

RECENT DEVELOPMENTS IN GLOBAL AND EURO AREA TRADE

In the wake of the global economic downturn of 2008-09, there was an unprecedented contraction in global trade. This was due to a number of demand and supply-side factors that had exacerbated the impacts of the downturn on international trade. First, the decline in global GDP stemmed mainly from developments in its trade-intensive components (such as investment), with a particularly large drop in demand for durable goods. Second, the expansion of international production networks over the past two decades appears to have increased the responsiveness of trade to fluctuations in demand. Third, trade was hampered by tight trade finance conditions worldwide. The second half of 2009 saw global trade start to recover, partly owing to a correction of the preceding collapse, but also to temporary factors, such as fiscal stimuli and a turn in the inventory cycle.

I INTRODUCTION

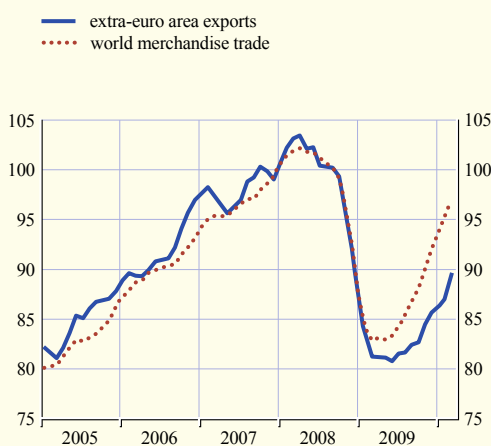
Following the intensification of the global financial turmoil in autumn 2008, the prolonged period of rapid growth in global trade gave way to its most severe downturn in post-war history, with extra-euro area trade developing virtually in lockstep (see Chart 1). Moreover, the contraction in global trade was considerably greater than the decrease in global GDP. The standard aggregate models used to forecast international trade failed to fully explain the decline in trade, highlighting a potential “trade puzzle”. Against this backdrop, this article reviews the main reasons for the contraction in global and euro area trade during the period 2008-09 and assesses the key determinants of the subsequent recovery.

Understanding these developments is important for several reasons. First, shedding some light on the roles played by one-off factors and structural changes in explaining the collapse in trade provides useful input for trade forecasts. Second, from an accounting perspective, these trade developments had a significant and pro-cyclical effect on euro area GDP growth (see Chart 2).¹ On the one hand, net trade accounted for about two-fifths of the cumulated contraction in euro area GDP between the third quarter of 2008 and the first quarter of 2009. On the other hand, around one-half of total GDP growth between the second quarter of 2009 and

¹ See also the article entitled “The latest euro area recession in a historical context” in the November 2009 issue of the Monthly Bulletin.

Chart 1 Extra-euro area exports of goods and world merchandise trade

(volume indices; September 2008 = 100; three-month moving averages)



Sources: Eurostat (external trade statistics) and CPB Netherlands Bureau for Economic Policy Analysis.

Chart 2 Contributions to quarterly euro area real GDP growth

(percentage changes; percentage points)



Source: Eurostat (national accounts). Note: Net trade refers to goods and services.

the first quarter of 2010 was attributable to net trade.²

The remainder of this article is structured as follows. Section 2 provides a set of stylised facts about global and euro area trade during the recent financial crisis. Section 3 reviews the main reasons for the contraction in global and euro area trade during the period 2008-09 and Section 4 looks at the key determinants of the subsequent recovery.³ Section 5 puts developments in euro area trade into perspective by comparing them with those of other major economies.

2 STYLISTED FACTS

During the initial phase of the financial crisis, extra-euro area trade was fairly resilient, but it began to show signs of weakness in the second quarter of 2008 when the euro area recession started. It then proceeded to decline significantly following the intensification of the global financial crisis in autumn 2008 (see Chart 3). The pace of the decline eased in the second

quarter of 2009 before the recovery eventually took hold in the second half of the year. A very similar picture emerges for global trade.

A "TRADE PUZZLE"?

The severity of the contractions in global and euro area trade during the period 2008-09 was unprecedented in post-war history. From peak to trough, world merchandise trade volumes contracted by 19%, while the volume of extra-euro area exports and imports of goods declined by 22% and 20% respectively. At their nadir, extra-euro area trade flows had returned to 2005 levels, with the downturn lasting about 16 months in the euro area and 11 months at the global level.

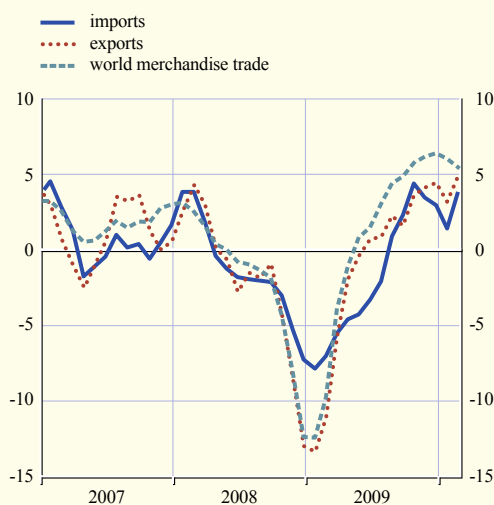
The collapse in global trade significantly exceeded the contraction in global GDP, which resulted in a decrease in the trade-to-GDP ratio

² This article covers data up to the first quarter of 2010.

³ See also the boxes entitled "The downturn in euro area trade" and "Recent developments in euro area trade" in the June 2009 and February 2010 issues of the Monthly Bulletin.

Chart 3 Extra-euro area volumes of trade in goods and world merchandise trade

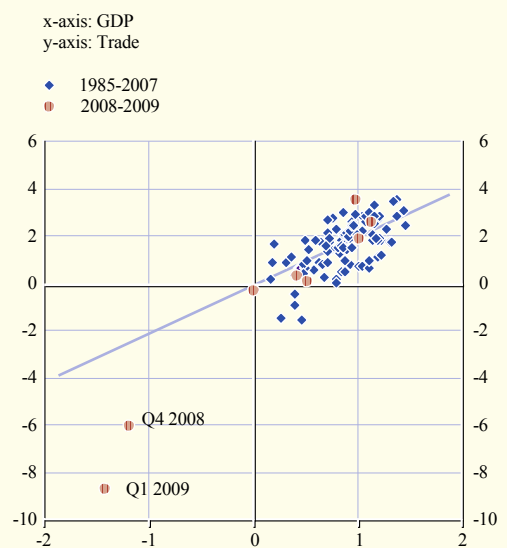
(three-month-on-three-month percentage change)



Sources: CPB Netherlands Bureau for Economic Policy Analysis and Eurostat (external trade statistics).

