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Towards a Framework for Measuring Trade Finance

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TOWARDS A FRAMEWORK FOR MEASURING TRADE FINANCE[1]

Trade finance encompasses a wide range of financial instruments that spans more than one of the standard financial account classifications and components, resulting in the lack of a comprehensive dataset that measures its magnitude, composition, and dynamics. This paper proposes a single satellite table that aims to bridge the current data gaps, while providing a starting point for a more integrated statistical approach. The table captures transactions and positions both within and across borders. It also addresses the recording of letters of credit—the traditional instrument of trade finance—as well as the open account trade and newer supply chain finance instruments. Given the challenges of source data collection, the paper proposes that a pilot test be undertaken in a few countries. Integration across statistical domains, including national accounts and financial statistics, would be a natural next step in the medium-term.

A. Introduction

1. **There is currently no single comprehensive dataset that measures the magnitude, composition, and dynamics of the trade finance market**. In the aftermath of the 2008–9 financial crisis, analysts cited the absence of data as an impediment to estimating the trade finance gap, which impacted assessments of whether targeted interventions to channel liquidity into the real economy were adequate and effective. To address this data gap, the G-20[2] and leading international financial institutions[3] advised to "*coordinate and establish a comprehensive and regular collection of trade credit*" to overcome "*a significant and avoidable hurdle for policy-makers to make informed, timely decisions*."

2. **At its 2017 meeting, the IMF's Committee on Balance of Payments Statistics (Committee) supported the idea of developing a proposal for collecting trade finance information for discussion at the 2018 Committee meeting.[4]** The decision is timely, because within the last decade, the trade financing market has undergone structural changes with the invention of digital supply-chain financing solutions and Fintechs that entered established markets with a specific focus on small and medium sized enterprises. This has extended the range of creditors and instruments beyond traditional bank-based financing instruments/facilities, resulting in gaps in data collection.

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[1] Prepared by Cornelia van Wersch (STA's Real Sector Division, RE) with gratefully acknowledged comments from Robert Dippelsman (RE); and Paul Austin and Emma Angulo (STA's Balance of Payments Division).

[2] See: G20 Trade Finance Experts Group - April Report Canada-Korea Chair's Recommendations for Finance Ministers

[3] See World Bank, 2011 "Trade Finance during the 2008–2009 Trade Collapse: Key Takeaways"; and IMF, 2011 Trade and Trade Finance in the 2008–09 Financial Crisis; BIS 2014 Committee on the Global Financial System (CGFS) Paper on Trade Finance: Developments and Issues; WTO

[4] See BOPCOM 17/17: Summary of Discussion and BOPCOM 17/21: Fintechs and the Financial Side of Global Value Chains—The Changing Trade-Financing Environment"

3. **The specific statistical challenge is** to (i) **measure the size of trade finance**, encompassing the new financial instruments, created by new financial suppliers, and through new channels (e.g., digital trade); and (ii) **provide a framework for data dissemination that is aligned to user needs**. In the short-term, the approach may be to seek to address the issue in the framework of the current standards. A long-term solution may imply an adjustment to these standards. This paper proposes an integrated approach to developing a reporting framework to capture both domestic and cross-border trade credit, and to distinguish between bank-intermediated and interfirm trade finance.

B. Capturing Trade Finance in the Current ESS

4. In addition to the three broad categories of financial assets and liabilities (equity and investment fund shares, debt instruments, and other financial assets and liabilities), both the *2008 SNA* and *BPM6* use a more detailed classification that is based primarily on the legal characteristics that describe the form of the underlying relationship between the parties to an instrument, which are also related to their liquidity and economic purpose. **However, trade finance encompasses a wide range of instruments at the financiers' disposal—**these financial instruments span more than one of the existing standard financial account classifications and components. As a result, the current macro-statistical frameworks do not facilitate an accurate measurement of domestic and cross-border trade finance.

5. **In ESS, cross-border transactions linked to the trade financing are short-term instruments recorded in the following categories of the financial account:**

- Other investment- trade credits and advances: records trade finance obtained through open accounts[5] or cash-in-advance between the exporter and the importer;

- Other investment- loans- short-term: includes trade finance obtained from banks or other non-bank financial institutions not in the form of securities; and

- Direct investment- debt instruments: includes trade finance obtained from affiliated companies.

