

# Enhanced Attention for Trade Finance

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Trade finance has recently begun to receive enhanced attention outside the ranks of practitioners and other specialists. The new attention has various causes. Reduced availability and the increased cost of trade finance have been accorded an important role in the slowing of the growth of world trade during the earlier part of the current crisis. These changes in availability and cost in turn are attributed partly to new bank regulations, in particular Basel II. Moreover, somewhat belatedly, the trade-finance industry realised that its lobbying regarding new bank regulations needed to be supported by more systematic data and argumentation. Partly in response to the greater lobbying directed at Basel II and Basel III, the Basel Committee on Banking Supervision now appears more sensitive to the impact of bank regulation on trade finance, and has amended the rules of the Basel capital framework to meet some of the concerns expressed by the industry.

The Committee on the Global Financial System (CGFS), one of the bodies associated with the Bank for International Settlements in Basel, recently released a wide-ranging report of a study group on trade finance (Committee on the Global Financial System, 2014). The report covers not only trends in the markets for trade finance, including developments during the current crisis, and the recent recourse to different forms and instruments of trade finance but also shortcomings of existing data, the impact of regulation, and the development by banks of new ways of supporting trade finance. Some topical subjects such as the provision of trade finance for global value chains and possible effects of fluctuations in the availability of trade finance on financial stability are addressed in the report. But there are also omissions concerning access for some developing countries to trade finance and the implications for trade finance of major trends in the regional distribution of global trade.

## **1. Trade finance since the crisis**

Global trade decreased sharply in 2008-2009. Between the fourth quarters of 2007 and 2008 goods exports declined by about 10 per cent, and between the fourth quarter of 2008 and the second quarter of 2009 the decline accelerated to a pace of about 15 per cent. Estimates of trade finance indicate that these declines were accompanied by contractions in trade finance of 1.9 per cent and 7.5 per cent.

The CGFS commentary on the role of trade finance during the early part of the crisis follows that of industry and IMF surveys published closer in time to the events. The decline in trade is viewed here as reflecting primarily aggregate demand and prices of traded goods. Movements in these variables would themselves have affected, but without fully explaining, observed changes in the amount of trade finance, i.e. bank products specifically linked to international trade transactions. Moreover – a point to which less attention is paid in the literature on the trade downturn -fluctuations in trade finance do not fully reflect those in total bank credit supporting international trade, which also includes inter-firm credit most importantly associated with open-account transactions where goods are shipped in advance of payment and the financing of working capital during the production of goods eventually moving in international trade (as explained in the box below). Despite the inadequacies and definitional problems of available data concerning trade finance, the CGFS nonetheless concludes, “A general picture that emerges from the literature is that trade finance disruptions had a secondary but economically significant role in the sharp reduction in trade volumes in the quarters following the Lehman bankruptcy...But given the magnitude of the reduction in trade volumes, even a secondary role implies an economically significant impact on trade and economic activity” (CGFS, 2014: 23). Academic studies suggest that 15-20 per cent of the decline in trade during the crisis was due to “credit shocks”, the financing of working capital as well as trade finance

proper being included under this heading. Statistical analysis carried out for the CGFS broadly agrees with this conclusion.

The less drastic slowdown in global trade in 2011-2012 was also accompanied by parallel developments in trade finance. Major countries which experienced contractions in their trade during the period from the second quarter of 2011 until the second quarter of 2012 also witnessed stagnation or declines in trade finance – with especially large declines in both trade and trade finance in Germany, Italy and Spain. However, the intensification of the Eurozone crisis in 2011 did not have spill-over effects on global trade finance.

More detailed analysis of trade finance during the crisis is provided in reports of surveys conducted by the IMF and the industry. The crisis was associated with changes in trade finance which varied substantially amongst regions as well as with variations in the relative importance of different categories of trade finance. For example, data from surveys of a sample of banks conducted by the IMF and the Bankers' Association for Finance and Trade–International Financial Services Association (BAFT-IFSA) suggest that banks in Asian and Latin American developing countries were more likely than those in other regions to have increased the value of their trade finance in both 2008 and 2009, a clear majority of banks in one group of Asian countries (China, India, Indonesia, Malaysia, Philippines, Thailand and Vietnam) actually increasing the value of their trade finance during this period (Asmundson et al., 2011: Appendix I). Moreover a survey by the International Chamber of Commerce (ICC) found resurgence in the demand for traditional trade finance instruments, especially letters of credit (ICC Banking Commission, 2009: 34-35; ICC Banking Commission, 2010: 33).