Chart 4 Growth in world trade and GDP

(quarter-on-quarter percentage change)



Source: ECB staff calculations.

Note: The regression line is based on the sub-sample from the first quarter of 1985 to the fourth quarter of 2007.

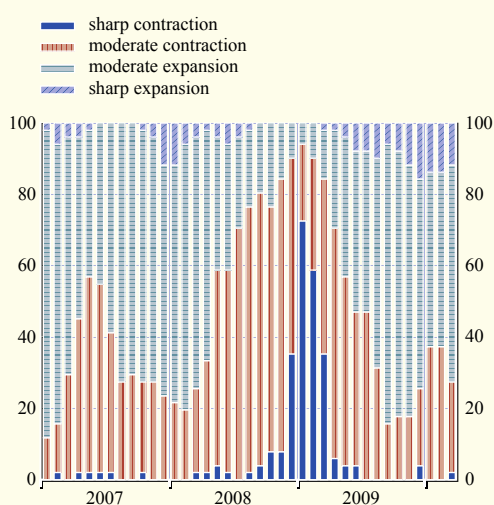
of about 15 percentage points. While it is well known that trade flows are generally more volatile than overall economic activity (and positively correlated with it), the decline in global trade over the fourth quarter of 2008 and the first quarter of 2009 was markedly greater than might have been expected on the basis of historical regularities and the actual decline in GDP (see Chart 4). Therefore, it is not surprising that standard aggregate quantitative trade models considerably underestimated the downturn in global and euro area trade in 2008-09, highlighting a potential “trade puzzle”.⁴ Interestingly, the observations from the second quarter of 2009 onwards were again roughly in line with historical model relationships. Furthermore, previous recessions did not give rise to a “trade puzzle” of a comparable magnitude. Thus, it appears that this puzzle may be related to the structural changes in the global economy over the past few years and the unprecedented nature of the recent financial crisis. Both factors will be discussed in Section 3.

Another important characteristic of the downturn in trade in 2008-09 was its truly global scope and high cross-country synchronisation. Having expanded in the overwhelming majority of countries up to September 2008, exports declined precipitously worldwide as the turmoil on the global financial markets intensified. By January 2009 73% of countries had witnessed a severe contraction in exports (i.e. three-month-on-three-month growth rates below -10%) and a further 16% had seen their exports fall, but at a more moderate pace (see Chart 5). These developments indicate that most economies were hit by a common shock or that cross-country transmission was exceptionally swift.

4 See, for instance, C. Cheung and S. Guichard, “Understanding the world trade collapse”, *Economics Department Working Papers*, No 729, OECD, 2009; and M. Bussière, A. Chudik and G. Sestieri, “Modelling global trade flows: results from a GVAR model”, *Working Paper Series*, No 1087, ECB, 2009.

Chart 5 Cross-country dispersion of export growth

(percentages; share of countries)

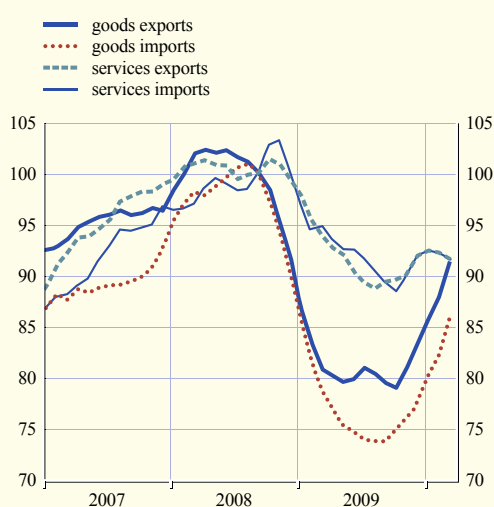


Sources: CPB Netherlands Bureau for Economic Policy Analysis and ECB staff calculations.

Note: Based on the three-month-on-three-month export growth rate, each country is assigned to one of the above-mentioned groups. The groups' cut-off values are export growth rates of -10%, 0% and 10%. The sample covers around 97% of global merchandise trade.

Chart 6 Extra-euro area trade in goods and services

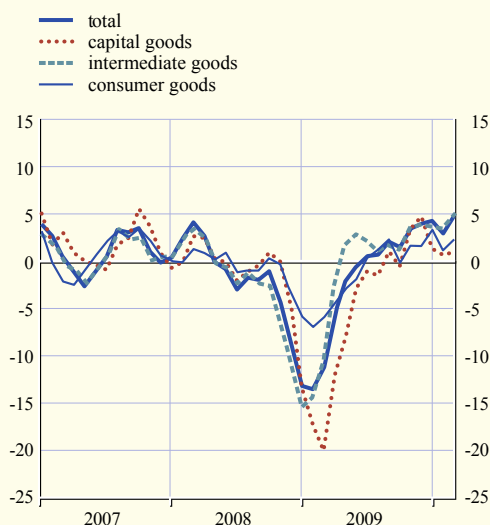
(value indices, September 2008 = 100; three-month moving average)



Source: ECB (balance of payments statistics).

Chart 7 Extra-euro area export volumes of goods by Broad Economic Categories

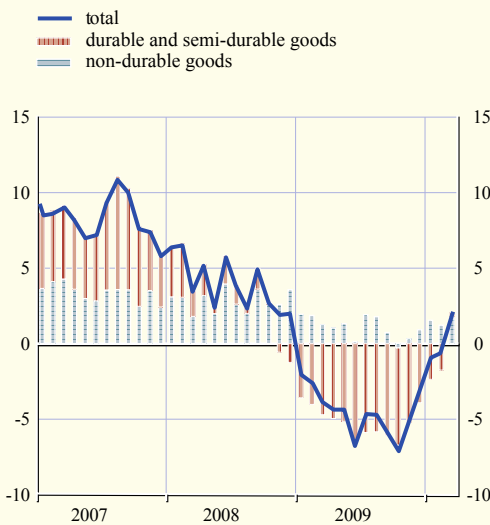
(three-month-on-three-month percentage change)



Source: Eurostat (external trade statistics).

Chart 8 Growth in extra-euro area export values of consumption goods and contributions

(annual percentage change; percentage points; non-seasonally adjusted)



Source: Eurostat (Comext).

