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TRADE FINANCE AND FINANCIAL CRISES

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KEY WORDS

trade finance; export credit insurance; financial crisis.

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This paper discusses the interrelationship between trade, trade finance, and financial crises. In particular, for small and economically open countries whose exporters and importers have scant access to external funds, interventions in form of e.g. the public provision or insurance of trade credit might provide an effective instrument to foster trade. Such economic deficiencies in trade finance tend to aggravate in times of financial crisis. However, as any market intervention, establishing public export credit and insurance schemes can also result in distorting trade finance, serve specific industries with subsidised trade finance, and ultimately burden the taxpayer with the losses of such schemes. Empirical results suggest indeed that schemes publicly supporting exports barely offset the adverse effects of financial crises on trade. This is maybe not surprising, since, rather than trade credit, international trade is in large part financed by cash and payments on account and dominated by multinational firms drawing on internal funds when trade occurs between their affiliates.

A. Introduction and Motivation

Trade finance enhances the flexibility of internationally oriented firms to settle cross-border payments as well as to better manage the associated risks of defaulting foreign buyers or sellers. Without the expansion of financial instruments such as trade credit and insurance to, respectively, provide liquidity for international payments and pool the corresponding risks, trade frictions such as volatile exchange rates, longer delays before expenses will be reimbursed, higher transportation cost, and aggravated levels of uncertainty about foreign economic and political conditions would probably have inhibited many benefits of the internationalisation and sophistication of supply chains that has been one of the most notable consequences of economic globalisation.¹ Indeed, according to the figures reported to the Berne Union (various years) - an international association comprising public and private export credit and investment insurances around the world - the volume of export credit more than tripled between 1993 and 2007, from about 350 billion to over 1.3 trillion US\$, which coincides by and large with the growth rate in merchandise trade, from about 1.9 to 13. trillion US\$, during the same period (WTO, 2008).

Compared with the recurrent episodes of e.g. burgeoning and crashing stock markets, marked periods with exceptionally high volatility in foreign exchange rates, or temporally collapsing property markets, trade finance has followed a relatively smooth development. Nevertheless, severe financial crises² tend to affect the funding and insurance of international trade to some degree. Since virtually every financial crisis depletes banks of a substantial fraction of their capital and, thus, undermines their capability to issue or extend loans to e.g. exporting firms, trade finance provides a possible transmission channel for adverse financial effects into the real economy. This process, which takes arguably about two years to become evident (Berne

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¹ See The Economist, 2009a. See also Herger et al. (2006) for an empirical overview of the way in which global supply chains are organised.

² The term financial refers to episodes where the financial system only partly fulfills its usual functions, including the channeling of funds from savers to investors, the pooling, trading, and diversification of risks, or the production of information to facilitate and monitor investments (compare e.g. Levine, 2005). Thereby, currency and banking crisis, sovereign default, or crashes on stock or property markets all provide examples for this. More often than not, a crisis affects several parts of the financial system.

Union, 2008, p.45ff.)³, exposes in particular small and open economies to instability on international financial markets. A more and more globally organised economy, where long and complex supply chains enable firms to exploit comparative advantages and benefit from scale economies, exacerbates the adverse effects from a temporal collapse in trade finance.⁴ The Great Depression, which started with a steep decline of the US stock market in 1929, serves as notorious example to illustrate how financial instability can initiate a vicious cycle between a decline in economic production for domestic and foreign markets, and mounting pressure for adopting protectionist measures against foreign firms deemed to cause domestic job losses, which in turn inhibits free trade and arguably tends to prolong a recession.⁵

Issuing state-guarantees on trade credits deemed non-marketable constitutes, probably, the most important political remedy against the alleged deficient provision of private trade credit or the corresponding crunch in times of financial crises. Indeed, in response to the experiences of the Great Depression, a large number of countries have since established or strengthened public institutions such as Export Credit Agencies (ECAs) or Export Import Banks (EXIM Banks) that issue export credit or underwrite corresponding insurances on the governments' behalf when international trade suffers for aggravated levels of payment risks.⁶ In spite of the deregulation of international financial market since the 1970s, which resulted in a dramatic growth of cross-border capital transaction and the broadening of international financial services provided by e.g. commercial banks, public export credit and insurance schemes have largely retained their status. E.g. the majority of the public funds pledged by governments of developed economies to support trade finance amid the global decline in international trade during the year 2009, will be allocated through ECAs.⁷ Furthermore, several countries including Brazil, the Czech Republic, Hungary, New Zealand, Poland, or Thailand, have established officially supported export credit and insurance programs during the past 20 years.

Against this background, this paper endeavours to address the interrelationships between trade, trade finance, financial crises, and public export insurance schemes. A primary objective is to establish the merits and the pitfalls of issuing state-guarantees on export credits to offset the adverse trade effects of domestic or foreign financial instability. In a nutshell, the following conclusion emerges: Though important frictions affect the unimpeded and comprehensive allocation of trade finance, there is only scant evidence that more generous public intervention in trade finance absorbs some of the collapse in exports following a financial crisis. Potential reasons for this are the distortions of such schemes, but also the fact that in an overwhelming majority of cases, international trade is financed by direct methods where firms pay by cash or on (open) account.