6. **Apart from trade credits and advances, the other instruments currently do not require a breakdown to separately identify transactions/positions linked to trade financing**. The standard component of trade credits and advances covers only credit extended directly by the suppliers of goods to their customers (*BPM6 5.70*). Other trade-financing categories, such as any working capital related financing provided by third parties/financial intermediaries, traditional bank-intermediated techniques, or newer supply chain financing instruments are not separately distinguished or at all captured. Further, trade

[5] Typically, an "open account transaction" in international trade is a sale where the goods are shipped and delivered before payment is due, which is typically in 30, 60 or 90 days.

credits and advances are often not directly measured in ESS, but rather approximated using estimation techniques or calculated as a residual item. The standard components of *other investment* are classified by institutional sector, and in principle by original maturity, and currency composition. These attributes provide a sound base for assessing liquidity or solvency problems affecting a specific sector and facilitates broader analysis of exchange rate and reserve management policy options—but with a missing link to trade.

7. **How important traditional bank-guaranteed instruments are for international trade cannot easily be measured.** In macroeconomic statistics, Letters of Credits (L/Cs) and other short-term documentary credits are not recorded,[6] because similar to other guarantees, no financial assets and liabilities are created. L/Cs are used to ensure payment for suppliers on time and for the correct amount, before change of ownership occurs. This is in contrast to trade credit and advances, when financial instruments are created concurrently with the change of ownership. Once the conditions of the L/C are met, the supplier receives payment, and the buyer receives the documents needed to claim ownership. These off-balance sheet instruments, outside the scope of ESS, may complement comprehensive trade finance statistics with an important indicator of bank-guaranteed trade.

C. Value Added of Compiling a Single Satellite Table

8. **A single satellite table would allow users to track and monitor trade finance market dynamics, and to separately assess and compare bank-intermediated with interfirm financed segments of the market.** Knowledge about market shares of bank-intermediated and interfirm financing products can provide essential information about the grade of resilience before, during and after times of uncertainties.[7] In adverse global situations (the case of the global financial crisis and previous crises), when the international community needs to quickly support the trade finance market, the availability of comprehensive and reliable data on trade finance flows would facilitate an informed assessment of the market situation and the adequacy of targeted interventions.

9. **A satellite table would also allow showing the bulk of trade finance that is off-balance sheet.** For the most part, as described above, L/Cs represent off-balance sheet commitments; only if the buyer takes a period of time before repaying his bank, short-term liabilities are created, indistinguishable from other loans, and of domestic nature. L/Cs and

[6] According to SWIFT data, used in a study by Niepmann and Schmidt-Eisenlohr (2013), about 91 percent of all L/Cs are used for cross-border transactions.

[7] For instance, when banks become more cautious and risk averse, increased pricing or more stringent rules for financing and guarantees has consequences for companies that largely rely on the banking system. Companies in open account relationships, on the other hand, can suffer from a lack of liquidity and longer maturities imposed by buyers, leaving suppliers potentially with a greater need for working capital. And overall, companies in an arm's length relationship are more vulnerable in open account relationships than those within the boundary of foreign direct investment relationships with access to internal capital markets.

documentary credits play two vital roles in the world economy (i.e., providing payment guarantees in support of supply chain transactions and mitigating payment risk).[8] [9]

10. **More recently, cost and efficiency requirements—combined with advances in technology and digitization—have fueled the emergence of platform-driven open account trade called supply chain finance (SCF).** Typically, SCF covers a set of instruments through which the largest company inside a supply chain uses its superior credit rating to help its lower-rated suppliers obtain access to financing at more favorable rates than they would obtain otherwise. Benefits include lengthening payment terms for buyers and shortening them for suppliers, thus improving working capital for both.[10] New product lines can have implications for market functioning and growth; and are most likely imperfectly captured by existing data identifying trade (related) credit. A satellite table that can be adjusted, would allow for tracking of structural changes and broad trends over time, and would support policymakers in identifying the need for, and the extent of, measures to support these markets.

11. **The advantages of a single dataset in terms of coverage and consistency outweigh partial and patchwork information from national datasets and adhoc surveys.** Several countries already have datasets in place that capture important segments of their trade finance markets.[11] Some countries focus on domestic borrowing, while others concentrate on cross-border activities; off-balance sheet items of banks are mostly excluded, and open account relationships in form of trade credits are disseminated as part of the balance of payments/international investment positions, but with serious flaws as discussed above. To fill the data gap during the recent global financial crisis, the IMF and the Bankers' Association for Finance and Trade (BAFT) conducted four adhoc surveys of banks between 2008 and 2010 on volume, prices and drivers of trade finance.[12] Also, the World Bank sponsored an exceptional bank and company survey in 14 developing countries in 2009. Regular surveys of banks’ strategies and business outlooks for trade financing are funded by the International Chamber of Commerce.[13] While these initiatives provide useful insights into

[8] Payment risk, because almost none of international trade is paid in cash.