Note: The chart refers to the category “consumer goods not elsewhere specified”, which excludes, for instance, cars as well as food and beverages, and accounts for about 15% of total extra-euro area exports of goods.

COMPOSITION OF EURO AREA TRADE

During the financial crisis the euro area witnessed notable changes in the composition of its trade flows, which may provide valuable insights into the determinants of the collapse in trade. First, the decline in extra-euro area trade in goods was significantly greater than that in services (see Chart 6). This reflected the fact that global activity contracted more in the manufacturing sector than in the services sector. Second, the share of services in euro area value added is much larger (around 70%) than that in euro area trade (around 25%), resulting in a larger decline in trade than in value added. Third, extra-euro area exports contracted across all main goods categories, but the decline was not uniform. Looking at the breakdown of goods exports by Broad Economic Categories, intermediate and capital goods recorded a more severe downturn than consumer goods (see Chart 7). A more detailed breakdown reveals that exports of non-durable consumer goods – in particular food and beverages – saw

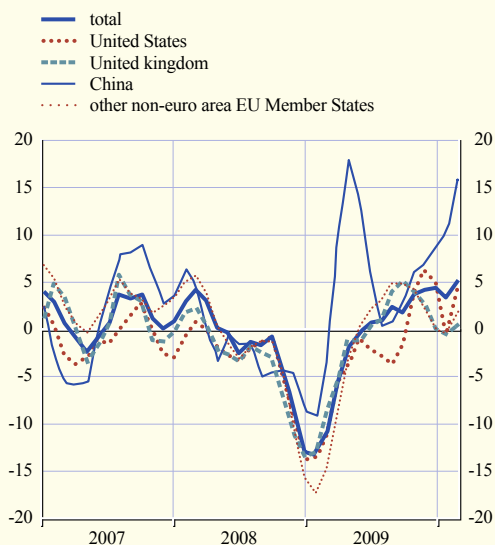
a relatively shallow downturn and mild recovery. By contrast, extra-euro area exports of durable consumer goods (as well as semi-durable consumer goods, such as apparel) contracted sharply (see Chart 8).⁵ Durable goods, i.e. capital goods and (semi-) durable consumer goods, tend to respond quite strongly to changes in overall economic activity, credit conditions and uncertainty.⁶ In the light of the exceptional level of uncertainty about the global economic outlook during the financial crisis, many consumers and firms worldwide took a “wait-and-see” approach and postponed parts of their planned expenditure, particularly on durable goods. At the same time, they may also have found it more difficult to finance “big-ticket items”.

⁵ A similar development was observed in the United States. See J. Wang, “Durable goods and the collapse of global trade”, *Economic Letter*, Vol. 5, No 2, Federal Reserve Bank of Dallas, 2010.

⁶ See the box entitled “Household consumption of durable goods during the latest recession” in the July 2010 issue of the *Monthly Bulletin*.

Chart 9 Extra-euro area export volumes of goods to selected destinations

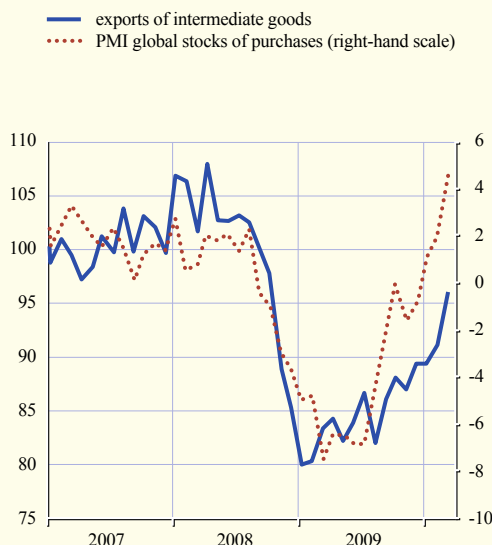
(three-month-on-three-month percentage change)



Source: Eurostat (external trade statistics).
Note: "Other non-euro area EU Member States" includes all non-euro area EU countries except Denmark, Sweden and the United Kingdom.

Chart 10 Extra-euro area export volumes of intermediate goods and PMI global stocks of purchases

(index; September 2008 = 100; mean-adjusted diffusion index)



Sources: Eurostat (external trade statistics) and Markit.

Finally, the contraction in extra-euro area exports of goods was broad based across destinations, but the recovery was more uneven (see Chart 9). Exports to Asia – in particular China – rebounded quickly on the back of substantial fiscal stimuli in that region, while those to other major destinations recovered only with a considerable delay.

3 EXPLANATIONS FOR THE COLLAPSE IN TRADE DURING 2008-09

A SEVERE DROP IN DEMAND SKEWED TOWARDS TRADABLE GOODS

According to standard trade forecast models, fluctuations in foreign demand – captured by the trade-weighted real imports of the euro area's trading partners – account for around 70% to 80% of the changes in extra-euro area export volumes, with the remainder being largely attributable to movements in the exchange rate and relative export prices.⁷ Clearly, foreign

demand was also one of the main drivers behind the collapse in euro area trade during 2008-09 and subsequently its recovery.⁸ As the financial crisis intensified in late 2008, consumers cut spending and businesses scaled down production and investment at the global level. As a result, global activity and hence demand for euro area exports plummeted. The fact that the global contraction in private demand was skewed towards durable goods (see Section 2) partly explains why trade contracted more significantly than GDP, in that the share of durable goods in international trade is much higher than their share in domestic value added.⁹

7 See R. Anderton and F. di Mauro, "The external dimension of the euro area: Stylised facts and initial findings", in F. di Mauro and R. Anderton (eds.), *The external dimension of the euro area: Assessing the linkages*, Cambridge University Press, 2007.

8 According to some estimates, 70% of the collapse in global trade in 2008-09 can be explained by changes in final demand alone. See R. Bems, R. C. Johnson and K.-M. Yi, "Demand spillovers and the collapse of trade in the global recession", Working Paper No 10/142, IMF, June 2010.

9 See C. Engel and J. Wang, "International trade in durable goods: Understanding volatility, cyclical, and elasticities", Working Paper No 13814, NBER, 2008.

The shock to final demand was also exacerbated by an inventory effect.¹⁰ In the final quarter of 2008 and in early 2009, the global Purchasing Managers' Index of stocks of purchases – a measure of pre-production inventory levels – fell steeply. At the same time, there was a sharp contraction in euro area exports of intermediate goods (see Chart 10). Therefore, global production appears to have drawn largely on existing stocks of intermediate goods for some time and thus have curbed trade in these goods. As firms also ran down post-production inventories in order to restore inventory-to-sales ratios to their optimal level, a similar effect appears to have affected trade in final goods.