These shifts in the value of trade finance no doubt partly reflect responses to the generalised increased risks during the crisis. But they are likely also to reflect shifts in trade shares during the crisis since there is wide variation among countries in their use of trade finance (CGFS, 2014: 9-12). Moreover data collected on a comparable basis also suggest reliance of the Asia-Pacific region on trade finance which is greater than its share of global trade would suggest. This region accounts for more than one half of letters of credit and overall exposures to trade finance, while the corresponding figure for Europe is one quarter and those for North America, Latin America, Africa and the Middle East on 5-10 per cent. In economies classified by the CGFS as Emerging Markets for which data are available, local banks account for the largest shares of bank financing in support of trade. In India, for example, in 2012 local banks (including foreign subsidiaries) provided about 80 per cent of trade finance, and for Brazil the corresponding figure was about 70 per cent.

## **2. Definitions and coverage of trade finance**

The CGFS study devotes an appropriate amount of attention to the terminology of trade finance. This terminology is typically unfamiliar to non-specialists. Moreover understanding the shortcomings of available data on trade finance requires a grasp of this terminology.

In statistical data on trade finance the transactions have traditionally been classified under the heading of arrangements which usually involve both payments and financing. Terms for typical payments and financing options are listed in Box 1. However, these data cover only part of the financing arrangements actually employed as part of international trade.

In practice, much of international trade is financed through unsecured credit lines available to companies of good standing from their banks, with such facilities frequently being extended without collateral. The purpose for which such lines are used is not necessarily specified in the documentation covering short-term unsecured borrowing, which may be classified under “general corporate purposes” or “working capital”. The borrowing firm may not be required to distinguish between those raw materials or finished goods

purchased at home and those purchased abroad. For medium-term unsecured financing of this kind (used, for example, for buying equipment or for carrying longer-term receivables) there is usually a written agreement specifying the purpose and terms of the loan but not necessarily whether it will be used partly or wholly to finance imports or exports.

Thus identification of trade financing in the form of multi-purpose or unsecured credit can be difficult. Indeed, the use of such facilities is rarely linked by lenders to trade finance, and is most likely to be managed in portfolios of commercial or corporate bankers as opposed to being recorded and managed as part of institutions' trade finance portfolios.

Indeed, generic facilities available to borrowers and used in support of their import and export activities are not, in the vast majority of cases, included in the specialized and more esoteric instruments referred to as trade finance nor are they classified under this heading. In industry parlance the term, "trade finance", usually refers to financing which covers transactions with tenures up to 18 to 24 months. Transactions involving longer maturities are categorized as *medium-term* trade finance, and the financing of more complex transactions such as capital projects with timeframes which may extend to many years are classified as *project finance*.

#### **Box 1. Frequently used terminology for payments and financing for international trade**

*Cash in advance.* Here the seller receives payment before shipping the goods. Such transactions may be covered by a loan to, or the credit line of, the importer.

*Open account.* Goods are shipped to the buyer and title documents and the invoice calling for payment within a stipulated period of time are mailed separately. The lag between shipment and payment may require the extension of credit during the period involved. Such credit may be through a banker's acceptance under which the bank accepting a draft assumes the obligation of making the payment at maturity on behalf of the buyer.

Both cash in advance and open account may involve inter-firm trade credit between importers and exporters, of which the counterpart may be credit extended to the lender by a bank. Reliance on inter-firm credit in international trade is more common among firms with well established commercial relations, among the constituent entities of multinational enterprises, or at least where the buyers are in jurisdictions with reliable frameworks for the collection of receivables.

*Documentary Collections (which include Documents against Payment and Documents against Acceptance).* The documents conferring title are released on payment, or on acceptance of a time draft which indicates a commitment pay at an agreed future date. The lag between the release of documents and payment by the importer may be covered by the extension of credit to the exporter by a bank that is party to the transaction in the case of Documents Against Payment, where funds are remitted almost immediately, financing can be extended to the importer, allowing a delay in the reimbursement of funds to the bank effecting payment.

