uncertain. Public disclosure of the amount outstanding could aid risk management by allowing investors to assess their exposure and liquidity profile. The Money Market Fund Regulation (MMFR) in Europe has already increased demand for such data.

The potential benefits of disclosing aggregated investor profiles are mixed. Authorities could use the data for monitoring, issuers could tailor funding strategies, and investors could manage liquidity better. However, the greatest benefits for issuers, such as direct engagement with investors, would require more specific information than aggregated profiles.

Post-trade transparency, including pricing, has mixed views. Some believe it could destabilize markets during stress, while others argue it improves valuation and price discovery. Authorities publishing aggregated pricing data have not reported issues, and market participants suggest that increased transparency could support repo activity and provide issuers with more pricing certainty.

Overall, while there are potential advantages to increased transparency in CP and CD markets, considerations must be made for the varying impacts on different market participants and the potential risks during periods of market stress.

Section 3.2.3: None

The expansion of private repo markets for commercial paper (CP) and certificates of deposit (CD) could enhance market functioning by providing liquidity in both normal and stressed conditions. However, this approach faces significant challenges and risks. Intermediaries could use these markets to finance their inventories, and money market funds (MMFs) might leverage them to avoid selling CP and CD at a discount during stress. Yet, MMFs face regulatory constraints that limit their ability to engage in repo transactions, and there is a risk of increased leverage and liquidity pressures. The repo market for CP and CD is more developed in the US than in Europe, but it remains limited compared to other collateral types, with activity primarily centered around dealer inventory financing. Tenor mismatches between dealers and cash lenders, as well as operational issues like the lack of CP and CD acceptance in European triparty platforms, hinder market growth. Additionally, the absence of tranche-level credit ratings for CP and the opaqueness in pricing and margining pose further obstacles. The current economic dynamics, including the mismatch in tenor preference and lower dealer profitability, also limit the attractiveness of CP and CD repos. Despite these challenges, in stress scenarios, the cost of repo transactions may be more favorable than outright sales.

Appendix: The CP and CD markets: Literature Review

The Appendix offers a comprehensive literature review of the commercial paper (CP) and certificates of deposit (CD) markets, examining their structure, characteristics, and vulnerabilities. It includes academic, industry, and policy-related literature, covering topics such as market dynamics, the role of intermediaries, and investor behaviors. The review also discusses the impact of regulatory exemptions, market fragmentation in Europe, and the cross-border nature of these markets. Additionally, it explores the behavior of money market funds (MMFs) and dealers during market crises, particularly the liquidity stress events of March 2020, and the subsequent central bank interventions. The Appendix highlights the main vulnerabilities of the CP and CD markets, such as limited secondary market activity, dealer balance sheet constraints, and transparency issues, which can exacerbate illiquidity during systemic events.