More generally, in the euro area and other major economies, the contraction in the trade-intensive GDP components, such as investment, was larger than that in the other components, such as government consumption. These different movements in the components of GDP account for a significant part of the contraction in global trade.¹¹

In summary, the sharp contraction in demand following the intensification of the global financial crisis was the main driver behind the collapse in global and euro area trade. The nature of this demand shock also helps to clarify some of the stylised facts identified in Section 2. First, the underlying confidence and liquidity shock appears to have hit all major economies at the same time, partly accounting for the high cross-country synchronisation of the collapse in trade. Second, the impact on the intensively traded goods and import-intensive components of demand was particularly strong, resulting in a larger decline in trade than in GDP. Third, the fact that services cannot be stored partly accounts for the relatively small decline in trade in services, as it was less affected by the severe inventory adjustment. Overall, however, the explanatory power of fluctuations in aggregate demand for both global and euro area export growth was lower than usual in late 2008 and early 2009. While this may be due partly to different movements in the components of demand and their differential import intensities, as well as to possible non-linearities, some supply-side factors also appear to be at play.

STRUCTURAL CHANGES RELATED TO INTERNATIONAL SUPPLY CHAINS

Recent empirical evidence suggests that trade has become more responsive to business cycle fluctuations over the past few decades, owing to structural changes in the world economy. According to some estimates, the elasticity of world trade to world income has risen from 2.8 in the 1980s to 3.7 in the 2000s (see Chart 11).¹² Furthermore, it appears to have been particularly high, at 4.7, during previous downturns (as compared with tranquil times), indicating that trade adjustments may sometimes be characterised by non-linearities and asymmetries. Consequently, the contraction in world trade, relative to the fall in GDP, was more pronounced during the period 2008-09 than during past recessions.

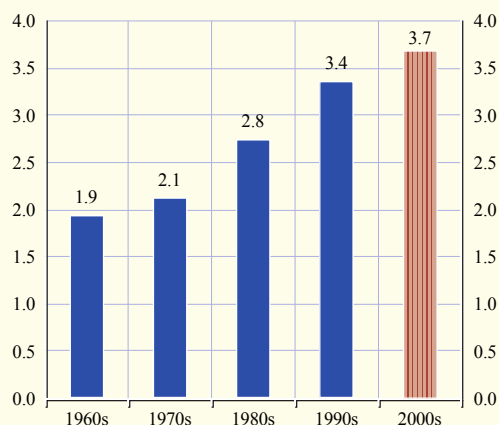
To some extent, the gradual increase in the elasticity of trade has been driven by the international fragmentation of production over the past two decades. Propelled by trade liberalisation and technological advances, international production networks have gained drastically in importance (see Chart 12). They have stimulated trade in intermediate goods and thereby boosted the import content of GDP components in many economies, including the euro area (see Box 1).¹³ In such an environment, any decrease in global GDP (measured in terms of value added) may trigger a significantly larger decline in trade (measured in gross terms), provided that marginal trade disproportionately involves vertically fragmented industries. With regard to the recent financial crisis, there is

10 See G. Alessandria, J. P. Kaboski and V. Midrigan, "The Great Trade Collapse of 2008-09: An inventory adjustment?", Working Paper No 16059, NBER, 2010.

11 See R. Anderton and T. Tewolde, "Turmoil, global trade and the internationalisation of production", paper presented at the conference "The global financial crisis", University of Nottingham, 10-11 November 2009, available at <http://www.nottingham.ac.uk/gep/documents/china/conferences/2009/bob-anderton.pdf>

12 See C. Freund, "The trade response to global downturns: historical evidence", Policy Research Working Paper No 5015, The World Bank, 2009.

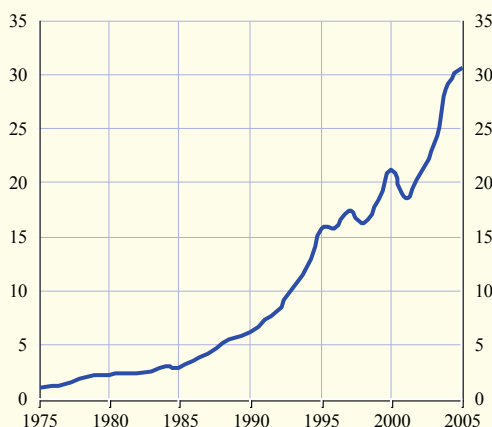
13 See, for instance, D. Hummels, J. Ishii and K.-M. Yi, "The nature and growth of vertical specialization in world trade", *Journal of International Economics*, Vol. 54, Issue 1, 2001.

Chart 11 Elasticity of world trade to world income

Source: C. Freund, "The trade response to global downturns: historical evidence", Policy Research Working Paper No 5015, The World Bank, 2009.

Chart 12 Index of vertical specialisation in the global economy

(index; 1975 = 1)



Sources: J. Amador and S. Cabral, "Vertical specialization across the world: A relative measure", North American Journal of Economics and Finance, 2009.

Note: This index is a measure of the global volume of imports used in the production of exports.

indeed some evidence that trade contracted systematically more in industries that are closely involved in vertical production networks, controlling for various industry characteristics.¹⁴ Of course, this finding has to be viewed against the backdrop of the considerable long-term benefits of international specialisation and trade.

The fact that international production networks allow for the instantaneous transmission of demand shocks to all countries involved partly explains why the downturn was highly synchronised across countries. This hypothesis

complements the idea that the majority of countries were hit by a common shock and is consistent with recent evidence showing that vertical linkages contribute significantly to aggregate output co-movement across countries.¹⁵

14 See A. Levchenko, L. Lewis and L. Tesar, "The collapse of international trade during the 2008-2009 crisis: In search of the smoking gun", Working Paper No 16006, NBER, 2010.

15 J. di Giovanni and A. Levchenko, "Putting the parts together: Trade, vertical linkages, and business cycle comovement", *American Economic Journal*, Vol.2, Issue 2, 2010.

