Karolina Ekholm: Do global imbalances pose a risk to the Swedish economy?

Speech by Ms Karolina Ekholm, Deputy Governor of the Sveriges Riksbank, at the Stockholm Chamber of Commerce, Stockholm, 13 June 2011.

*   *   *

The views expressed in this speech are my own and are not necessarily shared by the other members of the Riksbank's Executive Board or the staff of the Riksbank. I would like to thank Hanna Armelius for all her help in writing this speech.

Financial crises often come as a surprise. After the event, however, it may be a simple matter to look back and see all the flashing warning lights that should have signalled that things were about to go seriously wrong. I do not think many people realised how vulnerable the global financial system really was before the latest crisis, and consequently this crisis came as a surprise too. However, there were people who did see warning lights flashing. The problem was that they appeared to be flashing for a different type of crisis than the one that eventually arrived.

What we expected to arrive was an international crisis triggered by a collapse in the real value of the dollar.[1] The warning lights began flashing due to the major global imbalances arising from the fact that that some countries, above all the United States, had substantial and persistent current account deficits while others, for example China, had substantial and persistent current account surpluses. It appeared probable that the dollar would depreciate as it was difficult to believe that the United States would be able to maintain its deficit indefinitely,[2] and the real exchange rate normally weakens when a current account deficit needs to be corrected. And the dollar's status as a reserve currency throughout the world made the entire global economy sensitive to rapid changes in the dollar rate.

Although a dollar crisis did not occur, the analysis was reasonable. Substantial and persistent current account surpluses or deficits may be a sign of an underlying weakness or imbalance in the economy. Even though global imbalances have subsequently declined, this is due more to cyclical factors than to structural factors. They have also increased again recently in pace with the recovery of the global economy. The International Monetary Fund (IMF) continues to monitor the development of global imbalances and says that an adjustment of these imbalances is necessary if the recovery is to rest on stable foundations.[3] The association of developed countries and emerging economies that goes under the name G20 has therefore decided to perform thorough analyses when surpluses or deficits become substantial, in order to determine whether the country concerned should take measures. In the risk survey conducted by the Riksbank in May this year, in which participants on the Swedish fixed-income and foreign-exchange markets were asked to assess the risks to the Swedish financial system, global imbalances were seen as the greatest risk.

---

[1] See for example IMF, World Economic Outlook September 2006, Feldstein, 2007, Krugman, 2007. Obsfedt and Rogoff also warned about a substantial depreciation of the dollar as a result of global imbalances as early as 2005.

[2] Some observers claimed, however, that the deficit could be sustainable as to a certain extent it could consist of "dark matter" in the form of the value of the knowledge transferred from direct US investments abroad and the implicit insurance services provided to the rest of the world by US financial institutions, see Hausmann and Sturzenegger, 2005.

[3] IMF, WEO April 2011.

Today I intend to present my view of the global imbalances and their significance to the Swedish economy.[4] There is currently a widely-held view that the large current account surpluses and deficits make the global economy vulnerable, and that they should therefore be reduced. A move towards reduced surpluses and deficits could affect the Swedish economy in a way that has significance for monetary policy. Although it may be underlying imbalances that give rise to deficits and surpluses, we should not, in my view, set targets for how large these deficits and surpluses should be. Surpluses and deficits are to a certain extent a natural result of the different conditions in different countries and important mechanisms for redistributing capital in a way that makes the global economy more effective. Sweden, for example, has had a relatively large current account surplus for 15 years. It is currently larger than China's, calculated as a percentage of GDP. However, there is nothing to suggest that this surplus is the result of underlying imbalances in the Swedish economy. In the first instance, it is rather the consequence of a relatively high, but justified, level of saving. There are therefore, in my view, no strong reasons to expect this surplus to become a deficit within the near future – something which would typically happen through a strengthening of the real exchange rate. In my opinion, the current account surplus is thus not in itself an indication of a stronger krona.

What are the global imbalances and why have they arisen?