*Letter of credit (L/C).* A documentary or commercial letter of credit is an instrument typically issued by a bank on behalf of an importer in favour of an exporter, and represents a payment undertaking by the issuing bank to the exporter. A L/C constitutes a promise to make payment or to accept drafts (representing payment at an agreed future date) upon receipt of documents conforming exactly to the conditions set out in the letter of credit. The documents submitted typically include drafts, commercial invoices, packing lists, transport documentation (which may be a negotiable instrument), certificates of inspection, a certificate of insurance and, in general, any document required to evidence the exporter's compliance with L/C terms. A bank's commitment to pay is enforceable only when the exporter fulfils all the conditions specified in the L/C. The L/C can serve as the basis for an application for financing by the exporter during the period before payment is received from the importer. Security of payment under a

L/C can be increased through *confirmation* by a bank other than that which originally opened or issued the L/C. Confirmation will usually be by a bank in the exporter's jurisdiction, and since the obligation to pay of the confirming bank is added to that of the issuer, it relieves the exporter of the risk of non-payment by the issuing bank in the importer's country.

In countries where there are restrictions on banks' extension of guarantees *stand-by letters of credit* may be issued to serve much the same purpose. Here the demand for payment is usually based on a statement of default by the party from whom payment is due rather than the documents associated with the traditional commercial L/C.

The terms above refer to long-standing techniques of payments and financing classified under the heading of trade finance. The study of the CGFS also draws attention to some recent techniques which may or may not be classified in surveys or banks' returns as trade finance.

The *bank payment obligation (BPO)* is a payment method offering a level of security similar to that of a letter of credit. The BPO is an irrevocable undertaking on the part of an obligor bank (typically that of a buyer) to recipient bank (typically that of a seller) to pay a specified amount on agreed date on condition of a successful matching of electronic data according to rules adopted by the ICC. The BPO greatly simplifies the informational requirements in comparison with those of the L/C.

Recently global supply or value chains have been attracting increased attention amongst those concerned with trade finance. The needs of enterprises involved in such chains can now be met through *supply chain finance (SCF)*. Under this heading banks provide technology and other services to facilitate payments and financing within such chains. The services within a SCF platform include typical elements of financing for international trade (such as pre-shipment and post-shipment financing, purchases and discounting of receivables, etc.) but not L/Cs. The objective of such a platform is to bring within a single unit of a bank financial services related to supply, storage, cross-border relations between sellers and buyers, distribution, and final sales to customers (Advisory Services International Inc. and SWIFT, 2013).

In the case of trade finance involving contingent liabilities (such as L/Cs) the issuing institution faces exposure if the liability party fails to meet its financial obligation. Such contingent liabilities are counted among a bank's off-balance-sheet exposures and are thus included in the rules of the Basel capital framework.

Information on the costs of trade financing from private sources is not available on a uniform, systematic basis. This is partly due to the nature of trade finance, which comprises a variety of financing and payment structures designed to address a wide range of risks. Furthermore there is no industry-wide impetus or effort regarding publication of trade financing costs in a systematic or organized fashion.

As indicated by such data as are available, the costs and other terms of trade finance of trade finance lending and the rates of interest on other categories of the financing of international trade are determined by risk premiums, the amount of banks' capital allocated to trade finance, and the way in which the trade financing is structured.

### **3. Data on trade finance**

As the CGFS report notes, "There are no readily available data covering the global bank-intermediated trade finance market...This constrains the meaningfulness of simply aggregating available measures to arrive at a global stock of bank-intermediated trade finance and suggests instead an approach that treats each data source as providing a partial window into aspects of the bank-intermediated trade finance activity being conducted in that country or market segment"(CGFS, 2014: 5). The main data sources include

surveys by industry bodies - sometimes in cooperation with official multilateral bodies -, transactional data collected by industry bodies, and fragmentary information at a national level.

