

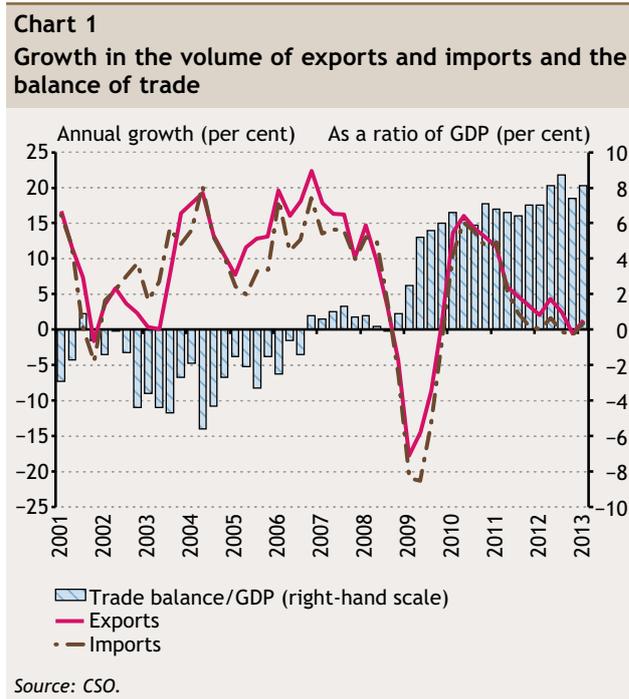
Katalin Bodnár, György Molnár, Gábor Pellényi, Lajos Szabó and Judit Várhegyi: Dynamics of the trade balance and developments in exports and imports*

This article examines how the trade balance (or net exports) changed during the crisis. In the early-to-mid-2000s, Hungary ran a trade deficit as external indebtedness grew. Since the crisis, balance sheet adjustments by economic agents have substantially reduced imports for consumption and investment purposes, whereas exports (and imports of interim products) grew during the same period. As a result, the trade balance moved into a large surplus. However, in this fifth year of the crisis, exports still remain below their pre-crisis levels, due not only to cyclical factors, but also potentially to long-term, structural reasons. To reduce external debt in the medium term, export-led growth will be required, which may come from faster growth on Hungary's export markets, an increase in market share or higher domestic value added of exports. Our analysis has identified challenges in all three areas.

INTRODUCTION

Hungary's balance of trade was negative from the mid-1990s, but then returned to a considerable surplus since the start of the crisis. As a consequence of rapid growth in domestic consumption in the first half of the 2000s, there was a steep increase in imports, resulting in a trade deficit in excess of 4 per cent of GDP by 2003. This was followed by a gradual improvement in the trade balance, as exports picked up and domestic demand weakened. Even before the crisis, the balance of trade had showed a minor surplus equal to around 1 per cent of GDP. The balance of trade improved further, by about 6 per cent of GDP in 2008–2009, due to a significant fall in external trade, which then resumed growing, albeit at a gradually declining rate after a brief rebound. Import dynamics have been consistently lower than export dynamics, resulting in a further increase in the trade surplus (Chart 1). This analysis identifies the reasons for these changes.

The crisis revealed that the previous growth model based on external borrowing was no longer sustainable. The risk appetite of markets declined, and debts accumulated prior to the crisis decreased only gradually. This also resulted in a permanent deterioration in Hungary's risk rating. All of these factors point to a debt service burden in excess of pre-crisis levels and more limited opportunities to borrow in the near future (MNB, 2010). In this environment,



domestic demand can only grow slowly and exports may become the main engine of growth. Accordingly, in order to evaluate Hungary's medium-term growth outlook, it is important to understand the extent to which exports and imports have contributed to the developments in the balance of trade and whether these changes reflect the

* The views expressed in this article are those of the author(s) and do not necessarily reflect the official view of the Magyar Nemzeti Bank.

effects of the business cycle or reveal long-term, structural developments.