³ The recent crisis that originated in a relatively small segment of sub-prime mortgages of the US property market follows indeed this pattern. The first information about precariously high amounts of bad loans surfaced during the year 2007. Though trade and trade finance continued to grow during the following year, fears that a global recession results in shrinking trade and trade finance manifested themselves only at the end of 2008 and in particular during the first months of 2009 (see, The Economist, 2009b), that is about two years after the financial crisis erupted.

⁴ There is a large body of literature that documents the theoretical and empirical relevance of trade for economic growth. A recent survey can be found in Levine (2005).

⁵ See e.g. Fingerrand and Schuknecht (1999) for a detailed overview of the interrelationships between trade, trade finance, and financial crisis.

⁶ For the case of the United States, Baron (1983) provides a comprehensive discussion about the historical conditions that lead to the establishment of the EXIM Bank.

⁷ See The Economist (2009).

The remaining text is organised as follows: Section B provides an overview of the principles, instruments, and institutions of trade finance. Section C uses regulatory theory to debate the potential of public support for trade and trade finance in times of crisis by means. Section D endeavours to estimate the implications of financial crises on trade as well as the degree to which public export insurance schemes in OECD countries tend to offset the corresponding adverse effects. Section E summarises and concludes.

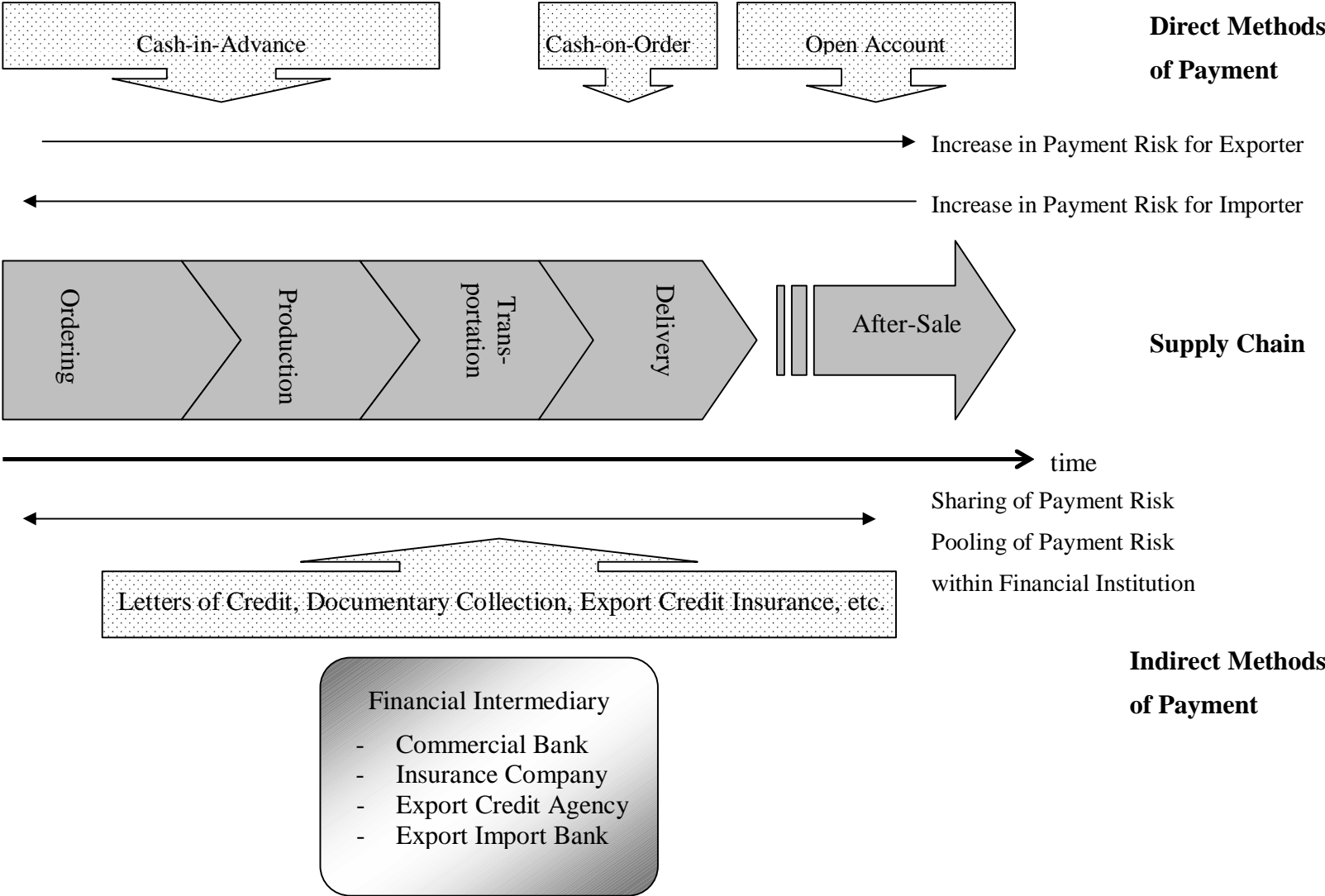
B. The Trade Finance System

Similar to the functions of a financial system in general, the effectiveness of trade finance manifests in the degree to which it facilitates the funding of delays, particularly when payments for commodities do not occur instantaneously, and the reduction of payment risks, particularly when foreign firms have a patchy record in honouring their financial obligations. Trade finance system is valuable since it facilitates the cross-border exchange of commodities, enhances the liquidity of merchant firms, generates information about payment risks, and offers possibilities for pooling such risks e.g. in form of insurances. By way of contrast, crises, but also underdevelopment of trade finance, can substantially impair free trade.