Surveys of trade finance in recent years by the ICC, the most important of the bodies conducting such surveys, contain both quantitative and qualitative information based on samples of banks. The ICC's samples have been increasing in size and in 2012 included 229 banks in 110 countries as compared with 2010 coverage of 161 banks in 75 countries (ICC, 2013a: 12). Even in the case of the institutions included in these surveys the information does not cover all the financing which banks extend in support of trade transactions since it is based on data from the departments of banks specialising in trade finance and thus, for reasons explained above, misses such items as financing provided for inter-firm trade and working capital for trade transactions. Some of the earlier overall surveys of the ICC were conducted in cooperation with the IMF and BAFT-IFSA.

Data on trade finance provided by banks in emerging markets is available in the quarterly Emerging Markets Bank Lending Conditions Survey of the Institute of International Finance. This survey is addressed to Senior Loan Officers, Chief Credit Officers, Credit Risk Officers or other senior officers in equivalent positions in banks based in emerging economies. The data are based on replies to questions as to changes in the willingness of the banks included in the surveys to supply international trade finance and as to changes in the demand for international trade finance from the banks' clients. The coverage of trade finance in these questionnaires is not specified.

The Society for Worldwide Interbank Financial Telecommunication (SWIFT) provides the communications infrastructure through which the majority of documentary (commercial and stand-by) letters of credit and documentary collections instruments (and their related messaging and payment flows) are transmitted between financial institutions across the globe. SWIFT is a cooperative organisation owned by banks which is designed to facilitate the exchange of payments and certain other financial messages between financial institutions throughout the world. A SWIFT payment message is only an instruction to transfer funds. Actual transfers are carried out through payment systems or correspondent banks, though issuance of a message does entail a liability to the disbursing bank (Stigum and Crescenzi, 2007: 854).

The principal source of aggregate data concerning export credit insurance is the International Union of Investment Insurers, better known as the Berne Union. Membership of this body includes the world's major private credit insurers and national export credit agencies.

Short-term (ST) insurance for trade transactions with repayment terms of one year or less is provided by both private and public members of the Berne Union. Data for such insurance from the Berne Union cover credit limits, i.e. the amounts which an insurer has committed itself to insure during a specified period, as well as covered exports, i.e. the value of trade covered by a credit insurance policy. The data also include claims paid and loss ratios, i.e. claims paid in relation to premium income which credit insurers use to measure credit quality retrospectively. Medium- and long-term (MLT) credit insurance with repayment terms of more than one year is mostly provided by official export agencies and usually covers particular transactions rather than trade transactions collectively up to a specified limit. Berne Union data do not include the relatively small amount of MLT credit insurance from private sources.

Terms and conditions associated with the extension of official credit insurance are available from the export credit agencies themselves and on a selective basis in specialist publications on trade finance.

The ICC Trade Register, an initiative started in cooperation with the Asian Development Bank, collects data from a number of banks considered to be global leaders in trade finance concerning the default and loss record on trade finance products. As of 2012 the coverage of the register was data on more than 15 million transactions provided by 21 banks (ICC, 2013a: 36).

The CGFS's own survey of its member countries indicated limited and heterogeneous coverage of statistics for trade finance. Only Brazil, India, Italy and Republic of Korea provide reasonably detailed data on a regular basis. For the majority of the member countries the coverage is limited to activities reflected in on-balance-sheet lending and thus excludes contingent liabilities such as L/Cs except to the extent that they are tied to or become actual loans.

#### **4. Risks of trade finance**

Regarding the appropriate treatment of trade finance in bank regulation a major target of the industry's representations has been the rules of Basel II and Basel III.

At a general level the industry has drawn attention to the overemphasis of Basel II and Basel III on counterparty as opposed to product or performance risk. In the industry's view this emphasis leads to the attribution of insufficient importance to the risk-mitigating factors of trade-finance instruments such as the self-liquidating character of many short-term trade-finance instruments, their collateralisation, and the short maturity of a large part of such financing. Failure to take account of the risk-mitigating features of trade financing is held by the industry to be likely to raise capital requirements for, and thus costs of, trade finance for all but highly rated borrowers – from developed and developing countries.

Industry critics of Basel II and Basel III have also drawn attention to the procyclicality of the risk weights for credit risk under options of the Basel capital framework which permit banks to make their own estimates of the determinants of such risk. These determinants include the probability of default and loss given default, both of which are likely to increase during economic downturns, again without proper account being taken of the mitigating factors inherent in the instruments of trade finance.