[9] L/Cs are used mainly in international transactions to overcome a lack of trust due to distance, country risk and variations in legal requirements (commercial L/Cs and its subcategories); but are also useful for any domestic transactions where the buyer and seller have not worked with each other previously (domestic or stand-by L/Cs). While a dominant instrument used for centuries through a clear set of governing guidelines, the fact of being paper-based, their cost, etc. have caused shifts towards trade financing in “open account” relationships directly between buyers and suppliers without active intermediation.

[10] Technically, these instruments bring the financial intermediary back into an open account relationship, whereby intermediation can be provided by the SCF provider itself (a Fintech company), the connected bank that is part of the SCF arrangement, or the bank that has SCF in its own service portfolio.

[11] See BIS Committee on the Global Financial System Papers No 50 (2014)

[12] IMF WP/11/16 Trade and Trade Finance in the 2008-09 Financial Crisis

[13] https://iccwbo.org/publication/global-survey-2018-securing-future-growth/: 251 banks participated in the 2018 Global Survey, from 91 countries.

broader trends or single market segments, a single table in terms of coverage and consistency, standardized terminology and instrumentation, would allow for a more comprehensive interpretation of the trade finance market in quantitative terms and over time.[14]

D. Trade Finance: A Satellite Table

12. **The draft table herewith proposed is modelled after one of the templates of institutional sector accounts showing the liabilities of one sector as assets of the other sector (Table 1).** The table allows to combine cross-border and domestic finance relationships, and from ESS, items covered under *other investment* and *direct investment*. Two novel features of the table are the inclusion of contingent accounts payable and receivable that are off-balance sheet and, similar to the Reserve Assets Template, of memo-items that capture country-specific information on complementary support programs in place.

13. It covers three categories of trade finance (see Annex 1):

   a. **Traditional bank-intermediated instruments** include off-balance sheet contingent assets and liabilities. Once the terms of the L/Cs are met, the supplier receives payment, and the buyer receives the documents to claim ownership. Domestic on-balance sheet short-term loans are created only if the buyer takes a period of time before repaying his bank. (Different types exist: commercial, revolving, standby, and confirmed L/Cs).

   b. **Open-account inter/intra-firm trade finance** means that suppliers and buyers do not seek trade financing from a financial institution—the only position is the supplier's open account claim on the buyer with payment targets of 30, 60, 90, or 120 days. This may include Dynamic Discounting where buyers can decide how and when to pay their suppliers in exchange for a discount on the purchased goods; the earlier the payment, the larger the discount.

[14] According to the WTO, up until 2004, combined efforts for a series of trade finance statistics were made by the IMF, WTO, BIS, and the World Bank and not continued. This was before the GFC, the subsequent call by the G20 and the same institutions for the need of comprehensive statistics, as well as the rise of new instruments and new players in the market.

Table 1: Draft Satellite Table of Comprehensive Trade Financing

Instruments/sector	Liabilities of:	Assets of: Finance providers (FCs or Fintechs) cross-border	Finance providers (FCs or Fintechs) domestic	NFCs cross-border affiliated	NFCs cross-border non-affiliated	NFCs domestic affiliated	NFCs domestic non-affiliated
Open account inter/intra-firm trade financing							
Trade credits	NFC						
Trade advances	NFC						
SCF or other working-capital-related financing							
o.w. Receivables / Payables Finance							
Loans, short-term (long-term)	NFC						
Deposits	FC						
o.w. Loan/Advance based Finance							
Trade credits	NFC						
Collateralized loans (Receivables or Inventory)	NFC						
Deposits	FC						
Traditional bank-intermediated instruments (L/Cs; etc.)							
Contingent accounts payable	NFC/FC						
Contingent accounts receivable	NFC/FC						
Loans, short-term	NFC						
Memo items							
		Private / public export credit agencies					
		cross-border	domestic				
Credit lines (drawn; by maturity)	NFC						
Credit guarantees	NFC						
Short-term lending of working capital	NFC						
Others	NFC						

NFCs = buyers and/or suppliers

Cells shaded in grey are not applicable (e.g., inter/intrafirm trade credits are only between NFCs).

