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Trade credit, trade finance, and the Covid-19 Crisis

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Trade credit, trade finance, and the Covid-19 Crisis

Key takeaways

- *As the Covid-19 pandemic hits economic activity, the vulnerabilities of longer and more geographically extended trade credit chains are coming to the fore, especially those related to international trade.*
- *While risk mitigation is available from financial intermediaries, the bulk of the exposures associated with supply chains is borne by the participating firms themselves, through inter-firm credit.*
- *Given the prevalence of the US dollar in trade financing, measures such as central bank swap lines that ease global dollar credit conditions may cushion the impact of the pandemic on global value chains.*

The pandemic has shocked global supply chains, straining business cash flows and working capital. For most firms, a large fraction of working capital is categorised as "accounts receivable" — the money owed by customers in the supply chain. Accounts receivable are matched to some extent by "accounts payable" on the liabilities side of the balance sheet – the money owed to suppliers further up in the supply chain. This interlocking chain of receivables and payables can be seen as the glue that binds supply chains together in the real economy and sustains their operation, both domestically and internationally (Carstens (2020), Kim and Shin (2012)).

Non-financial corporations may choose to finance the receivables with their own resources, in effect providing credit to customer firms. Such an arrangement is commonly referred to as "trade credit". Alternatively, they may choose to offload the exposure to banks and other financial intermediaries. One way to do so is via "factoring", where firms sell their accounts receivable at a discount to a third party known as the "factor", which is typically a bank, and receive immediate cash.[1] External financing is particularly common for importers and exporters, and the term "trade finance" is used collectively for all such arrangements facilitating international trade.[2]

This Bulletin constructs estimates of firms' working capital and highlights some key trends by drawing on a number of data sources, including the BIS series on aggregate trade finance. The details of the construction are reported in a separate online annex accompanying this Bulletin. Using our estimates, we highlight the exposure of supply chains and the broader economy due to the pandemic.

[1] Factoring is thus an outright asset sale, as opposed to a loan.

[2] See CGFS (2014) for a detailed description of different trade finance arrangements.

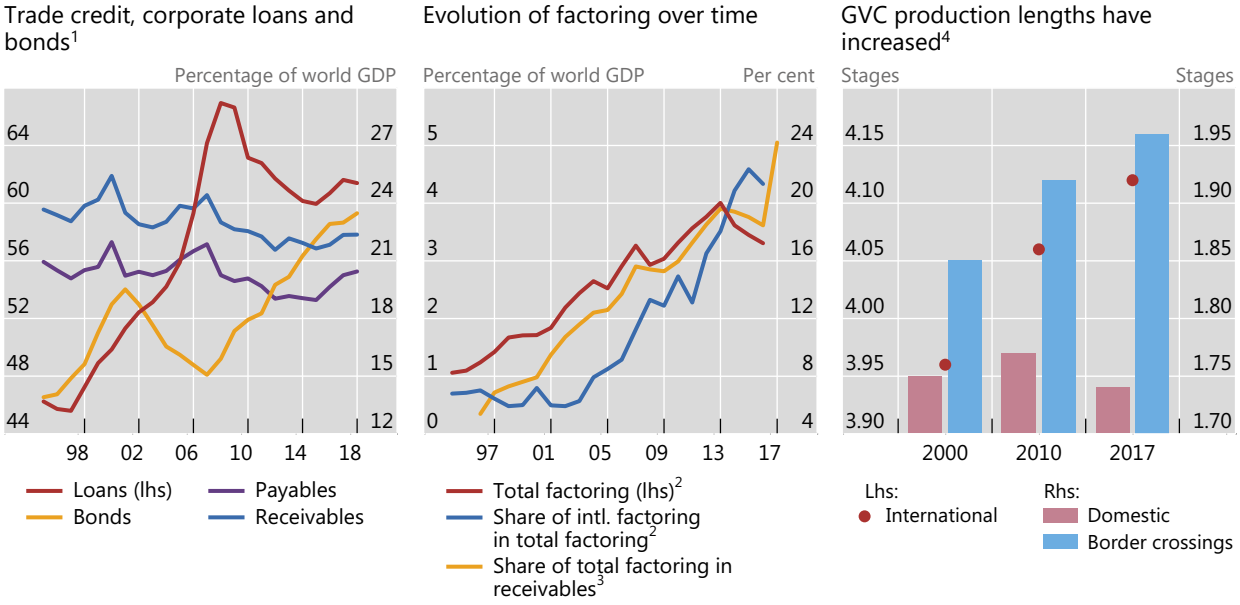
The landscape of trade credit and trade finance

In the world of interlocking payables and receivables, firms borrow from their suppliers and lend to their customers, thus creating a trade credit chain that runs parallel to the flow of goods along supply chains.[3] Trade credit is an important source of funding for non-financial corporations (NFCs). The volume of trade payables is comparable with that of outstanding corporate bonds, and amounts to roughly one third of NFCs' outstanding bank loans (Graph 1, left-hand panel). As they are intrinsically linked to the financing of inputs, trade payables are less subject to the cyclical ups and downs of corporate loans and bonds. As such, their volume has been fairly stable at around 20% of GDP over the past 25 years.