The CGFS study notes that the data of the ICC Trade Register and earlier of the ICC-Asian Development Bank Trade Finance Default Register support the industry's position at least for the large banks included in these surveys (CGFS, 2014: 25-26). The average default rate for traditional short-term trade-finance products during 2008-2011 was 0.02 per cent and the economic loss rate – after account is taken of recoveries – 0.01 per cent. Of special interest amongst the findings of the ICC-ADB Register was the first batch of data for nine international banks for 2008-2009, the period which included the sharp crisis downturn in international trade: the incidence of default was even lower than during the entire period 2008-2011 at 445 out of 2.8 million transactions (ICC Commission on Banking Technique and Practice, 2010: 6).

The coverage of trade finance in the ICC Trade Register until 2013 was limited to short-term instruments. For a smaller sample of 10 banks the coverage has now been expanded to medium- and long-term trade-finance products with backing in the form of insurance or guarantees from export credit agencies during the period 2006-2011 (ICC, 2013b: 14 and 26-30). Since the maturities of transactions are subject to greater variation than for short-term trade-finance products, default rates are calculated on an annual basis (i.e. as annual transaction default rates). In the case of medium- and long-term products the annual transaction default rate during 2006-2011 was a little greater than 1 per cent – low but higher than for short-term products.

The ICC register covers only some of the forms in which credit is used to support international trade. As mentioned earlier, many financial facilities used to support internationally traded goods and services are

not separately classified by banks under the distinct heading of trade finance. Instead they would be subsumed under different categories of borrower or exposure, and this would determine the estimation of their capital requirements for credit risk for Basel II and Basel III. Capital requirements estimated in this way may be procyclical in the same way as those for the credit risk of a bank's exposures to other categories of borrower.

## 5. Trade finance in the Basel capital framework

The principal but not the sole focus of the trade-finance industry's criticisms of bank regulation's effects on trade finance has been the capital framework of Basel II and Basel III. The Basel Committee has now revised the capital framework in ways which go a significant distance towards meeting these criticisms.

How has trade finance fitted into the framework of successive versions of the Basel capital framework? In view of the attention which the effects of the rules of Basel II and Basel III in relation to trade finance have recently received the remarks below go somewhat beyond the account in the CGFS study with a brief description of the rules' evolution in successive versions of the Basel capital accord.

Under the original 1988 Basel capital accord or Basel I the minimum regulatory capital for credit risks was to constitute 8 per cent of banks' *risk-weighted assets*. The attribution of risk weights to banks' loans and other on- and off-balance-sheet positions followed a relatively simple scheme. Off-balance-sheet exposures were converted to their on-balance-sheet equivalents by multiplying them by credit conversion factors.

Where trade finance took the form of bank lending, the rules were subsumed under those for lending generally. Where trade finance took the form of off-balance-sheet exposures or contingent liabilities, it was covered by the system of credit conversion factors.

- Direct credit substitutes were attributed a credit conversion factor of 100 per cent, that is to say they were treated in the same way as lending.
- Certain transaction-related contingent items (such as performance bonds and standby letters of credit) were attributed a credit conversion factor of 50 per cent (corresponding to a capital requirement of 4 per cent for an exposure to a non-financial firm).
- Short-term self-liquidating trade-related contingent liabilities such as L/Cs were attributed a credit conversion factor of 20 per cent (corresponding to a capital requirement of 1.6 per cent for a bank's exposure to a non-financial firm).
- Lending commitments (such as formal standby facilities and credit lines) were attributed a credit conversion factor of 50 per cent or 0 per cent according to whether the original maturity of the commitment was greater than or up to one year (corresponding to capital requirements of 4 per cent for the bank's exposure in the first case and 0 per cent in the second case).

In Basel II and Basel III, the frameworks currently being implemented in many countries, minimum regulatory capital requirements for credit risk are calculated according to two alternative approaches, the Standardised and the Internal Ratings-Based.

Under the simpler of the two, the Standardised Approach, the measurement of credit risk follows a system similar to that Basel I but with a finer calibration of credit risk based on ratings provided by so-called external credit assessment institutions, expected in most cases to be credit rating agencies. In the light of recent revisions of the rules concerning exposures to trade finance (see below) one feature of the Standardised Approach as originally formulated in Basel II and Basel III deserves special attention.