c. **Supply chain financing[15] and other working capital-related financing** that comprise traditional instruments in digitized formats and new services altogether. There are three main categories of SCF: (i) Payables Finance where the supplier exchanges his claim on the buyer for a deposit with the financial intermediary. Diverse instruments can be used, such as Receivables Discounting, Forfaiting, and Factoring; (ii) Receivables Finance where the buyer's creditworthiness allows the supplier to receive an early discounted payment for the accounts receivable; the early financing is for 100 percent of the receivables less a discount. The buyer will pay the due amount directly to the financial intermediary; and (iii) Loan/Advance against Receivables where the financial intermediary provides advances or loans to suppliers that are collateralized with future or current receivables. The suppliers repay the loans upon maturity and interest on an accrual basis. Loan or Advance against Inventory is an asset-based financing instrument where the finance provider obtains title over the goods as collateral (e.g., Finetrading); the lending is based on the inventory's appraised value, which is usually lower than the market value.

d. **A memo item** on the role of private and public export credit agencies in a country could provide useful information on existing programs that are in place, for instance, to provide short-term lending of working capital, credit lines or credit guarantees for specific market segments, as well as to support regional trade or supply chain operations.

14. **Comprehensive and efficient data collection imply challenges to avoid omissions and/or double counting.** One way to capture open account trade credits is to collect the data directly from NFCs manufacturing goods. However, if, for instance, the supplier sold the claim embedded in the trade credit outright to a financial intermediary (Payables Finance), the instrument would be extinguished in the books of the supplier, but not in the books of the buyer. The trade credit asset is then in the financial intermediary's books. Suppliers can also sell only parts of the outstanding claims. Additionally, the data could be sourced to a large extent from financial intermediaries—this could include off balance sheet data on L/Cs as indicator for future trade. Further, this could include all SCF intermediation as well as direct loans and advances to suppliers/buyers to finance supply chain-related working capital.

15. **Going forward, a pilot test of the table in selected countries could identify the most effective way to bring the data together.** This may result in a hybrid system

[15] Respondents to the ICC 2018 Global Survey on Trade Finance estimated that they processed about $9 trillion global value of trade finance transactions during 2017, and 43 percent of respondents said that SCF rose in 2017 compared to traditional techniques. In the Americas, the (bank-implemented) proportion of SCF is somewhat higher than in other regions, with payables finance being one of the dominating instruments. Respondent banks with the largest value of trade finance, reported the biggest rise in SCF. Implementing SCF requires technical competency and access to enabling platforms and technologies.

combining existing and new data sources. Existing surveys may need more detailed reporting instructions on the instruments, and, if resources allow, separate surveys can specifically target manufacturing companies that are part of supply chains and active in the import/export business. A substantive part of the information could be gathered from the trade finance departments of banks. A breakdown of financing into "between related and between unrelated at arms' length buyers and suppliers would be of particular analytical interest. A stand-alone comprehensive table can give overall insights on different country and regional patterns based on where an economy or region generally operates within global supply chains.

Questions for the Committee:

1. *Do Committee members agree with the need to consider collecting this information via a satellite account?*

2. *Do Committee members have views on the structure of the proposed table, including suggestions for further refinement?*

3. *Do Committee members agree that finalizing the table and conducting a pilot test in selected countries could be the next steps?*

Annex 1: Instruments to Finance Trade

	SUPPLIER		BUYER		FINANCIAL INTERMEDIARY	
	ASSET	LIABILITIES	ASSET: N/A	LIABILITIES	ASSET	LIABILITIES
A. Traditional bank-intermediated instruments	**contingent payment** from FI			**contingent payment** to FI	**contingent payment** from Buyer	**contingent payment** to Supplier
B. Open account inter/ intrafirm trade financing	**trade credit**			**trade credit**		
C. Supply Chain Financing and other working capital-related financing[1]						
(i) Receivables Finance (*supplier-led*) (ii) Payables Finance (*buyer-led*)	open account **trade credit** asset w/Buyer exchanged for deposit (working capital) from FI [2]			open account **trade credit liability to** Supplier, possibly exchanged for liability directly to FI[2,3]	future payment obligation (**short-term loa**n) from Supplier (or directly from Buyer) to FI[4]	**deposit** Supplier
(iii) Loan/Advance based Finance	(i) open account **trade credit** w/Buyer (ii) deposit (working capital) from FI	trade-receivables **(collateralized loan)**		open account **trade credit** w/Supplier	trade-receivables (**collateralized loan**)	**deposit** Supplier

Notes: *(1)Financial intermediation can be provided by a Fintech company independently or in collaboration with a bank. Banks incorporate Fintechs solutions also in their own portfolio. (2) Supplier can sell all or parts of outstanding claims to FI. Discounts are applied when sold on to intermediary. (3) The specific instrument of forfaiting involves medium/long-term maturities. (4) Can be bundled and traded as negotiable debt instruments.*