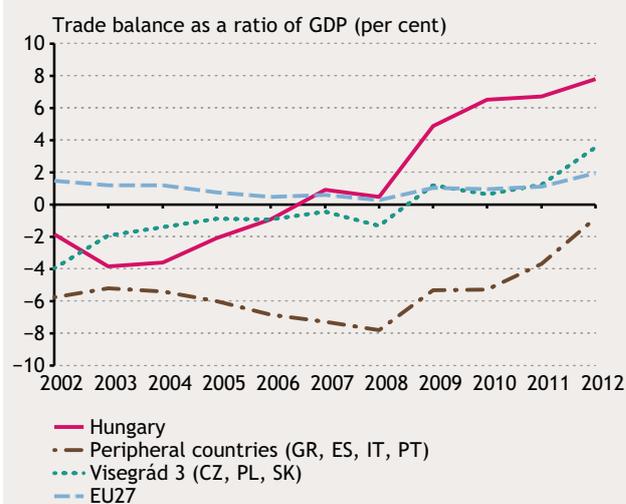
In the first part of our analysis, we look at the trends in the balance of trade from the pre-crisis years up to 2012 and compare these to the trends observed in other European countries. We then investigate how imports and exports have adjusted during the crisis and analyse the key factors determining the opportunities for export-led growth. We compare Hungary to several different groups of countries in the course of our analysis. We analyse the developments in external trade in comparison to the European Union average. We compare Hungary to the Visegrád group as well (the Czech Republic, Poland and Slovakia), which are our primary competitors in terms of exports and competitiveness. We also look at the average indicators of the EU periphery (Greece, Italy, Portugal and Spain). Similarly to Hungary, these countries had also accumulated high external debts prior to the crisis, and therefore domestic demand and thus developments in imports can be best compared to these countries.

CHANGES IN THE BALANCE OF TRADE

Hungary ran a trade deficit for years before the crisis. Prior to the 2000s, the trade deficit had been a reflection of an equilibrium process of convergence, but afterwards it reflected a rapid increase in domestic demand. Even as Hungary's exports grew quickly, the level of imports exceeded that of exports, due in part to the rapid, credit-fuelled expansion of consumption and capital investment from the early 2000s, combined with a lax fiscal policy as well. A similar process took place in other countries of the region, but their trade deficits were lower. At the EU level, the balance of trade was almost nearly balanced (as was the current account), but this concealed major differences between different groups of member states. Low interest rates and financial integration in the euro area led to dynamically increasing domestic demand in the countries of the periphery, which, combined with their relatively weaker export performance, resulted in significant trade deficits there (Chart 2).

Since the crisis, Hungary has been among the EU members best able to adjust its net exports. Prior to the crisis, major imbalances had built up within the European Union in terms of the current account and, within that, the balance of trade. Although improvements in the balance of trade across the EU as a whole do not appear significant (amounting to 0.6 per cent of GDP in 2007 and rising to 1.9 per cent in 2012), this masks major differences between the different countries. Besides the peripheral countries, which had previously accumulated large foreign debts (mostly

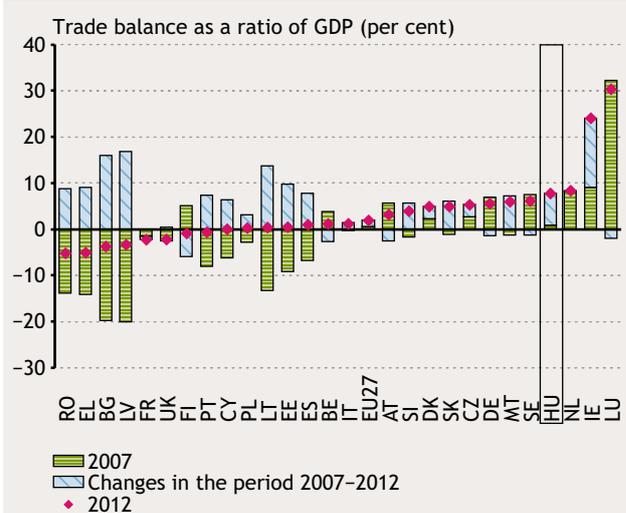
Chart 2
Balance of trade as a percentage of GDP in EU countries



Source: Eurostat.

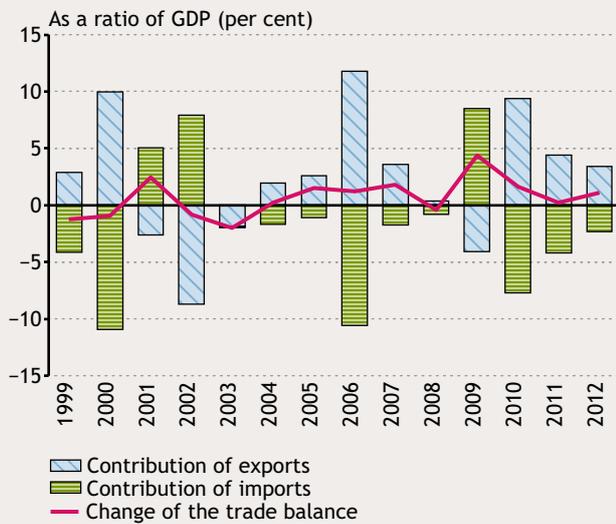
Greece, Portugal and Spain), as well as the Baltic countries, the greatest degree of adjustment was observed in Hungary. At the same time, net exports declined in several countries previously reporting positive trade balances, although adjustment processes were most pronounced in countries that had recorded high deficits before the crisis (EC, 2012). Although to a less significant extent than in Hungary, major changes in the balance of trade occurred in all other Visegrád countries as well. Hungary currently runs a trade surplus of nearly 8 per cent of GDP; one of the highest in the EU (Chart 3).