Under one of the two options of Basel II and Basel III for the credit risk of a bank's exposures to other banks (Option 2) claims on banks *not rated by a credit rating agency* carry a risk weight of 50 per cent

(corresponding to a capital requirement of 4 per cent) or in the case of claims with an original maturity of up to three months carry a risk weight of 20 per cent (corresponding to a capital requirement of 1.6 per cent).

As explained earlier, confirming banks may be chosen for the role of confirming L/Cs originally issued by banks in lower-income countries owing to their location in higher-income countries which increases the assurance to an exporter that a payment due under an L/C will actually be made. However, in the original rules of Basel II and Basel III, application of these low risk weights was subject to a *sovereign floor* under which no claim on an unrated bank could receive a risk weight lower than that which applied to the claims of the country in which it was incorporated. This could have the consequence of nullifying the benefits of the lower risk weights for trade-financing transactions involving the claims (of confirming banks) on unrated banks in lower-income countries and thus raising the costs of such transactions.

Under the alternative Internal Ratings-Based approach of Basel II and Basel III, for the major categories of exposure banks use their own rating systems to measure some or all of the four determinants of credit risk, namely the probability of default, loss given default, exposure at default, and the remaining effective maturity of the exposure.

- Under the Foundation version banks estimate the determinants of default probability but rely on their supervisors for measures of the other determinants of credit risk.
- Under the Advanced version banks, in addition to the probability of default, banks estimate the loss given default, the exposure at default, and the remaining maturity of the exposure (subject to a floor of one year and a ceiling of five years).

Regarding trade finance the following features of the Internal Ratings-Based Approach merit particular attention:

- In the Foundation version of the Internal Ratings-Based Approach the credit conversion factors used to estimate the exposure at default of off-balance-sheet exposures in the case of instruments which may be used as part of trade finance –the measurement of which is the responsibility of the bank’s supervisor - follow closely the credit conversion factors of the Standardised Approach for converting off-balance-sheet exposures to their on-balance-sheet equivalents.
- In the Advanced version of the Internal Ratings-Based Approach banks make their own estimates of these credit conversion factors subject to certain floors specified in the rules of Basel II and Basel III.
- In the case of both the Foundation and the Advanced versions of the Internal Ratings-Based Approach in the original version of Basel II and Basel III *the remaining effective maturity* for trade-finance exposures was generally subject to a one-year floor – a floor which, through its effect on estimated credit risk, contributed to keeping the capital requirement for trade finance above a certain level. However, in the case of the advanced version of the Internal Ratings-Based Approach, exceptions to this floor could be accorded to banks at supervisors’ discretion. These “could be accounted for at their remaining maturity”, even if this was less than one year.

In response to the highlighting by the financial crisis of the close connections between banks’ liquidity risks and threats to their solvency (the target of Basel I and Basel II) rules for banks’ management of liquidity risk, i.e. the risk that a bank will not be able to meet its obligations as they fall due, have been included in Basel III, the post-2009 version of the Basel capital framework. These rules include references to the instruments of trade finance.

The rules on liquidity management take the form of two standards, the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR).

Under the LCR the ratio of a bank’s high quality, liquid assets to net cash outflows over a 30-day period should be at least 100 per cent. Cumulative cash outflows are calculated by multiplying outstanding



balances of different categories of the bank's liabilities by percentages reflecting the expected run-off over a 30-day horizon, and by multiplying its off-balance-sheet commitments and other contingent liabilities by factors reflecting expected rates of draw-down. The contingent liabilities include guarantees, letters of credit and other trade finance instruments. The draw-down factors for such contingent liabilities are to be determined national supervisors.

Under a bank's NSFR the amount of the ratio of a bank's longer-term stable sources of funding should be at least 100 per cent of the stable funding required according to measures of the liquidity profiles of its assets and of potential liquidity calls due to contingent off-balance-sheet obligations over a one-year time horizon under conditions of extended stress..