Box 1**THE IMPORT CONTENT OF EURO AREA GDP COMPONENTS**

The vertical fragmentation of production across borders has been accompanied by a surge in international trade in intermediate goods and services. Partly as a result of this development, the share of both exports and imports in euro area GDP has increased significantly, rising from around 30% in 1996 to around 40% of GDP in 2007, according to the national accounts statistics (which include both intra and extra-euro area trade). The international integration of production has also contributed to the high co-movement of exports and imports. According to Eurostat's external trade statistics, the contemporaneous correlation coefficient for quarter-on-quarter growth rates

of extra-euro area imports and exports of goods was around 0.6 for the period 2000-07 (the most recent years are excluded owing to their exceptionality), up from around 0.2 for the period 1992-99. Furthermore, the import content of euro area exports has increased over time, i.e. euro area exports increasingly embody foreign value added. This box sheds some light on the importance of imports for the euro area economy. First, it compares the relative import intensities of euro area GDP components, and second, it compares the use of imported versus domestic inputs in euro area production.

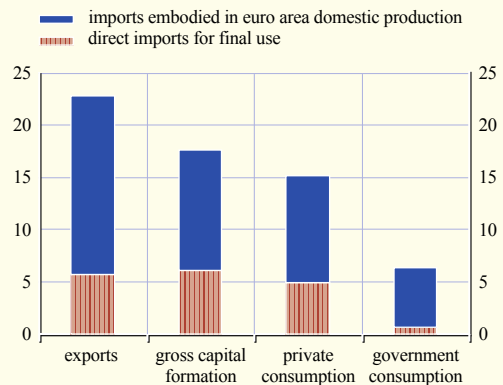
The measure of the import intensity of GDP expenditure components used in this box takes into account two effects: first, the amount of goods and services imported directly, and second, foreign value added embodied in domestically produced goods and services for consumption, investment or export purposes. Foreign value added is embodied in domestic production either directly, in the form of imported inputs, or indirectly, via domestic inputs which, in turn, have been produced with the help of foreign inputs.

These two effects can be estimated for the various euro area GDP components using the euro area input-output table for 2005.¹ Among the GDP components, extra-euro area exports have the highest total import intensity – around 23% of total exports to the rest of the world (see Chart).² This share is the sum of the direct imports (around 6%) – which are then re-exported – and the import content embodied in domestically produced exports (around 17%). These estimates do not include intra-euro area trade.

The import content of euro area investment and private consumption is lower, but still sizeable. Estimates indicate that around 18% and 15% respectively of total investment and private consumption are import-related, with directly imported goods accounting for about one-third of the total import content for both of these expenditure components. Government consumption has the smallest import intensity, amounting to around 6% in total, most of which reflects imports embodied in the intermediate inputs supplied by domestic producers.

Import intensity of euro area GDP components

(percentages)



Sources: ECB and R. van der Helm and R. Hoekstra “Attributing Quarterly GDP Growth Rates of the Euro Area to Final Demand Components”, Statistics Netherlands, 2009.

Note: Exports and imports refer to extra-euro area trade. At the time of compilation, data limitations prevented separate compilation of changes in inventories data.

1 The input-output table for the euro area as an aggregate was commissioned by the ECB and compiled by Statistics Netherlands using individual country input-output tables published by national statistical institutes. For more information, see R. van der Helm and R. Hoekstra, “Attributing quarterly GDP growth rates of the euro area to final demand components”, Statistics Netherlands, 2009. The estimates for the import content of consumption, gross capital formation and exports are based on nominal values available in the input-output table with a breakdown for 30 sectors. Imports and exports refer to euro area trade with the rest of the world. At the time the input-output table was constructed, data limitations meant that it was decided not to compile changes in inventory data separately.

2 See also the box entitled “The import content of exports and the internationalisation of production”, in “Competitiveness and the export performance of the euro area” by a task force of the Monetary Policy Committee of the ESCB, *Occasional Paper Series*, No 30, ECB, 2005. According to this paper, the euro area import content of exports to countries outside the EU was around 20% in 2000. The paper uses a weighted aggregation of input-output tables for selected euro area countries, covering around 55% of the euro area. By contrast, this box uses an estimated input-output table for the euro area aggregate and refers to euro area trade vis-à-vis the rest of the world. Notably, the import content varies significantly across euro area countries.

The aggregate figures for the import content of euro area production conceal a considerable amount of variation across sectors, with the industrial sector having the largest share (around 20%) of inputs directly imported from outside the euro area. Standing at around 10%, the share of imported inputs is smaller for the services sector.

Overall, the euro area economy depends quite strongly on imports from other countries, particularly for exports and, to a lesser extent, investment and private consumption. The recent downturn in the euro area was characterised by severe declines in both investment – which accounted for more than half of the contraction in euro area real GDP – and gross exports. It also was more pronounced in the industrial sector than in the services sector.³ These developments triggered a sharp decline in imports, limiting the negative contribution of net trade to euro area GDP.

3 For a discussion of investment, trade and sectoral developments during the downturn, see the box entitled “Euro area investment in the current downturn” in the July 2009 issue of the Monthly Bulletin, the box entitled “Recent developments in euro area trade” in the February 2010 issue of the Monthly Bulletin and the box entitled “The current euro area recovery across economic sectors from a historical perspective” in the April 2010 issue of the Monthly Bulletin.

TIGHTENING FINANCIAL CONDITIONS

The contraction in trade during the period 2008-09 may have differed from past contractions, not only because of significant changes in the global economy itself, but also because of the specific nature of the shock. In particular, the turmoil on the global financial markets during 2008-09 may have had a direct impact on global and euro area trade as a

result of the tightening financial conditions for exporters and importers. Box 2 provides an overview of the financial instruments geared at facilitating international trade, commonly known as “trade finance”. Of course, firms engaged in international trade will also be affected by financial conditions outside trade finance, e.g. when foreign customers find it more difficult to finance “big-ticket items”, such as capital or durable consumer goods.

Box 2

AN INTRODUCTION TO TRADE FINANCE

Broadly defined, trade finance includes all types of loans, insurance policies or guarantees that are directly linked to cross-border sales of goods and services.¹ The common feature of all these instruments is that they aim to facilitate international trade, either in the form of financing or risk management.

Since shipping goods from the factory to customers overseas takes time, many exporters face a lag between production and payment by the importer.² Therefore, they may have to extend trade credit to their customers – a form of trade finance known as an “open account transaction”.

1 This definition of trade finance is widely used in the literature, although some authors prefer a narrower definition that excludes, for instance, working capital financing. For background information, see M. Auboin, “Boosting the availability of trade finance in the current crisis: Background analysis for a substantial G20 package”, CEPR Policy Insight No 35, 2009; and T. Dorsey, “Trade finance stumbles”, *Finance and Development*, Vol. 46, No 1, March 2009.