Chart 3
Balance of trade as a percentage of GDP in EU countries, before and since the crisis



Source: Eurostat.

Chart 4
Impacts of exports and imports on developments in the trade balance



The trade balance improvement was caused by a greater degree of adjustment in imports. Net exports started to improve as early as 2006, at the same time as the consolidation of fiscal policy. Exports and imports both fell during the crisis, but a more marked decline in imports resulted in a significantly improved trade balance. Trade in goods has started growing again since the crisis, but export growth has remained persistently higher than import growth. As a result, the trade surplus continued to rise, approaching 8 per cent of GDP in 2012 (Chart 4).

IMPORT ADJUSTMENT

Domestic demand in Hungary has fallen considerably since the start of the crisis due to balance sheet adjustments by economic agents. In an international comparison, consumption and investment demand has fallen most notably in countries that had accumulated high foreign debts before the crisis (Chart 5). In Hungary, all three sectors contributed to the growth of external debt in the beginning and middle of 2000s. In public finances, major consolidation was necessary. A large proportion of households and firms borrowed in foreign currency from the domestic financial sector, which also contributed to the fact that Hungary's need for adjustment was among the highest within the EU and that balance sheet adjustment continues to this day.

The moderate growth in imports is primarily attributable to the decline in domestic demand. A significant proportion

Chart 5
Relationship between pre-crisis debt accumulation and the fall in domestic demand in EU countries

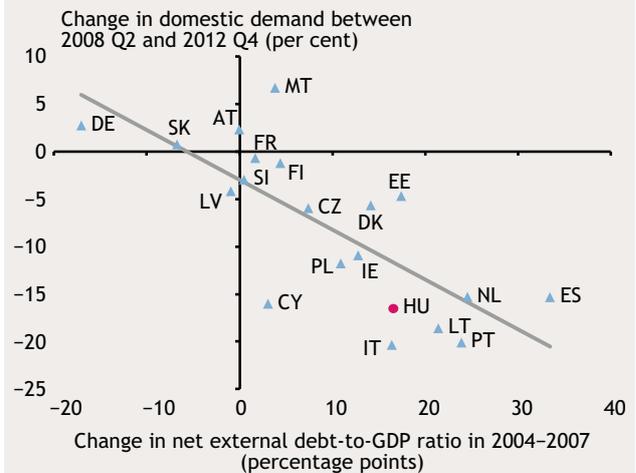
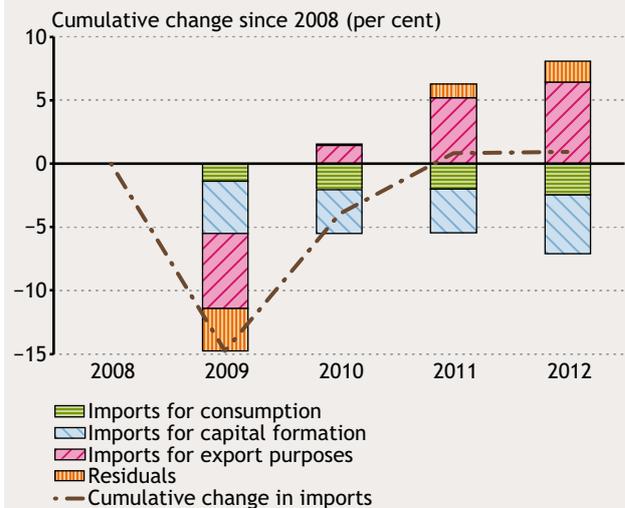


Chart 6
Contribution of GDP expenditure items to changes in import volumes



Note: We calculated the import content of expenditure items from the 2008 balance sheet of intersectoral relations. Imports cannot be fully decomposed to the contributions of the expenditure items. The residual member reflects the change in import content over time, caused, among other things, by changes in relative prices and the expenditure structure. Source: CSO, MNB calculations.

of domestic demand items originate from imports (according to 2008 figures, 34 per cent of household consumption and 52 per cent of investments were imported). As a result, falling domestic demand since the onset of the crisis has decreased imports as well. The recent growth in imports, observed since 2009, is attributable solely to the recovery in exports (the average import content of which was 56 per cent in 2008, Chart 6).