The flow chart, around which figure 1 has been arranged, depicts, in a stylised manner, a supply chain. When the stages of ordering, producing, transporting, and delivering goods or services coincide, the payment to settle a transaction can in principle occur instantaneously. This scenario eliminates virtually all sources of financial risks. By way of contrast, the long distances over which commodities need transporting or possible delays to obtain customs clearance introduce delays between these stages when it comes to international trade. Economic specialisation and the multinationalisation of the supply chain, which provides a prominent feature of economic globalisation, have led to increasingly complex and longer supply chains, in particular when capital-intensive, durable, and tailor-made commodities are involved. Then, a considerable discrepancy will arise between the time when a seller incurs (production and transportation) cost, a buyer receives commodities, and corresponding payments are made. The top of figure 1 illustrates different forms of direct methods of trade.⁸ They include cash payments before or upon delivery, but also the settling of an international transaction on (open) account, where exporters grant a foreign buyer typically a 30 or 90 days payment deadline after delivering commodities. Direct methods of trade finance suffer from several disadvantages. Firstly, they draw on internal funds which result in liquidity risks. Secondly, the inevitable deferrals in payments exposes firms to the risk of default. Due to the difficulties to obtain, assess, and verify information about the creditworthiness of a foreign contract partner, the prosecution of defaulted payments, or the economic and political risks in general, financial transactions across national borders are especially perilous. Such uncertainties can give rise to conflicts about the timing of payment, since early financial transactions such as cash-in-advance favours exporter but exposes importers, whilst open accounts result in the converse situation. Small and medium-sized enterprises without sufficient liquidity to fund and secure deferred payments might therefore be especially reluctant to trade when only direct methods of finance would be available. In the face of payment risks, financial institutions such as banks or insurances offer indirect methods of trade finance enabling firms to partly bridge the time between incurring costs and being

⁸ See US Department of Commerce (2007) for a detailed overview of the different methods of trade finance.

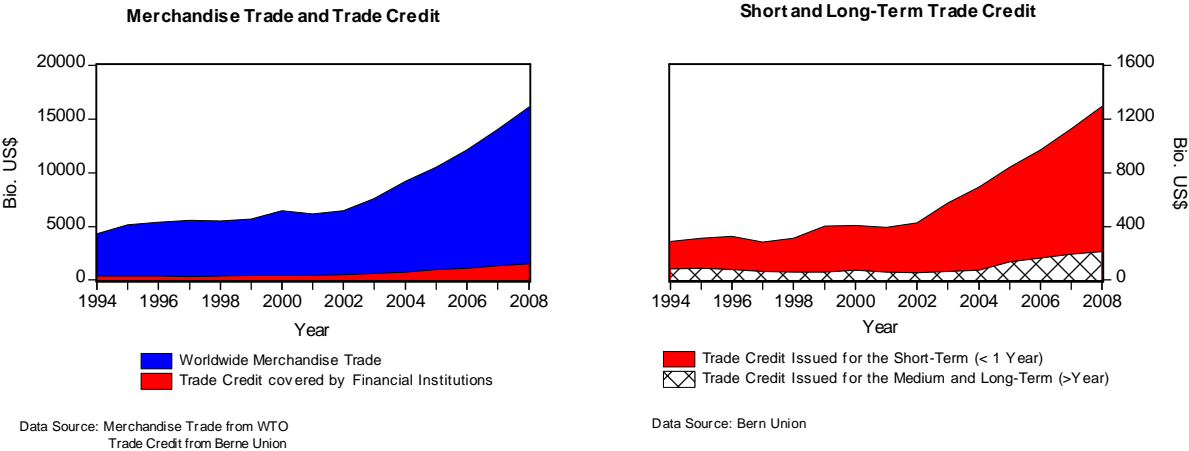
Figure 1: Schematic Representation of Trade Finance



reimbursed. In particular, as illustrated by the bottom of figure 1, by assuming trade credit in form of e.g. a letter of credit (also referred to as documentary credit) or documentary collection⁹, banks arrange the conditions of payment on the exporting and importing firms' behalf and assume financial responsibilities as soon as previously stipulated conditions, such as the confirmation that goods have been shipped or received, are met. Furthermore, export credit insurance permits a firm to indemnify itself against non-payment. Insurance policies typically reimburse up to 95 per cent of deferred or defaulted payments due to e.g. commercial (bankruptcy of foreign buyer, damage of commodities, etc.) or political risks (war, embargos, civil unrest, etc.). Thanks to indirect methods of trade finance, exporters receive more secure payments at an earlier stage whilst importers do not have to expose their internal funds before receiving commodities. By issuing trade credit and underwriting corresponding insurances for a large number of international transactions, financial institutions can pool corresponding liquidity and default risk and build up expertise in collecting information and monitoring the situation on foreign markets in a cost-efficient manner.

