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Elasticity in the monetary system

Key takeaways

- *Today's two-tier monetary system performs a crucial role: providing money in an elastic way through overdrafts and lines of credit in the face of uncertainty and unforeseen shocks.*
- *During the Covid-19 pandemic, such elasticity allowed central banks and commercial banks to provide a discretionary increase in the money supply to manage global shocks.*
- *In recent months, banks have expanded their loan commitments to sectors impacted by US tariffs in anticipation of client demand for working capital.*

Money forms the backbone of the economy and financial system. To play this role, it needs to pass three key tests. First, it needs to be accepted by agents in the economy at par with "no questions asked". This is often referred to as the "singleness of money". Second, it must support the integrity of the monetary system against financial crime and other forms of illicit activity. And third, it must expand and contract flexibly to meet the changing needs of the economy – a feature often referred to as elasticity.

The crucial role of elasticity is apparent in normal times, as credit enables obligations to be discharged without resulting in gridlock. Both central banks and commercial banks provide settlement liquidity elastically. One concrete manifestation is the elastic supply of reserves by the central bank, eg through intraday overdrafts, in real-time gross settlement (RTGS) systems. This greases the wheels of the monetary system, smoothing differences between incoming and outgoing payments to avoid the system becoming stuck. But the need for elasticity is even more important in times of stress or when precautionary demand for money is high. Crucially, banks create money elastically by extending credit to firms and households. When banks offer lines of credit, they pre-commit to providing such credit when needed. That allows borrowers to draw on these lines at their discretion, which creates new bank money (Goodhart (2017)). Borrowers can then make payments whose value exceeds their existing deposit balances. This can be particularly valuable during times of stress.

This Bulletin sheds light on the crucial role of elasticity in the monetary system, using recent examples from the Covid-19 pandemic and from ongoing global trade tensions.

The concept of elasticity

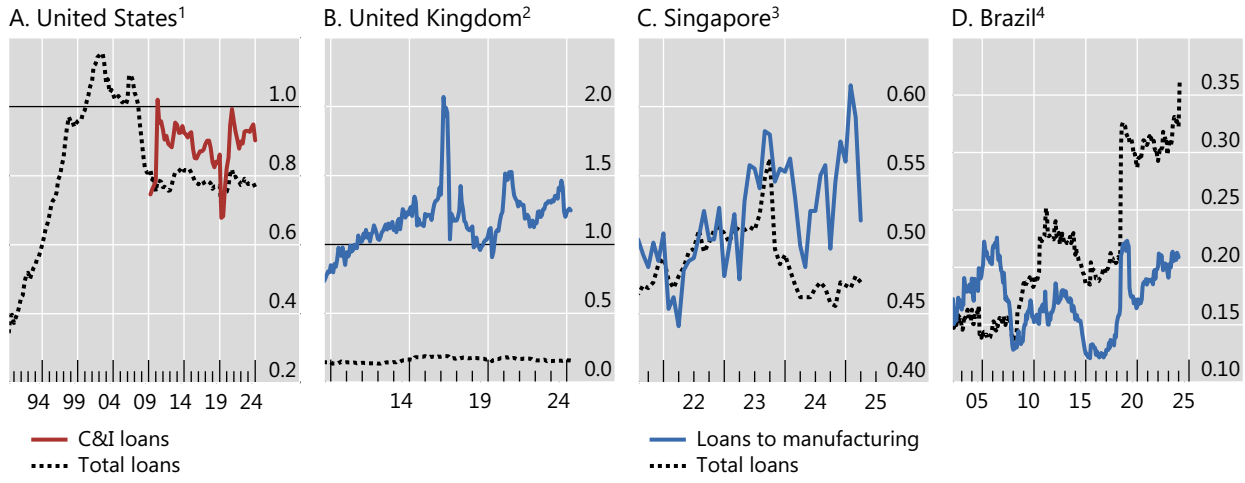
For money to play its key role in the economy, it must be provided in a flexible manner. In the face of shocks, changes in the money supply (ie expansions or contractions of money) can help to smooth the impact of those shocks on economic activity. This requires mechanisms for settlement liquidity to be supplied elastically, enabling the money supply to respond to demand.

