Box 2

THE USE OF TRADE CREDIT BY EURO AREA NON-FINANCIAL CORPORATIONS

Trade credit plays an important role in the external financing and cash management of firms. There are two aspects to the use of trade credit by firms, and both are interlinked with the need to finance production. For input suppliers, the firm receiving the inputs is a customer and the latter's trade credit payable with suppliers constitutes a form of borrowing; conversely, for the firm that acts as a supplier of other firms, its trade credit receivable is a proxy for how much it lends to its customers.

This box presents some stylised facts on the trade credit payable and receivable used by euro area non-financial corporations and investigates their role in the recent crisis, where it appeared to have played a buffering role at times when firms found it difficult to obtain external funding from credit institutions.

Advantages of the use of trade credit by non-financial corporations

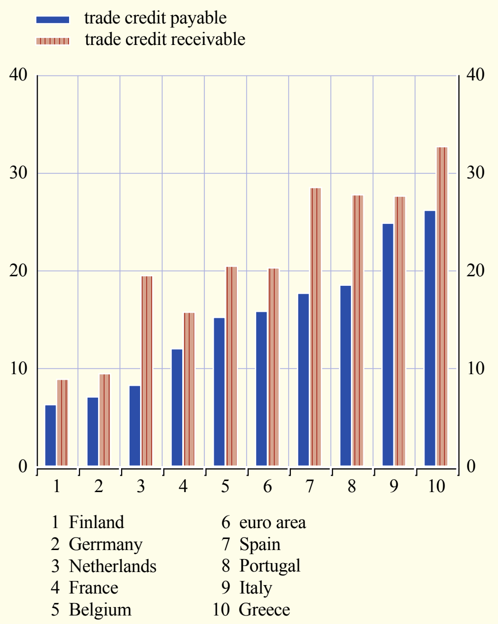
Trade credit can be seen to be equivalent, in several respects, to short-term loans provided by suppliers to their corporate customers upon an agreement to purchase their products and to settle the payment at a later stage. Such credit is created automatically whenever customers delay payment of their suppliers' bills.

Although trade credit typically proves to be more costly for the borrower than borrowing through the banking system (especially when customers do not use the discount[1] usually offered for early payment), it is nevertheless generally used by firms in the euro area. Trade credit theories relate the use of trade credit payable mainly to particular types of market imperfection, in particular to asymmetric information in markets throughout the product chain, but also to other forms of credit market friction.[2] The line of reasoning is usually as follows: some firms (typically small firms with limited collateral) are unable to obtain bank loans because it is too costly for the bank to monitor them. For suppliers of those firms, by contrast, monitoring and bargaining costs may be lower in the context of an established long-term relationship, since they frequently conduct business with the small firms and may also have the power to cut off the supply to such firms or to repossess the goods in the event of defaulted repayment. The aforementioned informational and bargaining advantages that a supplier has over a bank might provide the supplier with an opportunity to extend credit to the buyer even if that buyer does not seem creditworthy to the bank.

In practice, the use made by firms of trade credit payable and receivable differs considerably across euro area countries, sectors of activity and firm size. Chart A shows the level of trade credit across selected euro area countries for a large dataset of non-financial corporations that reported their use of trade credit receivable in the period from 1993 to 2009. For those companies in the sample, trade credit appears to be relatively more prevalent in Mediterranean countries, where it plays a role in between 20% and 30% of sales. Country differences

Chart A Average trade credit payable and receivable in the period from 1993 to 2009

(percentage of sales)



Source: Amadeus bureau van Djik Electronic Publishing and ECB calculations.
Note: Based on an unbalanced panel of 950,000 companies that report their use of trade credit payable.

1 For instance a common form of trade credit is "2/10 net 30", with "2/10" meaning that the buyer receives a discount of 2% for payment within ten days and "net 30" meaning that, in the event of the buyer not taking the 2% discount for payment within ten days, full payment is due within 30 days. The fact that the buyer prefers, in some cases, to delay payment for a further 20 days, rather than to take the 2% discount, defines an implicit annual interest rate of 43.9% (see Ng, C., Smith, J. and Smith, R.,"Evidence on the determinants of credit terms used in interfirm trade". *Journal of Finance*, Vol. 54, pp. 1109-1129, 1999.