Due to continued balance sheet adjustment by Hungarian economic agents, the coming years will only see a slow recovery in domestic demand. Households and firms remain heavily indebted, possibly necessitating further balance sheet adjustment. In addition, a more uncertain growth outlook has also triggered an increase in precautionary savings and a decline in investment demand. As a result, imports are only expected to exhibit moderate growth in the coming years.

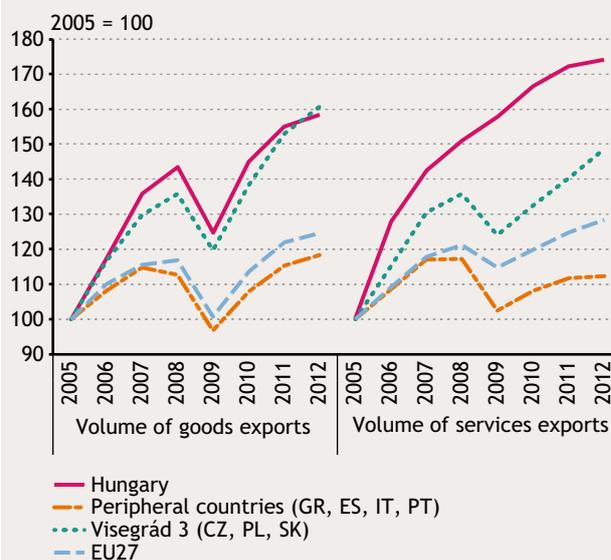
DEVELOPMENTS IN HUNGARY'S EXPORT PERFORMANCE

Hungary's volume of goods exports has increased, but the rate of growth has been subdued since the mid-2000s (Chart 7). In 2009, exports shrank primarily due to a steep decline in external demand. In subsequent years, demand for imports in Hungary's export markets gradually recovered. As a result, export volumes in 2011 exceeded the pre-crisis level. In an international comparison, one positive feature is the fact that export dynamics are higher in Hungary than in other countries which accumulated similarly excessive debts. However, compared to the countries in the region that are Hungary's direct competitors and have similar export structures, these dynamics were already lower in the post-crisis years. The fact that the competitiveness of certain large corporations which settled in the country in the 1990s weakened globally during the crisis, especially in the electronics sector, may have contributed to this. These companies were thus forced to cut their output and reorganise production chains. Some responded to the changed circumstances with layoffs and others by shutting down factories, which led to a slowdown in Hungary's export growth. The contraction in the electronics sector was partly offset by an expansion in automotive capacities, as a result of which both output and exports of the machine industry as a whole increased.

Hungary's service export volumes are growing dynamically. Service exports are much lower than the country's exports of goods (approximately one fifth of the latter). However, the balance of trade in services has been continually positive since the late 1990s. Growth in service exports was uninterrupted throughout the crisis, albeit its dynamics slowed slightly. This positive performance may reflect the fact that the decline in demand during the crisis was less pronounced for services than for goods. After all, demand for services is less dependent on cyclical changes (certain types of business services do not depend on production level: accountancy services, for instance, are in demand even as production decreases) or on external

Chart 7
Export volumes

(2005 = 100)



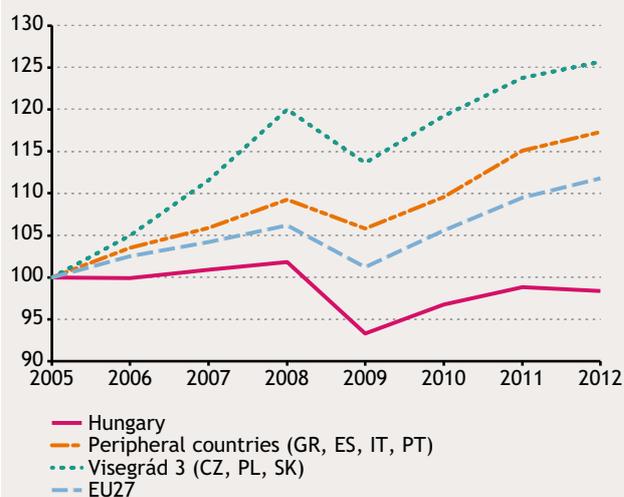
Source: Eurostat.

financing. Furthermore, protectionist measures, which were increasingly implemented in exports of goods during the crisis, are also less typical among services (Borchert and Mattoo, 2010).