When we speak about global imbalances we usually mean a situation in which deficits and surpluses in the current accounts of different countries appear to be unsustainable in the long term.[5] A surplus means that the value of a country's total output exceeds the value of the country's total consumption. In the same way as a household whose income exceeds its expenditure will save the difference, a current account surplus constitutes a form of saving for a country. In effect, the current account reflects the difference between total saving in the country and domestic investment. A countries income, which consists of the value of the goods and services produced there, can be used for consumption or for saving. Saving can in turn be used for domestic investment and for investment abroad. If total saving is higher than domestic investment, some of the saving must be invested in foreign assets and thus used for investment abroad. If, on the other hand, total saving is not sufficient to cover domestic investment, the county will have to borrow from other countries (from private or public sources). This means that countries with a current account surplus can invest in or lend to others, while countries with a deficit borrow from abroad.

In theory, capital should flow from more developed countries to emerging economies, as the return on capital should be higher there. This is also largely what we saw in Europe before the crisis – countries in southern and eastern Europe had current account deficits, while countries like Germany and Sweden had surpluses. Figure 1 shows current accounts, private net capital and GDP growth for eastern and central Europe. Many of these relatively rapidly-growing countries experienced a rapid expansion of credit, which contributed to the build-up of substantial current account deficits in the years before the crisis.[6] These countries then experienced steep falls in GDP during the crisis, which raises some doubts about whether the capital flows were really motivated by high returns. At the global level, however, there are many cases where less-developed countries, such as China, are lending to developed countries, such as the United States and the United Kingdom.

---

[4] This speech is largely based on a paper I have written together with Henrik Braconier, see Braconier and Ekholm, 2011.

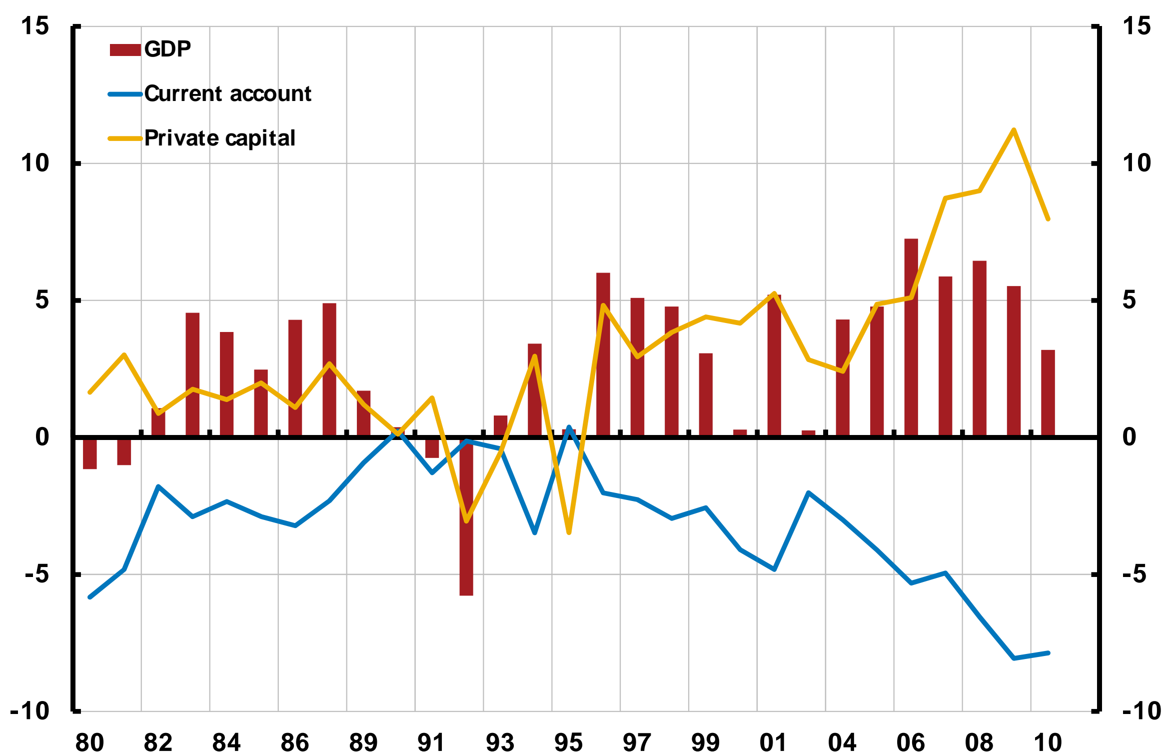
[5] The current account mainly consists of the difference between exports and imports of goods and services. Net capital income and various charges paid to and received from abroad are also included, but these components usually account for a much smaller part of the total than net exports.