In contrast, trade finance, as proxied by the share of cross-border factoring in total factoring, has steadily increased over the past two decades (Graph 1, centre panel). This long-term trend has gone hand in hand with the rise in international trade and, more specifically, the lengthening of global value chains (GVCs). While the lengths of domestic production chains estimated using world input-output tables at the country-sector level have remained constant, GVCs involving multiple border crossings have lengthened significantly between 2000 and 2017 (Graph 1, right-hand panel). Since financing needs increase with the length of supply chains (Bruno et al (2018), Bruno and Shin (2019)), trade finance has become more prominent in the context of GVCs.

Trends in trade finance and trade credit

Graph 1



[1] For a sample of European countries (BE, DE, ES, FI, FR, GB, GR, IE, IT, NL, NO, PL, PT), US and Turkey, for which data on trade receivables are available. These countries represent more than 65% of total world factoring. [2] World factoring data. FCI data on factoring include invoice discounting and documentary collections. [3] Same sample as in the left-hand panel. [4] Lengths of productions chains and number of border crossings. GVC length is defined as the average length (number of stages) of production segments that involve at least one border crossing in the production stage. Domestic length is defined as the average number of stages for purely domestic production and consumption. Border crossings are defined as the average number of border crossings in GVCs for production purposes. Computations are made using the framework of Wang et al (2017) and data from the Asian Development Bank's multi-regional input-output table (MRIO). Simple average of forward and backward linkages. Simple medians across countries and sectors.

Sources: Federal Reserve Board; Asian Development Bank; Factors Chain International (FCI); IMF; World Trade Organization; Eurostat; BIS; authors' calculations.

[3] An individual firm may be a net borrower or a net lender, depending on its position in the supply chain, sector of activity, and bargaining power. At the aggregate level, however, firms typically need external financing (through markets or banks) to fill the gap between trade receivables and payables (Graph 1, left-hand panel) and sustain the chain.

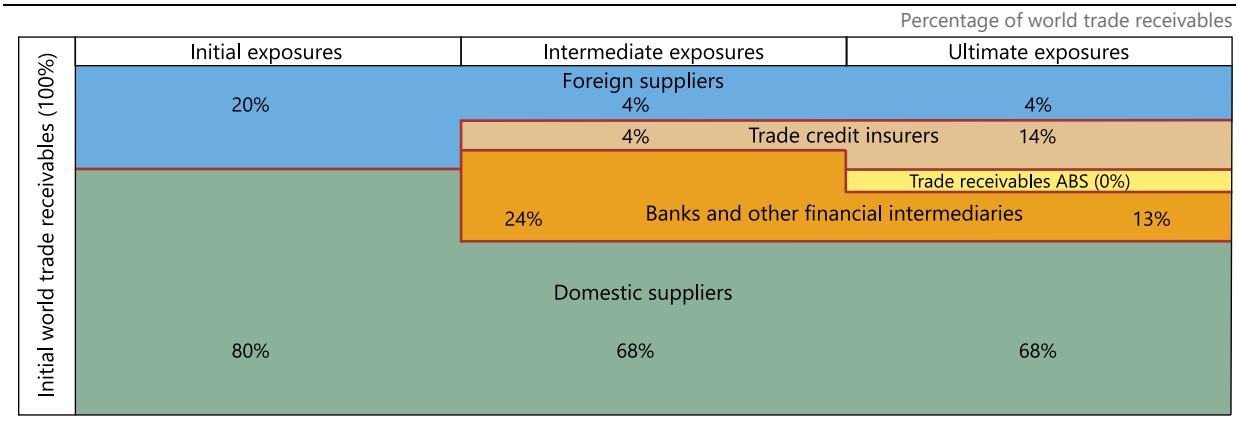
NFCs' exposures to trade receivables

We construct NFCs' trade credit exposures in three steps (Graph 2, and see online annex). As the first step, exposures are allocated between domestic and foreign counterparties depending on whether transactions are domestic or cross-border (Graph 2, left-hand column). We find that 80% are domestic and 20% are cross-border exposures.