For the 1994 to 2004 period, the left panel of figure 2 displays the development of the amount of trade credit issued by financial institutions that are members of the Berne Union as well as international merchandise trade as published by the WTO. Note that indirect trade finance that is issued by banks and insurances covers merely about 10 per cent of worldwide merchandise trade. This confirms the observation for earlier periods in Stephens (1998, p.5) as well as Fingerrand and Schuknecht (1999, p.6) that about 90 per cent of world trade, and in particular transactions that i.) involve commodities and consumer goods, ii.) routine transactions between firms acquainted with each other, or iii.) involve multinational firms, tend to be settled with direct methods of trade finance whereby open accounts are arguably most heavily used. The right panel of figure 1 contains a detailed picture about the composition of trade credit showing that financial institutions issued about 80 per of it for short-term, that is for maturities of no more than year.

Figure 2: Overview of Merchandise Trade and Trade Credit Issued by Financial Intermediaries (1993 to 2008)

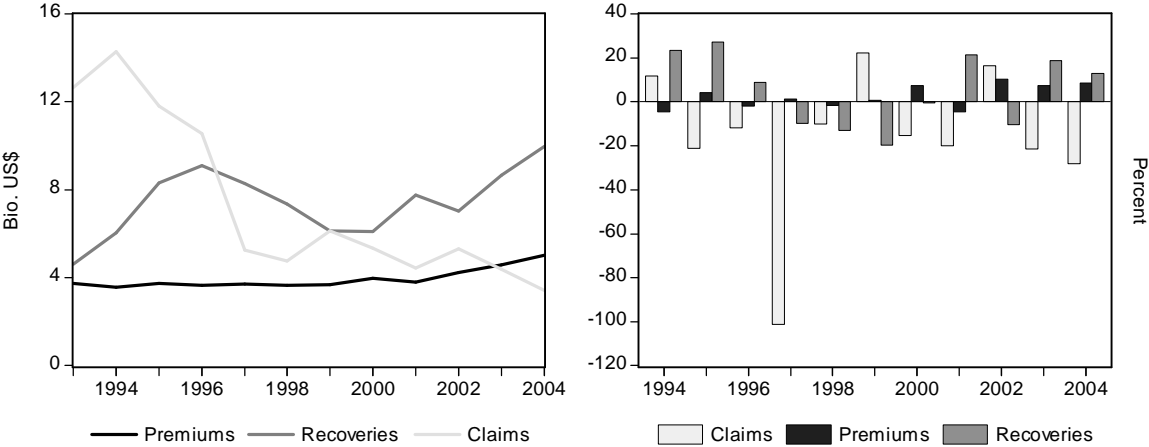


⁹ More complicated instruments such as export factoring or forfeiting exist that offer several credit and insurance services in form of a package.

Financial crises almost always tighten credit conditions, which infringes a country's short-term economic performance and, in turn, maybe even ignites a vicious cycle between unexpectedly high default rates, non-performing loans, and a prolonged recession. Even the global distribution of figure 2 suggests that episodes of major financial crises affect the volume of issued trade credit. In particular, a decline of about 16 and 6 per cent can be identified during the heyday of, respectively, the South-East Asia crisis in 1997 and amid the bust of the so called Dotcom bubble after the change of millennium. Though these reduction are substantial, they tended to be short lived, with positive growth resuming the following year, and far more modest that the plunge in stock markets or foreign direct investment which can easily fall by half during a financial crisis. Furthermore, a part of these effects is arguably offset by the increased usage of direct methods of trade finance e.g. when trading partner want to preserve established commercial relationships across a period of financial instability.¹⁰

Drawing again on the data reported to the Berne Union, figure 3 depicts the worldwide development in the export credit insurance market in terms of the relevant parameters of collected premiums, disbursed claims, and recoveries made. Between 1993 and 2004, insurance premiums were relatively stable and amounted to about 4 Bio. US\$ per year. Conversely, the disbursed claims have decrease over this period from a value of 12 to 14 Bio. US\$ to around 5 Bio. US\$. The shortfall between premiums and claims is made up by recoveries which amounted on average to about 8 Bio US\$ during the period under consideration.

Figure 3: Overview of Export Credit Insurance (1993 to 2004)



Data Source: Berne Union

Though claims would be expected to increase during or after episodes of financial crises when more firms tend to be affected by insolvency, this pattern does not arise with the Berne Union data. In contrast to the volume of issued trade credit, the growth rates reported on the right panel of figure 3 do not show marked increases in claims around the Asian Financial Crisis (1997 and 1998) or the bust of the Dotcom bubble (2000 to 2001). On aggregate, other sources of commercial and political risk than financial crises appear to account for sizeable fractions of claims from export insurances companies.