Today's two-tier monetary system has this feature of elasticity. At the core of the monetary system, the central bank provides the highest form of money – central bank reserves – used for the ultimate settlement of payments. Financial institutions must hold a minimum amount of such reserves, both to meet reserve requirements (where present) and to settle payments to other financial institutions in wholesale payment systems operated by the central bank. Where needed, intraday overdrafts help them to do this without waiting for incoming payments to replenish their money balances. In times of stress, central banks function as the lender of last resort, enabling banks to access liquidity on demand – against good collateral.[1]

Credit and credit lines provided by commercial banks fulfil a similar function, supplying money elastically to the broader economy (Stein (2013)). When a bank lends to a household or business, it creates both a new asset (the loan) and liability (a deposit), lengthening its balance sheet. With a credit line, and with overdraft facilities, the bank gives borrowers the discretion to access newly created money when needed (Goodhart (2017)).[2] The demand for such flexibility is economically large. In some countries, such unused loan commitments are larger than total used credit (Graph 1). The manufacturing sector, which has high capital needs but sometimes wide fluctuations in demand, often has even higher ratios of unused commitments to used commitments. The provision of trade finance by commercial banks is a further example of the elasticity of money. Trade finance helps to reduce risks related to payments across borders (CGFS (2014)). By pledging letters of credit provided by banks in one country, firms can draw funds from banks in other countries to meet working capital needs to fulfil customer orders.

Unused loan commitments provide a window on the elasticity of money

Ratio of unused to used commitments — Graph 1



C&I = commercial and industrial.

[1] For unused commitments, based on data for depository institutions. For used commitments, based on data for commercial banks adjusted by the ratio of total assets for depository institutions to that for commercial banks. [2] Based on data for monetary financial institutions. [3] Based on data for commercial banks. [4] Based on the data available in the Credit Information System, which includes reports from all financial institutions.

Sources: Central Bank of Brazil; Bank of England; Monetary Authority of Singapore; Board of Governors of the Federal Reserve System; BIS.

[1] This goes back to Thornton (1802) and to Bagehot (1873), who advocated for a central bank to lend early and freely, to solvent firms, against good collateral, at "high rates". Put differently: "*with the advantages of credit we must take the disadvantages too, but to lessen them as much as we can, we must keep a great store of ready money always available, and advance out of it very freely in periods of panic*" (Bagehot (1873), p 55).

[2] Credit rating agencies usually require issuers of commercial paper to secure a backup line of credit with banks to demonstrate their ability to manage rollover or other liquidity risks. However, data on undrawn credit lines often lack detailed information about these backup arrangements. In the United States, for example, supervisory data on unused bank commitments generally exclude unused commitments related to asset-backed commercial paper conduits.

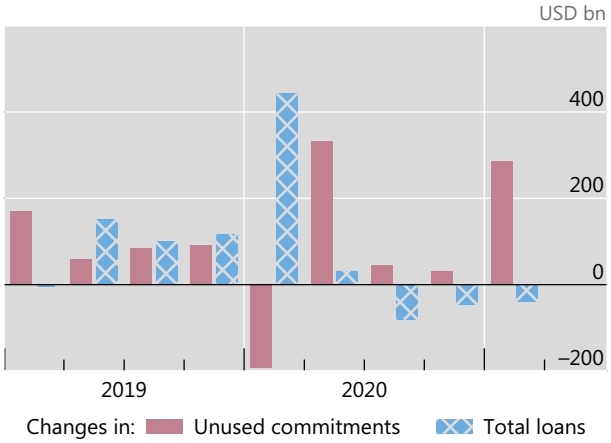
Elasticity during the Covid-19 pandemic

In recent years, the elasticity afforded to the monetary system through bank credit lines has helped the global economy weather significant shocks. For example, during lockdowns in the Covid-19 pandemic, sales collapsed and firms faced a cash flow crunch (Banerjee et al (2020)). Estimates at the time, however, indicated that credit lines would be an important shock absorber. Undrawn credit lines stood at about 120% of annual debt servicing costs and were over twice that of firms' own cash buffers at the time the pandemic hit. They provided a much-needed shock absorber thereafter.