As a second step, we estimate how far firms resort to financial intermediaries to reduce their exposures, by selling receivables, insuring against default, or purchasing guarantees from banks (Graph 2, centre column). These contracts shift suppliers' initial exposures to financial intermediaries – typically banks and insurers. Finally, as the third step, we estimate how far banks and insurers lay off their risk by packaging the receivables into asset-backed securities (so-called trade receivables ABS) and selling them to outside investors, to arrive at "ultimate exposures" (Graph 2, right-hand column).

NFCs remain exposed to most of their trade receivables

Distribution of exposures to trade receivables[1] Graph 2



[1] This graph shows how exposures to trade receivables are distributed across suppliers, financial intermediaries, and markets. The figures are expressed as a percentage of originated trade receivables (whether domestic or international) as of 2016, and are obtained from multiple sources using several approximations. They should therefore be seen as indicative of orders of magnitude rather than precise estimates. A detailed description of the calculations is available in the accompanying methodological annex.

Sources: Asian Development Bank; Factors Chain International; International Credit Insurance and Surety Association; IMF; Eurostat; Collaborative Market Data; CGFS (2014); authors' calculations.

Our estimates suggest that NFCs themselves retain the lion's share (above 70%) of their receivables exposures arising from supply chain activity.[4] In terms of ultimate exposures, banks bear 13% and insurers bear 14%. Other risk mitigation arrangements are negligible. Less than 1% of trade receivables are securitised, although the outstanding amount of trade receivables ABS has increased by 50% over the past five years (not shown in the graph).

Notably, exposures related to international trade are borne in large part by banks and other intermediaries.[5] Overall, firms offload relatively more of their cross-border receivables (about 80% of their initial exposures) than of their domestic receivables (15%). This could be due to the longer time lags and higher information frictions involved in cross-border transactions as compared with domestic ones, as well as the higher costs of facing a variety of litigation rules and legal environments.

[4] Given the information asymmetries and enforcement powers of firms, trade credit can in many instances be the most efficient form of external financing.

[5] For example, 88% of trade receivable insurance is used for international trade credit. In contrast, factoring is used more equally across domestic and international transactions.

Trade credit and supply chains vulnerabilities

Historically, losses on trade receivables have been relatively small compared with those on other asset classes (International Chamber of Commerce (2018)). Trade credit has often proved to be a resilient source of funding during recessions, including the Great Financial Crisis (GFC) – see CGFS (2014) and Coulibaly et al (2011). But the pandemic presents a perfect storm for supply chains.

First, the pandemic has hit real activity directly, rather than working primarily through stresses in the banking sector, as was the case in the GFC. Central banks do not have as many direct levers to address NFCs' financial stress as they have for banks, making support measures more difficult (Carstens (2020)). Moreover, the Covid-19 shock is more synchronised across sectors and countries, with buyers and suppliers being affected simultaneously. In such settings, the scope for inter-firm lending in the form of trade credit to cushion the economic impact is likely to be severely diminished.[6]

Second, the reliance on longer and more global supply chains may make even the largest companies "as weak as the weakest link". Early anecdotal evidence suggests that the auto industry may have been hit particularly hard due to knock-on effects along supply chains (Miller et al (2020)). This would be in line with the literature on the propagation of shocks along production chains.[7]

Third, fragilities may emerge in some credit risk mitigation arrangements that are being tested for the first time during the Covid-19 crisis. One example is trade receivables ABS, which are short-term and carry significant rollover risks. Another example is "reverse factoring", which allows large buyers to receive cash from banks for their payables until payments are called in by their suppliers. In the absence of clear disclosure requirements, reverse factoring gives scope for firms to disguise borrowing from banks as trade credit. Although firms can increase their cash holdings through this arrangement, such cash is earmarked for suppliers and does not provide the liquidity buffer that cash would normally provide (eg Jafari and Kalousova (2018), Eaglesham (2020)). As a result, credit rating agencies have recently warned against such practices.