¹⁰ For countries affected by the 1997 Asian Crisis, Love et al. (2005) show that trade credit issued by firms initially increased and only started to decrease after a couple of month into the crisis. Nilsen (2002) has shown that firms without bond ratings increase their reliance on direct methods of trade finance during monetary contractions.

C. Regulatory Controversies on Trade Finance

Whilst commercial banks and insurance companies offer a broad range of trade with short-term maturities and covering commercial risks, they are arguably reluctant to expose themselves to political risks as well as large and long-term export business (see Dewit, 2001, p.577; Fingerrand and Schuknecht, 1999, p.9, or Baltensperger and Herger, forthcoming, p.2). This is maybe not surprising since political elites have ample incentives to conceal accurate information about planned wars or imminent dangers of internal political unrest. For private export insurance companies, it could therefore be prohibitively costly, or even impossible, to manage such uncertainties and charge risk-adequate interest rates and premiums. Furthermore, political instability tends to affect entire foreign markets or even regions resulting in highly correlated foreign defaults, against which commercial banks and insurances have only limited scope for risk pooling. Systemic risks – that is events that imperil the aggregate default probabilities – and informational ambiguity – that is uncertainty or even ignorance about foreign payment risks – have long been recognised as potential causes for deficiencies of financial markets and resulting e.g. in a incomplete private offer of trade finance.¹¹ Within the present context, it is maybe important that today's financial crises could easily exacerbate such frictions. In particular, owing to the international integration of financial systems, instability tends to transmit rapidly across countries or even the entire globe and thus provides itself a source of systemic payment risk. Furthermore, times of crises typically create additional uncertainties about future economic developments that manifest e.g. in a high volatility of exchange rate rates or stock market indices. Finally, financial crises resulting in severe recessions could indirectly undermine political stability due to e.g. rising unemployment.

Owing to possible market failures and limitations, many countries see ample scope for public intervention in the trade credit and insurance industry.¹² This takes primarily the form of backing export credits and insurances with state-guarantees by government ministries, or more often than not, officially supported institutions such as Export Credit Agencies or Export Import Banks.¹³ Thanks to the possibility to draw on public funds, and hence ultimately on a country's tax base, such public export credit and insurance schemes are in a position to assume the aggravated and systemic payment risks deemed non-marketable by commercial banks and insurance companies. A remarkably large number of such schemes have been founded amid the economic misery during and in the aftermath of the Great Depression with the desire to foster trade and, hence, protect jobs within the export industry.¹⁴

In spite of the possibility to correct market failure and create additional exports, similar to any other government intervention, public export credit and insurance schemes give in several regards rise to distortions or to potential abuse by serving vested, rather than public interests. Firstly, issuing export credit and insurance policies with a state-guarantee creates, by

¹¹ For a thorough theoretical discussion of the reasons why trade finance suffers from market failure see Alsem et al. (2003).

¹² See Baron (1983) for a detailed overview of some economic rationales for public intervention in trade finance.

¹³ In most countries, these institutions are publically owned. In contrast, in Germany public export finances is delegated to the private company Euler-Hermes - one of the most ancient trade credit insurances in Europe – which an account on the governments' behalf.

¹⁴ Reporting the date of foundation in paranthesis, examples include the ECAs or Eximbanks of: Austria (1946), Belgium (1939), France (1946), The Netherlands (1932), The United States (1945), or Switzerland (1934).

definition, the prospect of a bail-out by the taxpayer in case economic or political developments or mismanagement have resulted in a prohibitive accumulation of non-performing credits or insurance policies. The sustained budgetary losses of many ECAs during the 1980s and the beginning of the 1990s (Dewit, 2001, 578 – 589) demonstrate that this is not merely a theoretical possibility. Though the financial standing of public export insurance schemes has since then improved in the sense that premiums and recoveries tend to cover the disbursed claims of all public schemes of OECD countries during the 1999 to 2005 period (see Baltensperger and Herger, forthcoming), it is not impossible that bailouts occur again in the future, in particular due to political demands to increase the amount of officially disbursed trade finance as reaction to the aggravated global crisis during the years 2008 and 2009. Secondly, the usage of state-guarantees in trade finance could be abused for inconspicuous export subsidisation and, thus, distort international competition between countries but also between private and public trade finance. In this regard it is maybe interesting to observe that public interventions into trade finance are typically concerned with promoting exports, but typically do not cover imports, though there is no sound economic rationale why the welfare gains of trade would depend on its direction since the concept of mercantilism has been dismissed by classical economics in the 18th century (see Baron, 1983, p.87f). The before-mentioned sustained losses of ECA have indeed been taken as evidence that charged premiums inadequately reflected the covered risks (Henry, 1987, Abraham et al. 1992, Boote and Ross, 1998). This situation has resulted in regulatory reform, where, among others, the World Trade Organisation (WTO) and the Organisation of Economic Cooperation and Development (OECD) have tried to impose minimum standards in the provision of publicly supported trade finance.¹⁵ Thirdly, similar to commercial financial institutions, public export credit and insurance schemes have only incomplete information about the conditions on foreign markets and tend to put markets with a recent history of political instability off-cover (Abraham and Dewit, 2000; Baltensperger and Herger, forthcoming). In general, incomplete and asymmetrically distributed information provides a questionable rationale for public intervention, unless there are reasons to believe that a public agency is superior in assessing foreign payment risks. Finally, public export insurance schemes suffer from the pitfall that funds are allocated on basis of political rather than commercial grounds. Though many countries have delegated daily business decisions to independent agencies rather than ministerial departments, the finding that ECAs appear to maintain privileged relationships with former colonies (Abraham and Dewit, 2000, p.9; Baltensperger and Herger, forthcoming) lends some support to this view. Publicly supported export credits tend to be concentrated in a relatively small number of concentrated manufacturing industries (machinery, electrical equipment, chemical industry, aircraft production) where lobbying is comparatively easy to organise. In a similar vain, to justify their existence, public export credit and insurance schemes often advance rationales in addition to export promotion including the provision of development aid or pursuing an industrial policy by supporting emerging firms with a high expected growth potential.¹⁶