2 For more details on the time lags involved in international trade, see S. Djankov, C. Freund and C. S. Pham, “Trading on time”, Policy Research Working Paper No 3909, The World Bank, 2006; and D. Hummels, “Time as a trade barrier”, *GTAP Working Paper Series*, No 18, 2001.

Alternatively, exporters may insist on “cash in advance”, which also eliminates the risk of non-payment. While both forms of financial relationship do not require the assistance of banks or other institutions, they are commonly seen as being part of trade finance.

However, firms may find it useful to have recourse to specialised intermediaries, such as commercial banks, private insurers, national export credit agencies and multilateral development banks. For instance, a bank can provide a letter of credit, which constitutes a commitment by the bank on behalf of the importer that payment will be made as soon as the terms and conditions stated in the letter are met. While this service is relatively costly, it reduces the risk of non-payment, as long as the bank itself is financially robust and healthy. Alternatively, an intermediary (the exporter’s bank) can be brought in to collect payment from the importer – through the importer’s bank – as soon as the exporter presents the shipping documents, usually without a verification process or recourse in the event of non-payment (“documentary collections”). Furthermore, export credit insurance and related instruments (e.g. export factoring or forfeiting) allow exporters to mitigate or transfer the risk of non-payment in the case of open account transactions. Commercial banks also provide export working capital financing for the entire cash cycle, either in the form of short-term loans or a revolving line of credit. Finally, in many countries, exporters are given support by national agencies, e.g. in the form of government-backed guarantees.

All these trade finance instruments are vulnerable to a deterioration in liquidity conditions and the evaporation of trust. In times of financial turmoil, commercial banks and insurers are likely to introduce more stringent lending conditions and increase the spreads on trade finance instruments. At the same time, exporters may attempt to switch from open account transactions to cash-in-advance transactions, which may be difficult if the importers are short of liquidity themselves. In brief, one would expect financial market turmoil to be accompanied by a deterioration in trade finance conditions. As a result of such supply-side disruptions, some international transactions, which would be warranted by final demand, may not take place.

In the wake of the financial crisis, the aggregate values of bank-intermediated trade finance contracted worldwide. Survey-based evidence clearly indicates that this decline was mainly the result of lower trade flows (i.e. demand for trade finance fell as trade itself declined).¹⁶ The decline in the bank-intermediated trade finance business appears to have been lower than that in trade values.¹⁷ This finding should be interpreted with caution, however, as the aggregate figures mask shifts in the composition of overall trade finance. First of all, there has been a shift away from open account transactions towards more secure cash-in-advance transactions and bank-intermediated trade finance (see Chart 13), possibly signalling exporters’ reassessment of counterparty risk. Moreover, some firms’ higher demand for export credit insurance and similar instruments may have partly counterbalanced

the significant decline in other instruments, such as letters of credit.

Surveys also show that importers and exporters were faced with more stringent lending standards (e.g. in the form of higher collateral requirements or shorter tenors) and higher trade finance costs during the global financial crisis. Spreads increased across the board as many financial institutions faced higher funding costs or capital requirements and reassessed counterparty risk

16 See the two reports by the IMF and the Banker’s Association for Finance and Trade entitled “IMF-BAFT Trade Finance Survey: A survey among banks assessing the current trade finance environment”, March 2009 and “Global Finance Markets: The Road to Recovery”, September 2009.

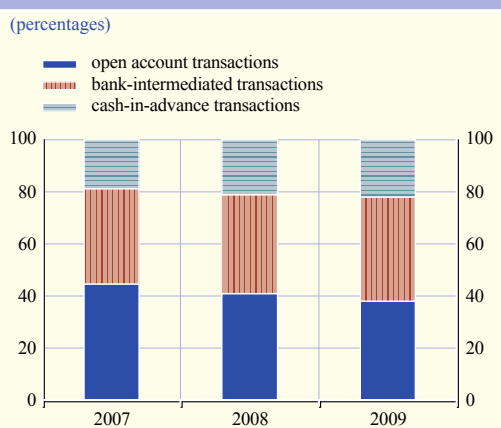
17 For a comparison of the changes in trade finance values and trade values, see J.-P. Chauffour and T. Farole, “Trade finance in crisis: market adjustment or market failure?”, Policy Research Working Paper No 5003, The World Bank, 2009.

in an environment of exceptional uncertainty and sharp exchange rate movements.

Increases in trade costs may have severe ramifications for international trade. First, exporters may find it difficult to raise the working capital needed to finance their international activities, while importers may not be able to pay for their purchases in advance. Second, tight financial conditions appear to hamper international transactions more than domestic transactions. When the health of an exporter's main reference bank deteriorates, it is likely to have a greater negative impact on foreign sales than on domestic sales.¹⁸ This may be explained by the fact that international transactions tend to be associated with a greater need for working capital financing (given the time lags involved) and are often perceived by banks as being more risky than similar domestic transactions (e.g. owing to differences in legal systems across countries). In addition, trade finance is provided largely at short maturities and therefore needs to be constantly renewed. Third, the complex nature of international production networks implies that confidence and liquidity shocks – even when confined to a small number of firms – can be quickly transmitted across countries. This can lead to supply bottlenecks that disrupt the entire network and magnify the contraction in trade.¹⁹ For instance, final goods producers may have to temporarily scale down their exports because financially distressed suppliers are no longer in a position to provide essential intermediate goods on time. Concerns about the liquidity position of final goods producers or retailers, in turn, may discourage foreign suppliers from timely delivery.

Empirical evidence on the recent financial crisis further underpins the idea that international trade and financial conditions are closely intertwined. In fact, exports of firms reliant on external finance were particularly affected by the crisis.²⁰ Thus, the difficulties faced by financial institutions worldwide during the crisis appear to have resulted in supply-side disruptions to international trade. Crucially, this effect compounds the effects operating through the demand side, partly accounting for the “trade puzzle”.²¹

Chart 13 Breakdown of global trade finance according to transaction type



Source: World Economic Outlook, IMF, October 2009.

Some may argue, however, that the impact of tightening conditions in bank-intermediated trade finance may have been mitigated by the growing recourse to liquidity provided along international supply chains.²² Large, liquid companies (“deep pockets”) with access to global financial markets – and often at the centre of these production networks – have an incentive to alleviate the liquidity constraints of affiliates, suppliers and customers to sustain production.²³

18 See M. Amiti and D. E. Weinstein, “Exports and financial shocks”, Working Paper No 15556, NBER, 2009. The authors also find that the deterioration in trade finance conditions accounted for about one-third of the decline in Japanese exports during the Japanese financial crises of the 1990s.