For quite some time, the increase in Hungary's export price index has fallen short of the prices of our regional competitors and EU member states (Chart 8). This may

Chart 8
Export price index

(2005 = 100)



Source: Eurostat.

reflect several factors (Munkácsi, 2009). One possible explanation may lie in Hungary's export structure: starting in 1995, the composition of exports shifted towards products with high technological content. After the millennium, however, Hungary was only able to increase its exports in areas where products with high technological content could be sold at lower prices. Moreover, sectoral specialisation also represented a shift towards products with lower unit values. Another possible explanation is that Hungary's inability to increase the rate of its export growth, despite the persistently low price index, may indicate competitiveness problems. Calculations by Benkovskis and Wörz (2012) suggest that, in other countries in Central and Eastern Europe, the export price index may have risen mainly due to improvements in non-price competitiveness (product quality as perceived by consumers). The competitive disadvantage of Hungarian exports may have been in part brought about by a less marked improvement in product quality. Additionally, Hungary's price competitiveness was unfavourable as well, as prices adjusted for quality improvement fell less in Hungary than elsewhere in the region during the 2000s.

The increase in Hungary's market share in exports of goods fell behind the Visegrád countries even before the crisis, and Hungary's market share at current prices has been decreasing since then. In the years before the crisis, Hungary's export market share grew quickly, at a pace outstripping that of other EU member states. However, the growth rate of export market share lagged behind the growth of our regional competitors right after the millennium (Chart 9). To some extent, this may be a natural process, as the country's external trade with the European Union may have approached its equilibrium by the millennium. In addition, Hungary's long-standing low price index may have also contributed to more moderate growth in market share at current prices. At the same time, Hungary has been unable to increase its market share calculated from volumes since the onset of the crisis (Chart 10).

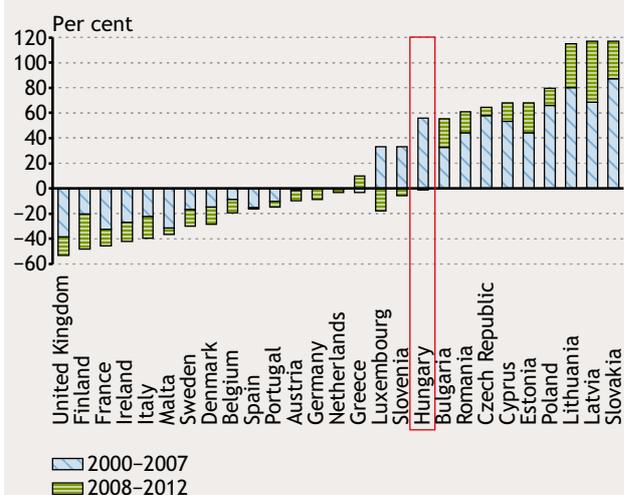
Hungary's export market share for services reveals more favourable trends. Export market share for services grew dynamically until around 2004–2005, but since then the rate of growth has been lower than that of regional competitors. Since then Hungary's market share has decreased, especially in 2012, but so have the market shares of its regional counterparts. Last year's decline was due mostly to a fall in tourism exports (Chart 9).

Chart 9
Market share in global exports, at current prices



Source: WTO.

Chart 10
Changes in global market shares in terms of goods export volumes

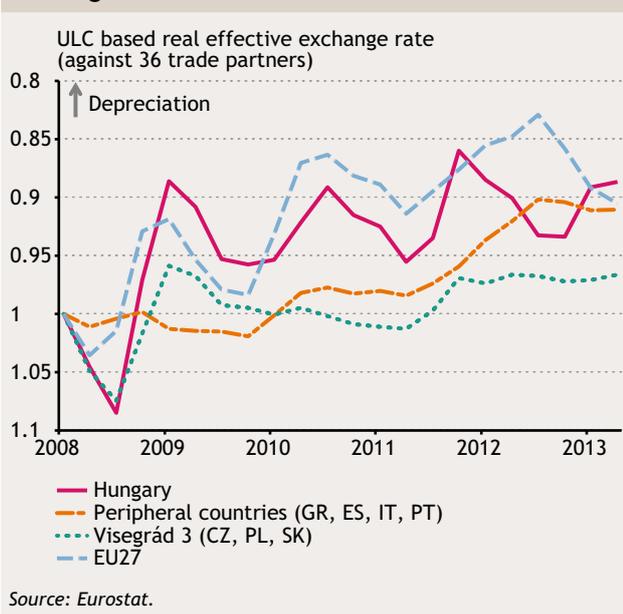


Source: CPB Netherlands, Eurostat.