D. Empirical Effect of Public Intervention in Trade Finance during Financial Crisis –

¹⁵ In particular, the so called Knaepen Package of the OECD stipulates minimum insurance premiums based on a commonly-shared risk assessment whilst the illustrative list of Annex I of the WTOs “Agreement on Subsidies and Countervailing Measures” explicitly mentions inadequate premiums in public export insurance schemes as a prohibited form of subsidy.

¹⁶ See Dewit (2001) for a theoretical analysis of the different rationales for public intervention in risky export insurance markets. Though public intervention in export finance can target specific industries, again important caveats arise in terms of creating scope for rent-seeking, incomplete information about the future prospect of industries, but also strategic retaliation by foreign countries.

Evidence from OECD Countries

Owing to the complex and countervailing implications between the deficiencies of financial markets and the distortions of issuing state guarantees on trade finance, the degree with which public export schemes foster trade remains ultimately and empirically an open question. In this regard, Baltensperger and Herger (forthcoming) find that the arrangement of officially supported export credits in OECD countries were in general associated with significant increases in exports whilst payment risks continued to introduce important impediments to trade.¹⁷ However, disaggregating the effect across countries with different levels of development, payment risks, and historical relationships, suggests that these benefits were asymmetric in the sense of accruing primarily with the developed world and former colonies, but not with countries with low incomes or high payment risks.¹⁸ As regards the motives for government intervention of section C, this lends support to the view that vested interests rather than the desire to correct market failure and provide aid determine the allocation of public trade finance. To the best of my knowledge, the effect of financial instability and crises has not yet been addressed. Therefore, this section revisits the data and approach of Baltensperger and Herger (forthcoming) to uncover the effect of financial crises and public export finance on trade by disaggregating exporting and importing countries accordingly.

The dataset of Baltensperger and Herger (forthcoming) covers the value of exports from the OECD members towards importing countries around the world during the 1999 to 2005 period. Differences in the generosity of publicly supported export finance are measured by the maximum coverage provided on risky exports as well as a measure for the associated subsidies as embodied by the fraction with which disbursed claims are covered by an ECAs income in terms of premiums and recoveries. Notable differences arise across OECD countries whereby Iceland and Ireland have not established a public trade finance scheme whilst e.g. Korea, Japan, Canada, and France had relatively generous schemes. However, even for the latter, officially supported export credits covered no more than 1 per cent of the total volume of exports. Finally, since 1999, the OECD publishes regularly updated assessment of the risk of default in international payments, which has been used to measure the corresponding empirical effects.

To gauge the effect of temporary financial instability on trade as well as evaluating the capacity of publicly supported export finance to cushion a resulting collapse in international trade necessitates information about the occurrence of financial crises around the world. Though such events are arguably difficult to delimit (Beck et al., 2006, p.1585; Barth et al., 2004, p.208), the relevance of indirect methods of payment imply that financial instability almost always manifests in considerable losses, defaults, or state interventions in the banking industry. Against this background, I will draw on the survey of Caprio and Klingebiel (2003), which has identified more than 150 episodes of banking crises since the late 1970s. Based on their classification, a variable labelled “financial crisis” has been compiled with a value of 0 for years and countries with a stable banking system, and a value of 1 and 2 in case countries were affected by, respectively a non-systemic or a systemic banking crisis, which manifests

¹⁷ Moser et al. (2006) as well as Egger and Url (2006) reach similar conclusions for, respectively, the case of Germany and Austria.

¹⁸ Egger and Url (2006) find some evidence that the Export Credit Agency of Austria broadened trade to higher-risk regions. However, this effect might be due to the historical relationship of Austria with Eastern European countries, which accounted indeed for a large fraction of export promotion. Furthermore, this paper does not control for international differences in systemic payment risks, which provides arguably the primary reasons why trade finance markets are incomplete.

in a partial and a virtually complete erosion of banking capital.

The merged samples about public export finance schemes and banking crises cover the 1999 to 2003 period and trade from the 30 OECD members towards 147 importing countries around the world including virtually every developed country as well as important emerging markets such as Argentina, Brazil, China, India, or Russia. Within this sample, 25 countries witnessed at least one year with a banking crisis, almost 90 per cent of which were systemic in nature. However, when it comes to OECD members, only Japan and Korea suffered from instability within the domestic banking sector.