[6] For a more detailed discussion, see Lane, 2010.

Figure 1

Current accounts, private net capital and GDP in eastern and central Europe

Percentage of GDP and annual percentage change



Note. Private capital is made up of direct private investment (net), private portfolio flows (net) and other private capital (net flows), expressed here as a share of GDP.

Source: The IMF

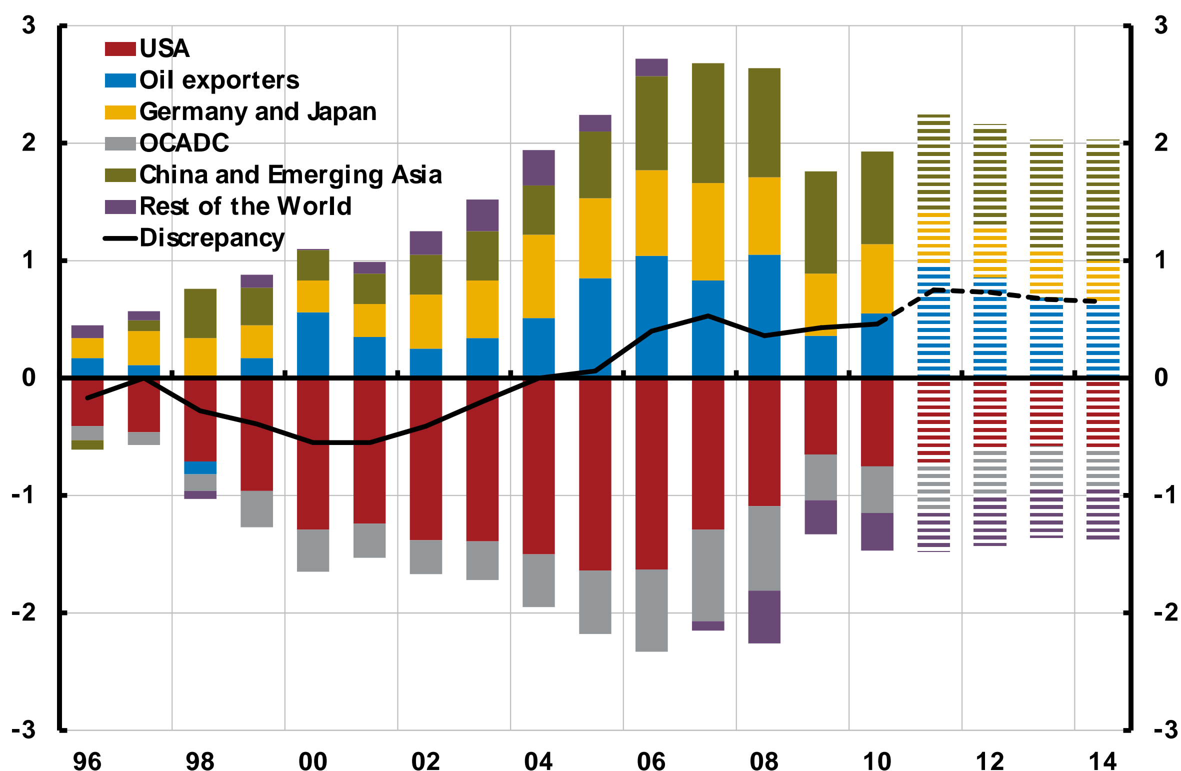
Global imbalances have increased since the deregulation of the capital markets at the end of the 1980s. One of the reasons for this is that countries with surpluses, such as China, have grown more rapidly than other countries. The higher rate of growth means that China's savings surplus (the difference between saving and investment) has increased as a percentage of global GDP. As the current accounts in the world must in theory total zero, this means that other countries must have increasing deficits to a corresponding degree.[7] On the deficit side, the Unites States stands out in that it alone has accounted for three-quarters of the world's total current account deficit. The United States has also been in deficit for a very long time, as much as 20 years. The countries that have a surplus, and that in practice thus lend money to the United States and other countries with deficits, have primarily been a number of oil-producing countries and China, but also include Japan, Germany and some other Asian countries (see Figure 2).