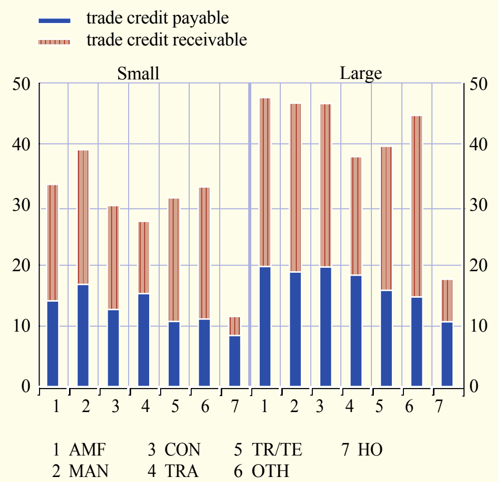
2 See Petersen, M.A. and Rajan, R.G., "Trade Credit: Theories and Evidence", *Review of Financial Studies*, Vol. 10, No 3, 1997, pp. 661-691, Guariglia, A. and Mateut, S., "Credit Channel, trade credit channel and inventory investment: Evidence from a panel of UK firms", *Journal of Banking and Finance*, Vol. 30, No 10, 2006, pp. 2835-2856, and, more recently, Klapper, L., Laeven, L. and Rajan, R., "Trade Credit Contracts", *World Bank Policy Research Working Paper*, No 5328, 2010.

may be accounted for by heterogeneous institutional structures[3] and trade credit payment conditions. Effective payment periods are longer in Spain, Portugal, Italy and Greece (ranging from 64 to 94 days for the non-financial corporations in the dataset) than in the other countries (where the average period is around 35 days), At the same time, the initial terms of payment in the former group of countries are usually longer, the availability of discounts is more limited and there are often no penalties for late payments.

Viewed in terms of firm size, trade credit is particularly important for small and medium-sized enterprises, in particular in times of financial strains, when firms find it more difficult to obtain funding from credit institutions. Nonetheless, trade credit is also widely used by large firms, but mainly as a cash management tool: by delaying payments, firms may be better able to match their cash flow to their needs (see Chart B).

Chart B Average trade credit payable and receivable across sectors and firm size in the period from 1993 to 2009

(percentage of sales)



Source Amadeus bureau van Djik Electronic Publishing and ECB calculations.
Notes: Based on an unbalanced panel of 950,000 companies that report their use of trade credit payable. AMF stands for agriculture, mining and fishing; MAN for manufacturing; CON for construction; TRA for retail and wholesale trade; TR/TE for transport and telecom; OTH for other business activities; and HO for hotels and restaurants.

In addition to taking credit from their suppliers, firms simultaneously offer trade credit to their customers. In fact, most firms have higher amounts of trade credit receivable than trade credit payable. Firms use trade credit receivable as a tool for implicit price discrimination across suppliers, in cases where it is not possible, for instance on account of legal restrictions, to discriminate directly on the basis of prices. In such cases, firms with a stronger market position may choose to make greater recourse to trade credit receivable, selling to customers on credit with a view to enhancing their competitive position in the market. Finally, firms provide more trade credit payable to customers that are in temporary distress. This also enhances their sales, since the distressed customer would otherwise no longer be able to buy their goods.[4] Another stylised fact is that trade credit is more widespread in sectors where there is a physical good involved, although it also plays a role in the provision of services (see Chart B).

Developments in trade credit during the recent crisis

Over recent years, trade credit payable and trade credit receivable of euro area non-financial corporations have moved broadly in line with the business cycle, thus confirming their typically procyclical pattern, as these developments are closely linked to the exchange of goods and services, and, hence, to economic activity (see Chart C). During the latest economic downturn, the annual growth rates of both the trade credit payable and the trade credit receivable of

3 A possible explanation for this is that trade credit should be more important than bank credit when creditor protection is weaker, because cash is easily diverted, while this is more difficult in the case of inputs, and the illiquidity of inputs facilitates trade credit (see Burkart, M. and Ellingsen, T., "In-Kind Finance: A Theory of Trade Credit", *American Economic Review*, Vol. 94, No 3, 2004, pp. 569-590). This is found to hold true for, in particular, French civil law countries.

4 See Cunat, V., "Trade Credit: Suppliers as Debt Collectors and Insurance Providers", *Review of Financial Studies*, Vol. 20, No 2, 2007, pp. 491-527.