Table 1 reports the results of estimating a gravity equation¹⁹ – by far the most popular framework to assess empirical trade patterns - where exports have been regressed onto explanatory variables including economic size, tariffs, a measure of payment risks, and the generosity of public support of trade finance in terms of insurance coverage and premium subsidies as defined above. Owing to their robustness when it comes to controlling for a plethora of unobserved and, during the four years under consideration almost certainly time-constant factors – e.g. geographical and cultural proximity but also the quality of political and legal institutions - that affect the empirical pattern of international trade, the reported results always include time and country-pair specific fixed effects. Furthermore, the usage of Tobit regressions is warranted since negative values cannot occur in bilateral trade entailing a clustering of more than 300 observed country-pairs without reported export activity.²⁰

Column 1 of table 1 replicates the baseline specification of Baltensperger and Herger (forthcoming) with the current data set producing, by and large, similar results. In particular, the value of trade between an exporting and importing country tends to increase with their joint economic size, as measured by the sum of their gross domestic product (GDP), whereas payment risks appear to infringe international economic exchanges. As regards the differences in public support for trade finance in terms of the maximal insurance coverage and inferred subsidies, more generous schemes appear to foster international trade when contemplating the full sample of foreign countries. Column 2 introduces the above-mentioned measure of financial (or banking) crisis. As expected, a negative entry arises meaning that instable financial and banking systems have the capacity to significantly reduce international trade. Importantly, this detrimental effect occurs in addition to the frictions from payment risks, whose estimated coefficient and standard deviation is by and large identical to column 1 in spite of the additional perils financial instability introduces to international transactions.

To further uncover the degree with which public export finance schemes absorb the adverse effects of potential collapses in trade finance, the remaining columns of table 1 estimate the current specification of the gravity equation across sub-samples of countries according to the stability of their financial system. In particular, column 3 restricts the sample to exporting and importing firms located in countries, whose banking industry was not affected by a crisis. This scenario encompasses more than 80 per cent of observations and, thus, unsurprisingly

¹⁹ “Gravity equation” refers to the idea that international trade increases with “economic mass” (e.g. their size in terms of GDP) and decrease with the distance between exporting and importing countries.

²⁰ For the sake of robustness, Baldwin and Taglioni (2006) strongly advocate the usage of fixed effects in gravity equations. As regards the econometric issues in estimating gravity equations with the current data, see Baltensperger and Herger (forthcoming).

Table 1: Effect of Export Credit Agencies and Financial Crisis

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Domestic Country (Exporter)	All OECD Countries		OECD Countries without Banking Crisis			Korea and Japan	
Foreign Country (Importer)	All	All	No Crisis	Crisis	Systemic Crisis	No Crisis	Crisis
Economic Size	0.292*** (0.019)	0.291*** (0.019)	0.489*** (0.023)	0.067** (0.034)	-0.008 (0.037)	1.144*** (0.095)	0.002 (0.172)
Tariff Barrier	0.019 (0.014)	0.022 (0.014)	0.051*** (0.015)	-0.076* (0.042)	-0.042 (0.043)	0.095 (0.109)	-0.459* (0.253)
Payment Risk	-0.191*** (0.045)	-0.205*** (0.044)	-0.277*** (0.068)	-0.048 (0.071)	-0.041 (0.072)	-0.529* (0.278)	-1.363* (0.713)
Coverage	0.048*** (0.010)	0.048*** (0.010)	0.052*** (0.010)	0.020 (0.027)	0.036 (0.027)	-0.161 (0.219)	-0.854** (0.358)
Premium Subsidy	0.029*** (0.006)	0.029*** (0.006)	0.041*** (0.007)	-0.008 (0.014)	-0.010 (0.015)	-0.327 (0.269)	-4.808 (84.70)
Financial Crisis		-0.089*** (0.013)					
N	9,599	9,599	7,830	1,236	1,090	464	69
Country-pairs	3,782	3,782	3,072	577	486	211	39
Log-Likelihood	-2,087	-2,068	-1,780	-71.65	-98.92	-100.8	-577.3

Notes: The dependent variable is the value of exports. Independent variables refer to the joint GDP of the exporting and importing country (Economic Size) the average tariff levied on imports (Tariff Barrier), an assessment of the default risk on international payments (Payment risk), the risk adjusted maximally available percentage of exports covered offered by a public export finance scheme (Coverage), the extend with which claims in public trade finance are funded by premiums and recoveries (Premium Subsidy), and a nominal value for non-systemic and systemic crisis in the foreign banking industry (Financial Crisis). Baltensperger and Herger (forthcoming) provide details about the definition of variables. Columns 3 to 7 cut the sample according to whether the exporting and importing country suffer from a financial crisis. All specification contain country-pair and time-specific fixed effects. Estimation is by fixed effects panel Tobit regressions. Robust standard errors are given in parentheses.