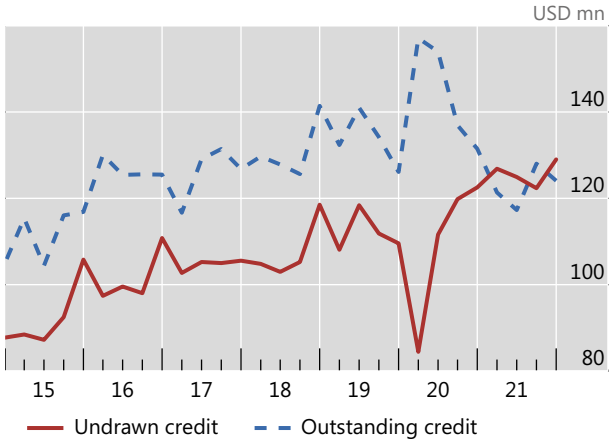
Data from US banks highlight the significant quantity of liquidity supplied through credit lines during the early phase of the pandemic. In the first quarter of 2020, US bank credit jumped by around half a trillion US dollars (Graph 2.A). Around 50% of this increase was likely due to firms drawing on bank credit lines, as unused commitments declined concurrently by around a quarter of a trillion dollars. Data from a global panel of non-financial firms further illustrate the use of credit lines at the start of the pandemic. A jump in outstanding credit in the first quarter of 2020 was mirrored by a significant and similar-sized decline in undrawn credit in the average firm in our panel (Graph 2.B).[3]

The elasticity of money during Covid-19 — Graph 2

A. US bank loans rose as borrowers drew on loan commitments during Covid-19



B. Undrawn credit of non-financial corporates dropped as outstanding credit spiked[1]



[1] Seasonally adjusted medians. Outstanding credit includes commercial paper, revolving credit and term loans.

Sources: BankRegData; S&P Global Market Intelligence; BIS.

Elasticity in the light of global trade tensions

Global trade tensions rose sharply in recent months. Following the outcome of the US presidential election in November 2024, indicators of global trade policy uncertainty increased dramatically, surpassing the previous highs recorded in 2018 and 2019 (Graph 3.A). The rise in uncertainty and prospect of tariffs have brought the elasticity of the monetary system into the spotlight once again.

In an environment of heightened uncertainty, firms are inclined to secure sources of liquidity to help them withstand potential shocks. The sudden escalation in uncertainty makes swift access to credit lines particularly advantageous compared with the slower, more gradual process of accumulating cash buffers

[3] Similar mechanisms were seen globally. For instance, thanks to swap lines, central banks were able to access foreign exchange liquidity, which contributed to a surge in cross-border banking flows (Aldasoro et al (2020)).

through retained earnings. In addition, tariffs entail the need for working capital to bridge the time gap between importing goods and receiving cash flows from sales.

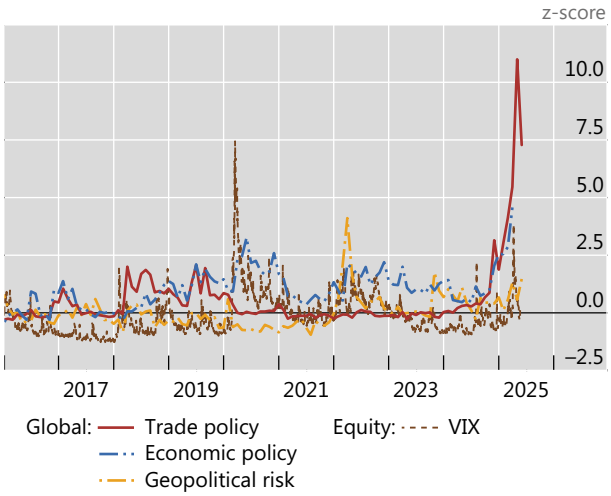
Indeed, data from a global panel of non-financial firms reveal an unprecedented surge in undrawn credit, as firms have requested larger credit lines from banks (Graph 3.B). Among non-financial firms, the average amount of available undrawn credit doubled in the fourth quarter of 2024.