19 For a closely related theoretical model, see N. Kiyotaki and J. Moore, “Credit chains”, mimeo, London School of Economics, 1998.

20 See J.-C. Bricongne, L. Fontagné, G. Gaulier, D. Taglioni and V. Vicard, “Exports and sectoral financial dependence: evidence on French firms during the great global crisis”, *Working Paper Series*, ECB, forthcoming; and M. Wynne, “The financial crisis, trade finance and the collapse of world trade”, in *Globalization and Monetary Policy Institute 2009 Annual Report*, Federal Reserve Bank of Dallas, 2009.

21 The OECD estimates that trade finance accounted for about one-third of the decline in global trade in the winter of 2008-09. See *Economic Outlook*, OECD, June 2009.

22 See M. Kolasa, M. Rubaszek and D. Taglioni, “Firms in the Great Global Recession: The role of foreign ownership and intra-group finance”, Working Paper, Narodowy Bank Polski, forthcoming; and C. Altomonte and G. Ottaviano, “Resilient to the crisis? Global supply chains and trade flows”, in R. Baldwin (ed.), *The Great Trade Collapse: Causes, Consequences and Prospects*, CEPR, 2009.

23 See, for instance, F. Boissay and R. Gropp, “Trade credit defaults and liquidity provision by firms”, *Working Paper Series*, No 753, ECB, 2007.

In this respect, international production networks may have been a source of resilience during the recent financial crisis, preventing an even sharper downturn in global and euro area trade. However, it appears that this partial substitution of bank-intermediated trade finance was not sufficient to shield international trade from the direct impact of the financial crisis.

PROTECTIONISM

During the Great Depression of the 1930s, many governments succumbed to protectionist pressures, thereby exacerbating the global downturn. The recent financial crisis has also seen greater recourse to restrictive trade policy measures. So far, the scope of these measures has been fairly narrow. The import-restricting measures introduced between October 2008 and mid-February 2010 by G20 members cover around 2.0% of G20 imports, which is equivalent to around 1.2% of total world imports. The induced reduction in trade volumes is likely to be significantly lower than these figures. The timing of these measures suggests that the increase in protectionism was indeed mostly a result of the collapse in trade.²⁴

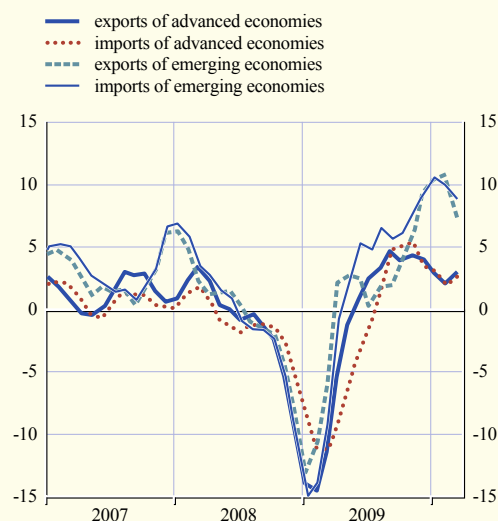
It is difficult to capture more covert forms of protectionism, particularly those related to the fiscal stimulus packages implemented worldwide, such as “buy-local clauses”.²⁵ Furthermore, weak labour markets, an uneven recovery and the lack of room for fiscal manoeuvre in many countries could increasingly tempt governments to resort to protectionism.²⁶ Looking back at the 1970s, it can be particularly difficult to remove non-tariff protectionist measures. Therefore, an intensification of protectionism across the world remains a downward risk to the global economic outlook and should be strongly resisted.

4 THE RECENT RECOVERY IN GLOBAL AND EURO AREA TRADE

Following the severe contraction in late 2008 and early 2009, a recovery in global and euro area trade started to take hold in the second half

Chart 14 Import and export volumes of goods by country groups

(three-month-on-three-month percentage change)



Source: CPB Netherlands Bureau for Economic Policy Analysis. Note: The series include intra-regional trade.

of 2009 and continued into the first half of 2010. In the advanced economies, both imports and exports expanded in late 2009 at a pace well above the average for the past two decades. In the emerging economies, however, the rebound in trade was even more pronounced, on both the import and export side (see Chart 14). This was due not only to resilient GDP growth in many emerging economies and the increased importance of trade between them, but also to demand impulses from some advanced economies – partly transmitted through international supply chains.

24 See H. K. Kee, C. Neagu and A. Nicita, “Is protectionism on the rise? Assessing national trade policies during the crisis of 2008”, Policy Research Working Paper No 5274, The World Bank, 2010. The authors estimate that the increase in protectionism accounted for less than 2% of the collapse in world trade in 2009.

25 See the box entitled “The risks of protectionism” in the September 2009 issue of the Monthly Bulletin and the article entitled “Assessing global trends in protectionism” in the February 2009 issue of the Monthly Bulletin. See also S. Evenett (ed.), “Unequal compliance: The 6th GTA Report”, CEPR, 2010.

26 During the Great Depression, trade policy was particularly restrictive in countries that could not resort to alternative expansionary policies. See B. Eichengreen and D. A. Irwin, “The slide to protectionism in the Great Depression: Who succumbed and why?”, Working Paper No 15142, NBER, 2009.

Notably, the upswing in global trade was supported by some of the factors that had actually curbed trade growth during the downturn. First, although the trade-intensive global manufacturing sector had contracted more than the services sector, it rebounded vigorously, thereby supporting international trade. Indeed, this can be seen as a correction of the severe contraction following the global confidence and liquidity shock in late 2008. Second, the car-scraping schemes and related measures implemented in many economies helped to revive, at least temporarily, the automobile industry, whose output is traded intensively.²⁷ This contributed to a sharp increase in extra-euro area exports of cars, as well as related parts and components, which had witnessed a particularly severe downturn (see Chart 15).²⁸ Third, the inventory effect started to reverse globally towards the end of 2009, which further supported trade.

In parallel, global supply chains appear to have been gradually reactivated, as signalled by the rebound in intermediate goods trade. Moreover, trade finance conditions eased globally on account of the various policy measures implemented worldwide to stabilise

the financial system and of the decision by the G20, in April 2009, to ensure the availability of USD 250 billion for trade finance over the period 2009-11. However, lending standards and trade finance costs have generally remained above pre-downturn levels, which may have prevented a stronger recovery in trade.²⁹ Following past global downturns, industries reliant on external finance experienced a more sluggish recovery in exports than other industries, controlling for demand effects. This suggests that supply-side financial frictions also affect the recovery of trade. Therefore, a sustainable recovery in global and euro area trade not only requires improvements in global demand conditions, but also a robust and healthy financial system.