* Coefficients are significant at the 10% level

** Significant at the 5% level

***Significant at the 1% level

yields similar results than the baseline specification of column 1. Note, however, that the estimated coefficient for every variable has increased. Conversely, when contemplating the scenario of column 4 with financially stable exporters trading with foreign markets in financial crisis, the significant entries pertaining to the arrangement of public export finance schemes disappear. Though this does arguably not sit well with the justification of equipping export credits and insurances with state-guarantees, this result is maybe not surprising, since Export Credit Agencies are frequently reluctant to assume prohibitively high levels of payment risks (Abraham and Dewit, 2000, Baltensperger and Herger, forthcoming). Conversely, high tariff barriers, whose setting constitutes another policy to intervene in international trade, continue to reduce exports to a significant degree. Maybe, an elimination of artificial impediments such as customs duties on international trade, constitutes a more promising avenue to offset the adverse effects of financial crises. To further investigate their the relevance, column 5 drops, furthermore, about 10 per cent of observation where instability was non-systemic in the sense of affecting only a part of the foreign banking industry. Under this scenario, the factors associated with the gravity equation no longer provide any significant explanation for the pattern of exports across countries and years. This outcome is remarkable insofar as factors such as economic size, but also political and legal quality manifesting e.g. in the pervasiveness of payment risks, constitute strongly entrenched empirical determinants for international trade.²¹ Apparently, systemic banking crises perturb trade to a degree where the conventional forces of international economics are temporarily suspended. The final two columns shift the perspective in terms of considering a scenario where countries are confronted with a domestic crisis. Within the current data set, which covers exports from OECD countries and the 1999 to 2003 period, only Japan and Korea witnessed systemic instability within their financial system, which considerably reducing the number of observations to uncover the implications of public support for trade finance. Bearing this caveat in mind, columns 6 and 7 lend further support to the previous finding in the sense that public intervention in the trade finance industry does not appear to offset the corresponding crunch in exports regardless whether or not the importing country is likewise confronted with a financial crisis. In particular, whilst higher payment risk undermines the readiness of Japanese and Korean firms to export towards a foreign market, differences in the generosity of underwritten insurance or issued credits with a state-guarantee did not provide the desired stimulus. For the case of column 7, where the foreign country was likewise in financial crisis, more generous insurance coverage appears to have even reduced the volume of trade. Recall, however, that this scenario covers only 69 observation as well as that Export Credit Agencies tend to put foreign countries off-cover when they give rise to excessive payment risks.

In sum, the empirical pattern does not suggest that the arrangement of public export finance schemes significantly protect trade when countries enter a financial crisis. This result corresponds with the conclusions of Baltensperger and Herger (forthcoming) in the sense that, though ECAs appear to foster trade in general, this effects does not arise with countries suffering from aggravated levels of payment risks, financial underdevelopment, or, indeed, financial crisis. Apparently, publicly supported trade finance suffers from similar deficiencies than trade finance when it comes to dealing with systemic risks.

²¹ Gravity equations almost always produce a good fit to the data as well as significant coefficients. According to Baldwin and Taglioni (2006, p.2) even a relatively small number of variables often explain around 70 per cent of the variations in international trade.

E. Summary and Conclusion

Financial crises temporarily infringe the efficient and secure allocation of funds. As regards international trade, this manifests in a reduced access of firms to trade credit and insurance to deal with delays in transportation, incomplete information about creditworthiness and foreign institutions, exchange rate volatility etc. when shipping merchandise across borders. Historical events such as the Great Depression suggest that the appeal of protectionism rises in times of economic uncertainty which could endanger a relatively rapid economic recovery. In response to this, an increasing number of developed countries and emerging markets have established public export finance schemes that essentially issue state-guarantees on export credits and insurance policies. The expectation is that government intervention corrects market failure due to aggravated levels of incomplete information about the creditworthiness of foreign buyers or systemic risks resulting from political instability or, indeed, financial crises themselves and, thus, foster trade by broadening trade finance. In particular when small and export-oriented countries are confronted with a regional or global financial instability, a limited provision of trade finance can severely imperil economic prospects.

However, comparing the empirical pattern of exports with differences in the generosity of public export finance schemes across the OECD during the 1999 to 2003 period does not suggest that countries with more generous programs better weather the financial storm from domestic and foreign banking crises. This is maybe not surprising when considering the fact that up to 90 per cent of trade is financed by direct methods of payment such as cash or on (open) account. Furthermore, the remaining 10 per cent are overwhelmingly covered by trade finance instruments issued by commercial banks and insurances companies for the short term. Plainly, publicly supported trade finance accounts for less than 1 per cent of total merchandise trade and can therefore barely alter the adverse trade effects of financial crises. Moreover, collapsing exports can only be reverted by intervention into trade finance when payment, and the associated risks, pose the primary obstacle for completing a deal, but not when the cause is merely the corresponding reduction in foreign demand amid the unfolding of economic recessions.

To conclude, maybe the biggest long-term danger of a financial crisis lies in uniformed responses that leave deficient institutions after the corresponding economic instability has vanished. As regards the implications of financial crises for international trade, it is maybe more advisable to reduce trade distortions in form of e.g. tariff barriers rather than erecting new ones in form of selectively issuing additional state-guarantees on trade credit and insurance policies.

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