The anticipation of having to pay tariff duties may have prompted firms to expand their credit lines with banks. Since tariff payments are required to clear goods from the dock, firms must settle these costs before they can generate cash flows from sales to other customer firms or to final consumers.[4] This leads to a heightened demand for liquidity.[5] Credit lines offer a flexible solution, enabling firms to bridge the time gap between upfront tariff payments and the cash inflows from subsequent sales.[6]

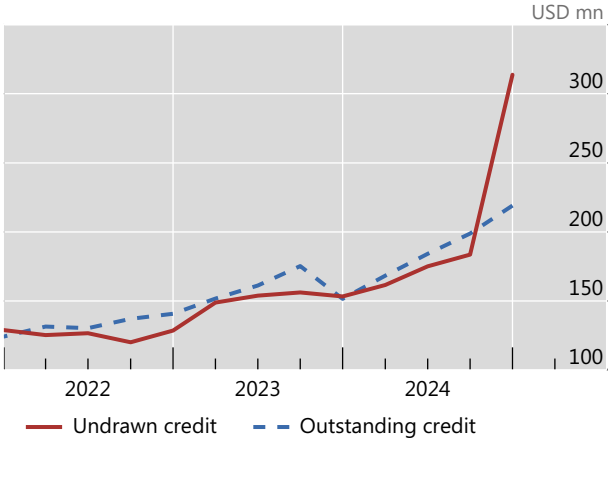
Recent trade uncertainty and money elasticity

Graph 3

A. Global uncertainty and stock market volatility have spiked recently[1]



B. Undrawn credit of non-financial corporates has recently risen faster than outstanding credit[2]



[1] Z-score of policy uncertainty and VIX from 2000 to present. VIX is daily, while uncertainty measures are monthly. [2] Seasonally adjusted medians. Outstanding credit includes commercial paper, revolving credit and term loans.

Sources: Baker et al (2016); Caldara et al (2020); Caldara and Iacoviello (2022); Bloomberg; S&P Global Market Intelligence; BIS.

To assess the potential influence of tariffs on the recent rise in credit lines, we examine whether firms that are more likely to be affected by future tariffs were especially active in extending their credit lines with banks. To classify which firms may have expected to face tariffs in late 2024, we use the incidence of the 2018 US Section 301 tariffs, which identify products at the eight-digit Harmonised Tariff Schedule level. We then match these product level identifiers to six-digit North American Industry Classification System sectors to identify firms that produce these products. We consider these firms to be in the "affected" sectors.

Firms operating in sectors impacted by the 2018 tariffs significantly extended their credit lines in the fourth quarter of 2024. In affected sectors in the United States, the ratio of undrawn credit to total credit for the average firm in those sectors rose by around 20% (Graph 4.A, red line). By contrast, undrawn credit

[4] Free on board (FOB) is one of the most commonly used trade terms. Under this arrangement, the buyer assumes responsibility for all import duties and tariffs once the goods leave the seller's country. In such cases, the importer is obliged to cover these costs.

[5] See for example, G Tett, "Get ready for a corporate rush for cash", *Financial Times*, 2 May 2025.

[6] An alternative to bank credit lines is to delay payments, but this could cause major disruptions to cash flow, destabilise supply chains and strain business relationships.