Hungary's export market share has been impacted by several cyclical factors since the crisis:

- **Hungarian goods exports react particularly sensitively to international business cycles.** The country's export market share tends to decrease at times of global recession and increase during upswings. This is due to the

Chart 11
Changes in unit labour cost (ULC) based real effective exchange rate



fact that a major part of Hungarian exports consist of semi-finished and intermediate products. These respond to changes in demand even more sensitively than consumer goods, as a result of the inventory behaviour of global production chains.¹

- **Structural changes in industry may have temporarily worsened Hungary's export market share, especially in 2011–2012.** A decline in capacity in the electronics sector preceded the launch of newly built automotive sector capacities. In the near future, this could be offset as the automotive industry's output begins to pick up.
- **By contrast, depreciation of the exchange rate may have slightly improved the country's export market share.** Although Hungary's real exchange rate has depreciated relatively steeply compared to other European countries (Chart 11), the expected positive outcomes of this depreciation may have been limited by a number of factors. In light of the high volume of foreign currency debt of the private sector, improving price competitiveness could well have been offset by the deteriorating balance sheet position of firms. Furthermore, given that imported raw materials represent a high proportion of exports, the impact of the exchange rate on net exports may be limited. Finally, the bulk of

Hungary's exports are destined for a small number of foreign-owned corporations, which keep their books in euros and therefore do not necessarily respond to short-term changes in exchange rate. Market services may have been more strongly affected by the exchange rate: in the first half of 2009, for example, when the forint depreciated sharply, there was a quick and considerable surge in shopping tourism.

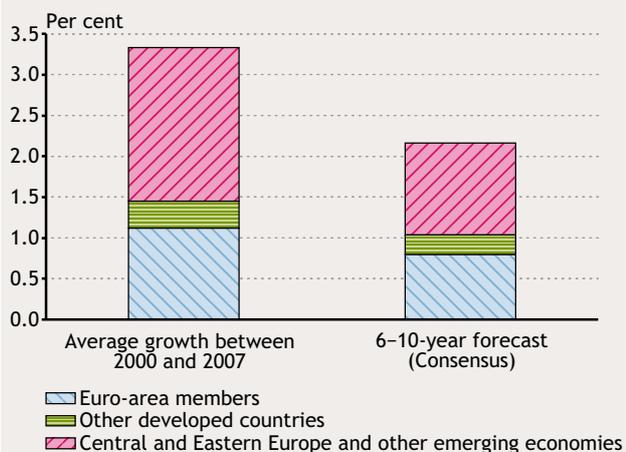
THE CHALLENGES OF EXPORT-LED GROWTH

Looking forward, exports may be the engine of growth over the medium term. In the wake of the global economic crisis, it has become apparent that the growth model based on intense external borrowing requires adjustment. Investors' risk appetite is expected to remain below its pre-crisis levels over the long term, and therefore, less external funding will be available. As a result, convergence must continue in a manner that prevents any significant deterioration in the external balance (MNB, 2010). This also presupposes a better balance of trade than before the crisis. There are three potential ways of achieving export-led growth. First, exports at current prices could increase if both demand on export markets and the volume of exports grow, or if Hungary can achieve better prices on its export markets. Second, improving the competitiveness of exporting companies could result in increasing market shares and thus growing exports. Third, even at an unchanged level, exports may contribute to economic growth to a greater degree if their domestic value added content increases. In the following, we review the extent to which these factors could assist in the transition to an export-led growth model, and examine the key challenges faced by Hungarian exports.

Hungary's export markets may only grow at a more sluggish pace than before the crisis. The period before the crisis was characterised by an underestimation of investment risks. Many countries accumulated debt positions that later proved unsustainable and will take a long time to correct. In overindebted countries, therefore, slow growth can be expected. In addition, global relations in trade and finance also mean that the growth prospects of countries not directly affected by debt have also worsened. Over the long term, certain demographic processes (the aging and shrinking of populations) represent further challenges, especially in more developed regions (Chart 12).

¹ Manufacturers maintain buffer inventories to hedge against the unexpected changes in demand for finished goods, and the volume of such inventories also depends on the expected level of demand. For instance, if sales prospects improve, end-product manufacturers will order intermediate products in volumes sufficient to meet expected demand and maintain a larger buffer inventory. This, moving up the production chain, has a multiplier effect, so that the volatility of orders and production may constantly rise. Altomonte et al. (2012) used European foreign trade figures to study this phenomenon.