5 RELATIVE EXPORT PERFORMANCE

While the contraction in euro area exports in 2008-09 was severe by historical standards, all other major economies experienced equally severe downturns in trade. The subsequent recovery, however, was weaker in the euro area than in most other major economies (see Chart 16). Overall, the euro area appears to have lost export market share between the first quarter of 2008 and the final quarter of 2009, as indicated by a negative “export growth gap” (i.e. the growth differential between euro area exports and total foreign import demand). The most recent data for 2010 suggest some correction in this regard, owing in particular, but not exclusively, to the growing demand for capital goods.

During the downturn, import demand contracted across the globe, dominating other determinants of export growth. Thereafter, country-specific factors – such as the product

Chart 15 Extra-euro area export values of goods

(year-on-year percentage change; non-seasonally adjusted)



Source: Eurostat (Comext).

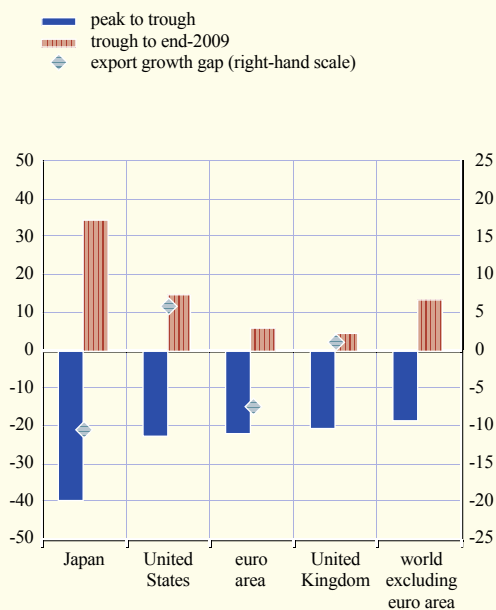
27 OECD data show that in Germany, for instance, the automobile industry accounts for about 21% and 13% of total manufacturing exports and imports respectively.

28 For an overview of the recent measures to support the car industry, see D. Haugh, A. Mourougane and O. Chatal, “The automobile industry in and beyond the crisis”, *Economics Department Working Papers*, No 745, OECD, 2010.

29 See, for instance, the report entitled “Rethinking trade finance 2010”, International Chamber of Commerce, 2010.

Chart 16 Merchandise export volume growth in selected economies

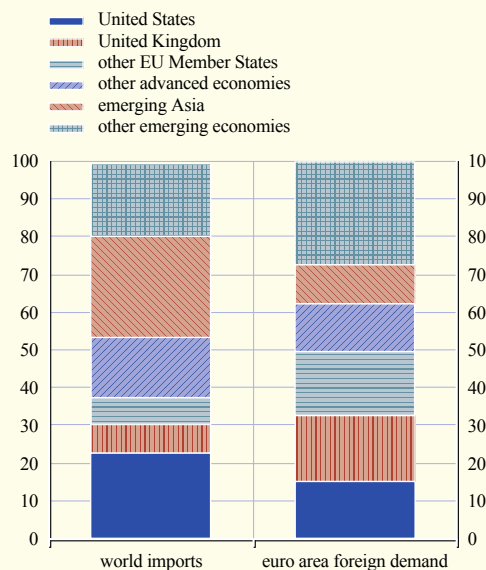
(percentage changes; percentage points)



Sources: CPB Netherlands Bureau for Economic Policy Analysis, Eurostat and ECB staff calculations.
 Note: “Euro area” excludes intra-euro area trade. The “export growth gap” is computed as the percentage point difference between export growth and growth in country-specific foreign demand between the first quarter of 2008 and the final quarter of 2009. Foreign demand is proxied by the trade-weighted real imports of the euro area’s trading partners.

Chart 17 Composition of world imports and euro area foreign demand

(percentages; average for 2000-08)



Sources: IMF and ECB staff calculations.
 Notes: Euro area foreign demand is a trade-weighted measure of the total import volumes of the euro area’s trading partners. “World imports” excludes the euro area.

and country composition of exports, as well as price competitiveness – made more of an impact amid an uneven recovery of the global economy. Above all, euro area exports were constrained during the recovery by relatively weaker import demand in some of its major export markets, particularly the non-euro area EU Member States. At the same time, the increase in export growth stemming from buoyant imports in emerging Asia was smaller for the euro area than for other major economies, particularly compared with Japan, owing to the relatively lower weight of emerging Asia in euro area exports (see Chart 17). The significant movements in effective exchange rates, particularly in the final quarter of 2008, are also likely to have affected the export performance of all major economies. However, in the light of the time lags in exchange rate pass-through,

the impact of these developments in price competitiveness was arguably mostly felt during the trade recovery and thus contributed to its uneven shape.

6 CONCLUSIONS

The unprecedented contraction in global and euro area trade in the wake of the global economic downturn of 2008-09 gave rise to a “trade puzzle”. The contraction in trade was significantly larger than might have been expected on the basis of historical regularities, leading to the failure of aggregate quantitative trade models to predict the severity of this downturn. Recent empirical evidence suggests that the puzzle was due partly to various factors that exacerbated the impacts of the global economic downturn on international trade.

First, the decline in global and euro area GDP was focused mainly in the trade-intensive components (such as investment), with a particularly large drop in demand for durable goods. Second, the expansion of international production networks over the past two decades appears to have increased the responsiveness of trade to fluctuations in demand and may have acted as an additional amplification mechanism. Third, trade was hampered by financial constraints worldwide. In brief, the unusual responsiveness of global and euro area trade during the recent financial crisis appears to be related to both the structural changes in the global economy and the exceptional nature of the crisis itself.

In the second half of 2009 global trade and – with some lag – euro area trade started to recover from its worst downturn in post-war history. The rebound can be seen as a correction of the severe contraction following the intensification of the financial crisis in late 2008. However, it was also supported by temporary effects, such as the turn in the inventory cycle and government car-scrapping schemes. The sustainability of the recovery in global and euro area trade will depend critically not only on a further strengthening of private demand, but also on the robustness and health of the global financial system. Finally, an intensification of protectionism across the world remains a downward risk to the global economic outlook and should be strongly resisted.