Each category of a bank's stable funding (such as capital, preferred stock with a maturity of at least one year and the more stable categories of deposits) is multiplied by a factor reflecting its degree of stability. The required stable funding (RSF) is measured on the basis of supervisory assumptions, reflected in RSF factors, concerning the liquidity risk of the bank's assets, off-balance-sheet exposures and certain other commitments including guarantees, letters of credit and other trade finance instruments. The inclusion of off-balance-sheet exposures and other contingent liabilities reflects the view that, in spite of their need for little immediate funding in normal times, they can cause significant drains of liquidity during periods of stress (which should be met by the establishment of reserves to meet such drains). For the contingent liabilities due to trade finance the RSF factors are left to national supervisory discretion.

The supervisory discretion regarding the treatment of trade-finance instruments in the LCR and the NSFR has the advantage of providing for flexibility which can take into account variations in national circumstances and in policy objectives. This can be important for emerging-market and other developing countries for which liquid assets may often be available only in more limited forms and amounts than for developed countries.

In Basel III the rules for capital requirements for risk-weighted assets are to be supplemented by an aggregate leverage ratio. Inclusion of the aggregate leverage ratio in Basel III is a response by the Basel Committee to the build-up of the excessive on- and off-balance sheet leverage which helped to trigger the financial crisis but was not necessarily evident prior to the crisis in measures of leverage based on risk-weighted assets (such as those of Basel I and Basel II).

The aggregate leverage ratio sets a minimum level for banks' high-quality (so-called Tier 1) capital in relation to on- and off-balance sheet positions (where the latter – the off-balance-sheet positions - include the contingent liabilities associated with trade finance). In the original version of Basel III, with only highly restricted exceptions, off-balance sheet exposures in the ratio's denominator (including those associated with trade finance) had a credit conversion factor of 100 per cent - and not the lower credit conversion factors allowed in the estimation of risk-weighted exposures for the minimum regulatory capital requirements for credit risk of Basel II and Basel III.

Major targets of the trade-finance industry's criticism of Basel II and Basel III, which the industry believed were supported by negative findings concerning their influence on the availability and cost of trade finance in the surveys of the ICC and the Bankers' Institute for Foreign Trade (now BAFT-ISA), were (1) the way in which the risk-weighted capital requirements failed to take adequate account of the low credit risk of trade finance were estimated, and (2) the 100-per-cent credit conversion factor for trade finance in the denominator of the aggregate leverage ratio.

## 6. Revisions of the Basel capital framework

Two recent revisions in the rules of Basel III go some way towards meeting the trade-finance industry's criticisms.

The first announced by the Basel Committee in October 2011 is directed at the rules for estimating the credit risk of trade finance (Basel Committee on Banking Supervision, 2011). The changes involve two waivers.

1. A waiver of the one-year floor for the maturity of issued and confirmed letters of credit for banks estimating risk weights on the basis of the advanced version of the Internal Ratings-Based Approach. As noted earlier, this waiver could already be accorded to a bank at its supervisor's discretion
2. A waiver of the sovereign floor under which no claim on an unrated bank can receive a risk weight lower than that of the claims on the country in which it was incorporated. This is designed to lower the capital requirements for, and thus the costs of, confirming banks' trade-finance exposures to unrated banks in lower-income countries.

In January 2014 the BCBS specified credit conversion factors of less than 100 per cent for trade-related contingencies and transaction-related guarantees included in the denominator of the aggregate leverage ratio (Basel Committee on Banking Supervision, 2014). Short-term self-liquidating L/Cs now have a credit conversion factor of 20 per cent in the case of both the issuing bank and the confirming bank. Moreover certain transaction-related contingent items (such as performance bonds, bid bonds, and standby letters of credit, which are vehicles for guaranteeing performance related to particular transactions) have a credit conversion factor of 50 per cent.

Further changes in Basel III, involving, for example, the rules for the management of liquidity, are currently under consideration. Even in its present form the CGFS expresses the belief that through its contribution to bank resilience Basel III will contribute to the resilience of trade-finance markets (CGFS, 2014: 30). However, the recent revisions are unlikely fully to meet the continuing concerns of the trade-finance industry concerning what it believes to be Basel III's attribution of excessive levels of risk to trade finance for the purpose of setting capital requirements.

## 7. New techniques of trade finance

Recently banks themselves have been increasing their use of techniques designed to enable their continued involvement in trade finance, while economising on the use of their own capital. As the CGFS study notes (CGFS, 2014: 27), banks have historically sold loans financing international trade to other banks to adjust the risk profiles of their balance sheets. But several leading banks are now securitizing such loans through deployment of the "originate to distribute" model better known in the context of the securitization of mortgages. Such activity has so far been on a small scale to a great extent owing to non-bank investors' limited familiarity with trade finance.