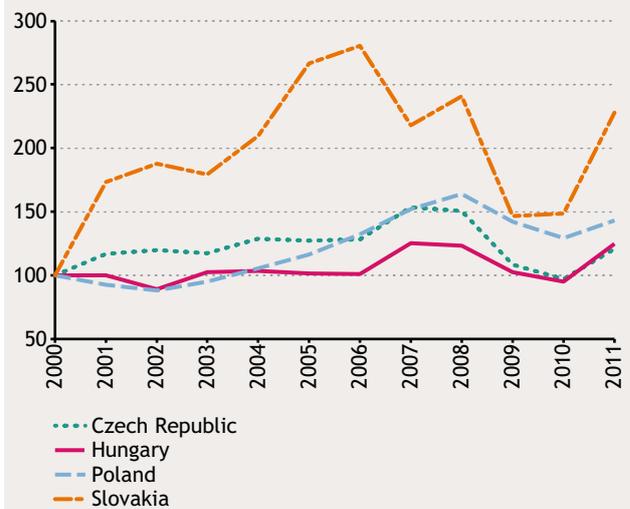
Chart 12
Growth in Hungary's key export markets



Note: Weighted average of GDP growth for countries with at least a one-percent share in Hungarian exports, with the weights reflecting respective shares in 2011 exports.

Source: Eurostat, CSO, Consensus Economics, MNB calculations.

Chart 13
Changes in investment volume in the manufacturing industries of the Visegrád countries



Source: Eurostat.

Changes in the geographical and product structure of exports may mitigate the negative impacts of a slower global growth environment. If Hungary can export to regions characterised by relatively higher growth rates and specialise in sectors with relatively better development prospects, its effective external demand will decelerate less than the global economy as a whole. However, entering new markets and changing product structures are extremely costly options for individual Hungarian exporters, and the outcomes are uncertain. A more active engagement in global production chains could be a viable alternative to this strategy. Well-capitalised multinational corporations are also working to strengthen their foothold in the faster-growing markets. By establishing supplier relationships, smaller Hungarian companies could increase their exposure to more dynamic markets at a lower cost and less risk.

In the medium term, competitiveness problems could hinder the expansion of market share. In addition to cyclical factors, the weak dynamics of Hungary's export market share may reflect structural problems as well. The capacities of the export sector are expanding more slowly than in other countries of the region: investment activity in the manufacturing industry has, for a long time, lagged behind the rest of the Visegrád countries, even with recent large-scale investment projects in the automotive industry

included (Chart 13). This suggests that Hungary's ability to attract capital may have weakened over the past decade compared to its regional competitors. However, a more in-depth analysis of these issues already exceeds the bounds of this study.²

The exchange rate may help improve Hungary's share in goods exports over the medium term, but its impact may remain limited. In economic history, successful episodes of export-led growth have typically been accompanied by an undervalued exchange rate (see for example Rodrik, 2008). In addition to boosting the competitiveness of well-established exporting companies, a weak exchange rate could also make it easier for new exporters to enter the global market. This could be a potentially significant impact: in countries exhibiting significant export growth, new exporters have accounted for almost half of all growth in exports (Freund and Pierola, 2012). However, there is disagreement in the literature as to whether it is the undervalued exchange rate that is responsible for positive export performances or whether the undervalued rate and fast growth are joint symptoms of the same underlying reason.³ Furthermore, estimates based on figures from manufacturing (e.g. Campa, 2004; Das et al., 2007) suggest that a weaker exchange rate is limited in its ability to facilitate the entry of new exporters to markets. Accordingly,

² For a detailed analysis of the issue, see for example Gál (2007) and Martonosi (2013). The Competitiveness Research Network coordinated by the European Central Bank is currently assessing the competitiveness of European economies, including Hungary. The research relies on a wealth of product- and company-level data to obtain the most comprehensive picture about the competitiveness of individual economies and companies, and their impacts on economic output. For the first results, see for example ECB (2013).

³ For example, a high rate of savings may lead to undervaluation compared to the equilibrium exchange rate while also contributing to fast economic growth, cf. Berg and Miao 2010.

it is the improved productivity of companies, rather than an undervalued exchange rate, which may play a more decisive role in increasing the number of exporters. Productivity is nevertheless correlated with imports: estimates on Hungary (Halpern et al., 2011) indicate that, in the 1993–2002 period, one-third of the increase in productivity originated from imports of capital goods. As depreciation of the exchange rate makes it more expensive for future exporters to import capital goods, under extreme circumstances, it may even hinder their entry to export markets.