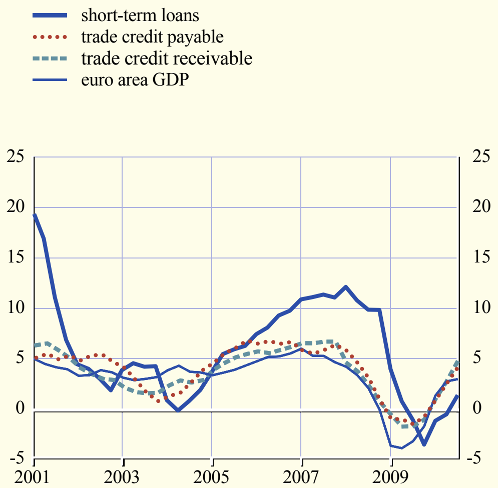
non-financial corporations in the euro area decreased considerably, from peaks of 6.4% and 6.7% respectively in the fourth quarter of 2007 to historical lows of -1.5% and -1.7% respectively in the third quarter of 2009. Trade credit payable and trade credit receivable have moved in parallel, as a large proportion of the transactions is internal to the non-financial corporation sector. The fact that the decline in the annual growth of trade credit payable between non-financial corporations has been less pronounced than that in nominal GDP growth may indicate that trade credit between companies has played a buffer role in the downturn. With respect to advances on payments, suppliers of goods and services may demand more payments on account from their buyers as they may need to finance their production process with such payments, instead of through bank loans. In this respect, trade credit payable may also serve as a substitute for unavailable (bank or other) external financing. Indeed, Chart C suggests that trade credit payable started to recover well before, and faster than, short-term loans.

A look at the evolution of trade credit payable relative to bank loans over the business cycle makes it possible to derive some additional information on firms' ability to replace bank loans with trade credit. The amount outstanding of trade credit relative to that of bank loans has diminished steadily since 2000, which may be due both to the favourable bank lending conditions prevailing between 2004 and 2006 and to the gradual implementation of the Directive 200/35/EC of the European Parliament and of the Council of 29 June 2000 on combating late payment in commercial transactions,[5] which entered into force in 2002. In the period from March 2000 to December 2009,

5 Official Journal of the European Union, L 200, 8 August 2000, pp. 35-38. The Directive imposes a fixed payment term of 30 days, unless contractually agreed otherwise, the legal rate of interest on overdue payments (which amounts to the interest rate applied by the ECB to its main refinancing operations plus 7% per annum), as well as the recovery costs.

Chart C Trade credit, short-term loans and euro area GDP

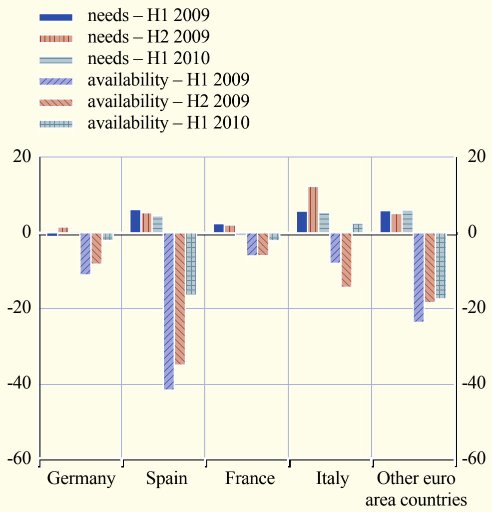
(annual percentage changes)



Sources: Eurostat and ECB.
Notes: Annual percentage changes are calculated as the four-quarter sum of transactions over the amounts outstanding four quarters earlier. Trade credit receivable and payable are estimated by the ECB on the basis of partial information. The year-on-year percentage changes in euro area GDP are expressed in seasonally adjusted current prices.

Chart D Change in small and medium-sized enterprises' trade credit needs and availability in selected euro area countries

(over the preceding six months; net percentages)



Source: EU-ECB survey on small and medium-sized enterprises' access to finance.
Note: The net percentages are defined as the difference between improved and deteriorated needs and availability over the past six months.

this ratio declined from 46% to 31%, but it subsequently started to increase, indicating that firms which were unable to obtain financing from banks have turned to their suppliers for credit. Furthermore, trade credit receivable has also increased slightly faster than trade credit payable, indicating that, in net terms, non-financial corporations are also extending credit to their customers, albeit only little. Although information is scarce, there are some indications that small and medium-sized enterprises have made increasing use of trade credit to overcome their financing difficulties since 2009. According to firms interviewed in the ECB's survey on the access to finance of small and medium-sized enterprises, their need for trade credit as a source of external finance peaked in large euro area countries in the second half of 2009, but declined thereafter as that need was compensated for by the increased availability of trade credit in the same period (see Chart D).