For this purpose banks have deployed both outright and synthetic securitisation.

In an outright securitisation the trade-finance assets underlying the securitised assets are assembled by one or more banks and sold to a special purpose vehicle funded by commercial paper and other securities. The advantages to the bank are due to the lower credit risk, and thus lower regulatory capital requirements, of any consequent exposure to the special purpose vehicle in comparison to the trade finance itself. The cash from the sale can also be useful as a source of additional liquidity, assisting the bank in meeting regulatory rules on liquidity.

In a synthetic securitisation, investors take loss positions against a portion of a bank's trade-finance portfolio and receive a stream of payments (similar to insurance premiums) from the bank. Since the securitised assets remain on the bank's balance sheet, synthetic securitisation of trade-finance assets can reduce its exposure to credit risk and thus its regulatory capital requirements but cannot be a source of liquidity from the sale of these assets.

## **8. Instability, trade patterns and access**

The low-risk character of the traditional trade-finance instruments should protect them from instability except following serious economic downturns and shocks (CGFS, 2014: 21). Nevertheless, as noted at the beginning of this paper, part of the sharp downturn in global trade in 2008 is attributed to "credit shocks" associated with trade finance. Furthermore the data on the contraction of identifiable trade finance during this episode may well underestimate the contribution to the trade downturn of the contraction of financing in support of trade not explicitly identified in surveys as trade finance.

The CGFS study considers that there is a continuing risk that trade finance can amplify financial shocks due to the effects on borrowers' creditworthiness of borrowers and their access to foreign-currency financing. Moreover, in the case of supply chain finance, although the network of participating institutions were generally viewed by participants consulted for the CGFS as likely to prove resilient even in stressful conditions the impact of cutbacks in bank financing "could be quite disruptive to the affected businesses" (CGFS, 2014: 20).

In a transactional-level econometric analysis matching French monthly trade data with ownership information for the period 2007-2009 (which is not cited in the list of references of the CGFS study) the authors assessed the role of global value chains in fluctuations in trade in intermediate goods (Altomonte, Di Mauro, Ottaviano, Rungi and Vicard, 2012). They found that intra-group trade in intermediates reacted faster to the negative demand shock associated with a trade downturn, but also recovered faster, than arms-length trade between entities not belonging to the same group. The authors attribute this more rapid reaction time to a "bullwhip effect" due to the faster transmission of information and better management of inventories which is possible within a group. The analysis does not identify any independent role for trade financing here, although the authors acknowledge that intra-group financing may prove a particularly useful alternative to external financing in troubled conditions.

The CGFS study – understandably in view of its membership - focuses largely on trade-finance issues such as problems or risks posed by such finance to global trade. However, it overlooks problems of lesser interest to developed and major emerging-market countries such as access to such financing for low income countries, whose banks may have difficulty in establishing with banks in developed countries the correspondent relationships which are important for both trade finance and the facilitation of payments and settlement in international trade.

The CGFS study also does not discuss future trends in global trade which may have important future implications for its financing.

The CGFS study notes that, as in pricing and settlement, the dollar remains the predominant currency in trade finance. The ability of many banks to provide trade finance depends on their access to dollar funding (CGFS, 2014: 13-14). Thus in India 90 per cent of import loans and much export financing is denominated in dollars, and even in China the proportion of trade finance loans denominated in dollars is twice as great as that denominated in Renminbi.

However, trade between major regions of emerging market and developing countries has expanded faster than global trade since the 1990s (Pavoni, 2014). This trend seems likely to have implications for both

currency denominations of payments and financing in international trade and for the leading role as arrangers of trade finance still played by multinational banks with their headquarters in developed countries (listed in Banker, 2014). Political developments such as the current crisis between NATO and Russia over Ukraine may even accelerate this process since sanctions affecting the access of major countries to trade finance from developed-country banks as well as to the main systems of payments and settlement of trade transactions are likely to lead the countries affected to establish – possibly long-term - alternatives as to both currencies and transactional infrastructure.

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