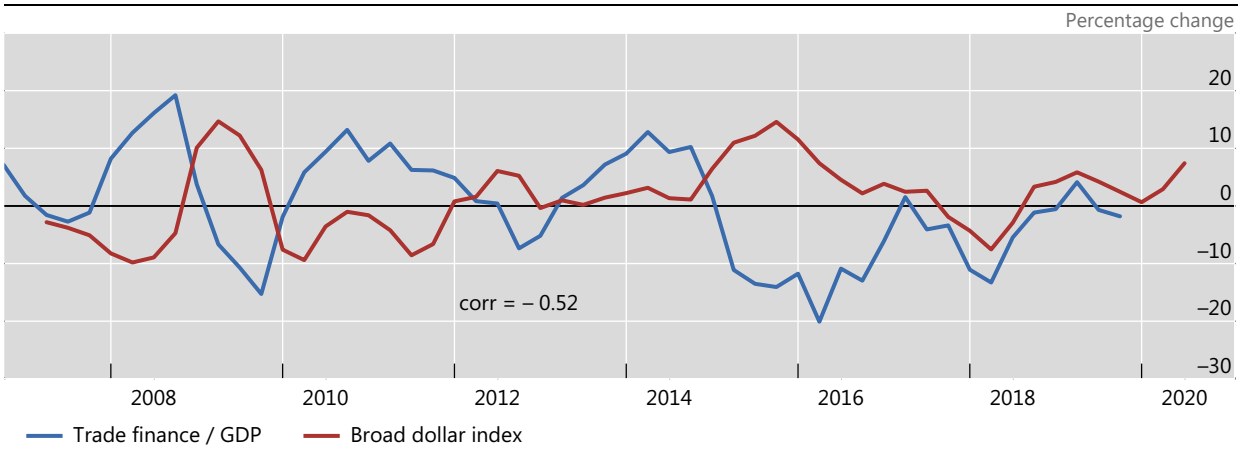
In addition to these new sources of vulnerability, some old ones are also likely to resurface in the wake of the Covid-19 crisis. For example, sharp appreciations of the dollar may impair trade finance and GVCs. Historically, global trade finance volumes reported by central banks to the BIS have co-moved negatively with the dollar (Graph 3). Several forces contribute to this, but arguably the most prominent among them is the financial channel of the exchange rate. Dollar appreciations lead to a tightening in dollar financial conditions due to the sensitivity of dollar credit supply to the broad dollar exchange rate (Bruno and Shin (2019), Avdjiev et al (2019)). An appreciation of the dollar is associated with tighter dollar credit conditions.

The sharp appreciation of the dollar in the early stages of the Covid-19 crisis may have had knock-on effects to trade finance from stress in the banking system. Given the prevalence of the US dollar in trade financing, mitigating the impact of dollar credit fluctuations will be an important component of shielding global value chains from the pandemic's economic fallout. In this respect, the recent expansion of central bank dollar swap lines and other measures to mitigate dollar liquidity conditions are likely to further cushion trade finance.

[6] Although large firms tend to act as liquidity insurers against idiosyncratic shocks inside their supply chains in normal times (eg Boissay and Gropp (2013)), such a mechanism may not work during an aggregate shock on the scale of Covid-19.

[7] See eg Jacobson and von Schedvin (2015), Carvalho et al (2016), Agca et al (2020).

Trade finance co-moves negatively with the dollar index[1] Graph 3



[1] Percentage change (year on year). The trade finance series is constructed as an aggregate of amounts outstanding reported to the BIS by 9 central banks (DE, GB, ES, HK, JP, IT, FR, KR, US). Reporting basis differs across central banks along several dimensions such as inclusion of foreign operations of home-headquartered banks.

Sources: Board of Governors of the Federal Reserve System, IMF, Eurostat, BIS, authors' calculations.

Concluding remarks

Covid-19 may hit the real economy much harder than the GFC did, posing a proportionately greater policy challenge (Carstens (2020)). While the evidence suggests that central banks' corporate bond purchase programmes may help to inject liquidity into trade credit chains through large firms (Adelino et al (2020)), more direct support in the form of grants and loan guarantees may be needed to cushion the impact of the shock, especially for smaller firms in the supply chain. In addition, government-guaranteed bank loans could be used to purchase trade receivables and inject cash into supply chains. Such loans could even be securitised and financed by a central bank facility.

Governments could also provide infrastructure to facilitate financial contracting among private parties. In Mexico, for example, the NAFIN development bank does not provide funding or factoring services directly, but operates a digital platform that allows small suppliers to use their receivables from large buyers to obtain working capital financing through reverse factoring operations with participating financial institutions.

Credit insurers, who are exposed to the credit risk of about 14% of trade receivables (Graph 2), have also been impacted by the pandemic. To cushion the market, authorities in Europe, where trade credit insurance is most prevalent, have taken several measures to raise their domestic credit insurers' loss absorption capacity, often with the direct involvement of public funds.[8]

Finally, the international dimension is likely to be particularly important given the relatively higher exposures of banks and other intermediaries to trade finance, and the prevalence of the US dollar in trade financing. Governments have already moved to fill trade financing gaps in the current crisis. Their measures include increasing the capacity of export credit agencies, expanding working capital programmes, and introducing new facilities to support exporters and importers, particularly SMEs (OECD (2020)).

[8] For example, in France, a EUR 12 billion programme will reimburse insurers for payments to suppliers whose buyers have defaulted. In Germany, credit insurers will pay EUR 500 million of the first EUR 5 billion in claims, and the government will reimburse them for a further EUR 25 billion.

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