The exchange rate may have a relatively stronger impact on service export market shares. According to Eichengreen and Gupta (2012), the exchange rate has a more pronounced influence on exports in the service industries than on exports of goods. This impact could be particularly notable in modern services (e.g. communications, IT and administrative services). This could have several reasons, such as the lower import content of modern services, the lower costs of entry to export markets or the greater price elasticity of demand of these services. At present, the weight of these advanced sectors within Hungary's service exports is low; therefore, the export-inducing effects of the exchange rate have been limited so far. Looking forward, however, an exchange rate consistently weaker than before the crisis may boost exports of these services to a higher degree.

Finally, as the import content of Hungarian exports is high, there could be potential for growth by increasing the local value added content. Compared to other

Visegrád countries, the local value added content of exports in Hungary is low (Chart 14). This may suggest that Hungarian exporters have specialised in the production of components with lower profit margins (and therefore with a lower added value at current prices). In this case, the same composition effect may be reflected in the value added content, which keeps the export price index low. On the other hand, a low local added value content may also indicate competitiveness problems. It is possible that Hungarian suppliers have not been able to integrate properly into international production chains. On a similar note, it is also possible that exports taking place outside the production chains of multinational corporations are weaker than in other countries.

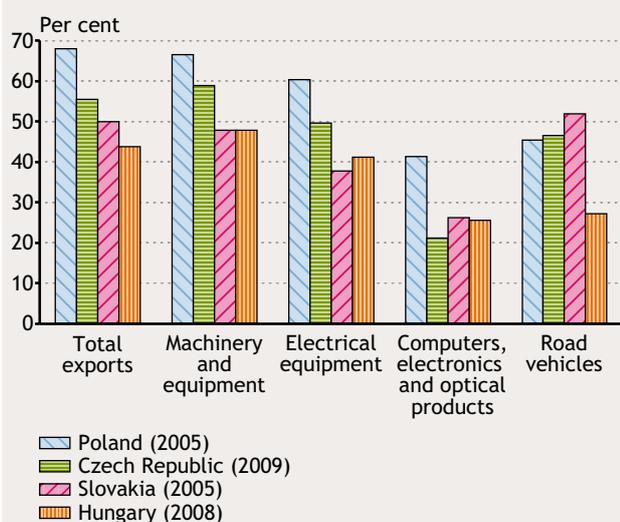
CONCLUSION

In this analysis, we examined developments in the balance of trade during the crisis. The substantial adjustments seen since then were due primarily to setbacks in domestic demand and the related import demand, triggered by the balance sheet adjustments of Hungarian economic agents. In light of the ongoing balance sheet adjustments and the increasing adoption of precautionary behaviour, imports for consumption and investment purposes may only grow at a moderate pace even over the medium term. Exports may nevertheless grow, which will also boost imports of intermediate products.

The volume of Hungary's goods exports is growing at a slower rate than before the crisis. This may be due in part to the fact that, on a global scale, certain large corporations which settled in Hungary during the 1990s saw their competitiveness weaken during the crisis, especially in the electronics sector. The decrease in their output has not yet been offset by the recent expansion in the automotive industry. At the same time, growth in Hungary's volume of service exports was uninterrupted even during the crisis, due in part to the fact that demand for these services is less sensitive to business cycles. The price index of exported goods and services was already at a rather low level before the crisis. While this can be explained in part by the geographical and product structures of Hungarian exports, the low export prices may also reflect lagging competitiveness.

Hungary's share in exports of goods has been decreasing since the crisis and its services export share is stagnating. Several cyclical factors have influenced the country's share of the export markets since the onset of the crisis. External demand has contracted considerably, which has hit Hungarian exports very hard, given the significant weight of semi-finished and intermediate products. Structural changes

Chart 14
Local value added content of exports



Note: Estimates based on input/output tables for the year shown in brackets after the name of each country.
Source: Eurostat, MNB calculations.

in industry may have also contributed to a temporary decline in Hungary's export market share. On the other hand, the country's real exchange rate has depreciated to a greater extent than in other European countries, which may have mitigated these effects.

The crisis has revealed that the previous growth model based on external borrowing is no longer sustainable. Therefore, future growth must not come at the price of significant deterioration in the external balance. As long-term growth prospects for Hungary's export markets are low, this might pose challenges to an export-led recovery. This obstacle may be overcome by having Hungary's exports realigned further towards faster-growing regions. Increasing Hungary's export market share may also be limited by structural factors, as reflected by the slow growth in export sector capacities. The exchange rate can play a limited role in increasing the country's market shares over the medium term, particularly in the service industry. Finally, improving the value added content of exports might also represent a potential for growth.

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