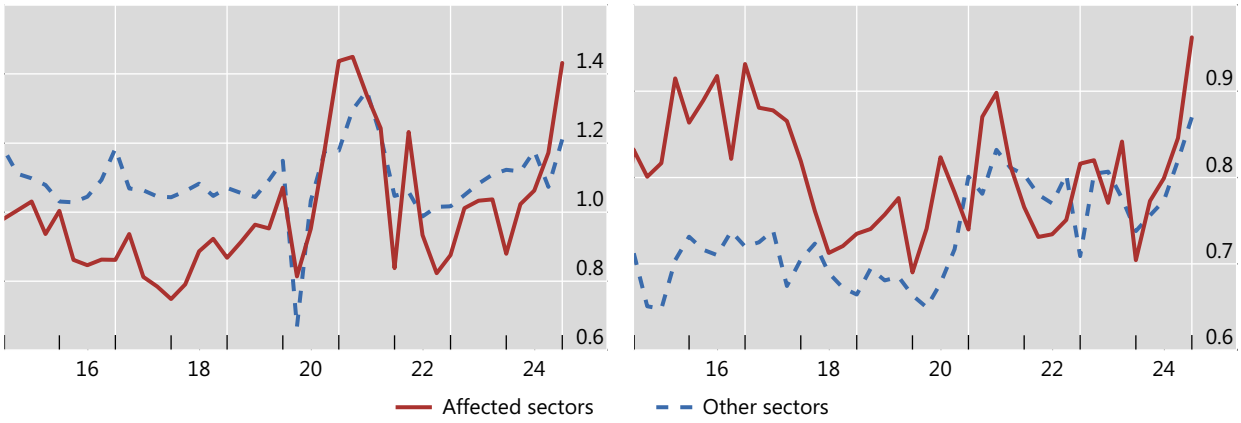
ratios changed less for the average firm in other sectors (blue line). Similarly, non-financial firms in affected sectors outside the United States also substantially extended their credit lines relative to total credit outstanding, outpacing changes in other sectors (Graph 4.B). The recent increase in the undrawn credit ratio in affected sectors is entirely attributable to firms extending their credit lines, rather than to a decline in outstanding credit.

Exposure to trade tariffs and extension of credit lines

Ratio of undrawn to outstanding credit — Graph 4

A. Undrawn credit to outstanding credit has risen more for affected sectors in the United States…[1, 2]

B. …and in the rest of the world[1, 2]



[1] Ratio of undrawn credit to outstanding commercial paper, revolving credit and term loans. [2] Seasonally adjusted medians based on a sample of over 2,500 non-financial firms globally per quarter. Affected sectors are those sectors where the United States imposed increased tariffs in 2018. Other sectors are the remaining sectors.

Sources: S&P Global Market Intelligence; BIS.

Conclusions

Elasticity is an essential feature of the monetary system, allowing firms to meet their payment and liquidity needs, thereby greasing the wheels of the economy in both stable and challenging times. During normal periods, monetary elasticity facilitates economic activity by providing businesses with the working capital they need on demand. In times of stress, such as the Covid-19 pandemic, this flexibility becomes even more valuable (Boissay et al (2020)). Against the backdrop of recent trade tensions, the ability to swiftly access liquidity through credit lines will likely play a vital role in ensuring that obligations, such as tariff payments, can be met without triggering widespread gridlock. Such disruptions would be far more likely if businesses were forced to rely solely on their existing cash reserves.

The fractional reserve nature of banking operations is what enables the elasticity of the monetary system. Pre-funded payment instruments (such as stablecoins or pre-funded non-bank payment service providers) do not offer such elasticity.

By the same token, the flexibility of the banking sector entails the need for regulatory safeguards. Only when banks are sufficiently well capitalised can the system effectively provide funds to the economy in a flexible manner, particularly in response to significant shocks. For instance, during the Covid-19 pandemic, banks with stronger capital buffers experienced less severe declines in stock returns during market downturns (Acharya et al (2024)). Conversely, as seen during the Great Financial Crisis, an undercapitalised banking system with insufficient liquidity buffers can severely constrain this elasticity (Stein (2013)). The resulting contraction in trade finance not only amplified but also propagated the initial economic shock (Ahn et al (2011)). In this light, maintaining high levels of bank capital, and the resilience of the financial system, will help to retain this important function of the monetary system in the future.

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