[7] There is however a discrepancy for the world as a whole, see Figure 2.

Figure 2

Current accounts around the world

Percentage of global GDP



Note. OCADC comprises Bulgaria, Croatia, Czech Republic, Rumania, Hungary, Ireland, Lithuania, Poland, Portugal, Estonia, Greece Spain, Turkey and the United Kingdom.

Source: IMF WEO April 2011

Current account surpluses or deficits are not bad in themselves and do not necessarily entail an unsustainable imbalance in the long term. In a globalised world they are a natural consequence of the different conditions in different countries in terms of factors such as demography, the degree of development and natural assets. A surplus may be justified by a country's need to have a high level of domestic saving – for example due to an ageing population – but also means that consumption will be held back, thus reducing the demand for other countries' exports. However, some underlying problems, such as a too low level of saving linked to a too optimistic view of the future, may be reflected in a weakening of the current account. This can also contribute to generally low interest rates which, in combination with other factors such as shortcomings in the supervision of the financial sector, generate the potential for a financial crisis of the type we have just experienced.

The factors that above all led the imbalances to grow in the years before the crisis were above all increased saving in the public sector and the corporate sector in China, together with increased saving in the oil-producing countries. Investment, on the other hand, remained at approximately the same level as previously.[8] It appears that the increase in saving exerted a worldwide downward pressure on long-term interest rates, which may have led investors to turn to higher-risk assets in the hunt for higher yields. In the United States, however, saving was low and investment was high partly because of the low interest rates. The low interest rates also stimulated the housing market which, in combination with decades of an

---

[8] China has had a very high investment ratio, but aggregate saving is even higher.

expansionary housing policy, led to the build-up of a bubble that eventually burst. Many observers therefore believe that the global imbalances were one of the causes of the financial crisis.[9]

There are better and worse reasons for current account surpluses and deficits

In the 1970s and 1980s, large current account surpluses or deficits were generally regarded as something negative. This period was marked by fixed exchange rates and by the regulation of capital flows across national borders. A deficit was often seen as a sign of an approaching devaluation. However, after the capital markets were deregulated and the exchange rates began to float to a greater extent, the view became more positive. It was assumed that changes in the current accounts reflected an optimal redistribution of the freely-moving capital. In the 2000s, however, we began to hear warnings that, above all, a rapid correction of the imbalances could have serious consequences for the value of the dollar, resulting in rising long-term interest rates, recession and a possible financial crisis.[10] The fact that capital flowed from emerging economies with great growth potential to the United States – where it was apparently used to a large extent to finance investment in housing – indicated that this was not a case of capital seeking a higher marginal return but rather of an excessive provision of credit.

At the same time as the US households became increasingly indebted, major currency reserves were built in, for example, China. It was at this time that Ben Bernanke spoke about a ”global saving glut”.[11] There were, however, good reasons why the level of saving was high in many Asian countries. Following the crisis in Asia in the early 1990s, the countries wanted to build up currency reserves to protect themselves against future stoppages in capital flows. Research indicates that countries that had reduced their vulnerability in this way were also hit less hard by the latest crisis.[12] Furthermore, there were, and still are, weaknesses in the social safety nets of several of these countries which mean that households have to save in order, for example, to be able to afford medical costs in the future. China also has an ageing population as a result of the one-child policy, which may also justify a high level of saving.

There have been claims from the United States, however, that the substantial current account surplus is largely due to the fact that China's currency is undervalued and thus indirectly favours Chinese exports and production that competes with imports. Other factors that may have contributed to the surplus is that the financial market in the United States is more highly developed than in many Asian countries, which has made it advantageous to invest savings there rather than in the domestic economy, and that companies in China pay out a relatively small part of the profits in dividends, which probably helps to boost saving but restrict consumption.[13]

Global imbalances and capital flows after the crisis

The crisis that actually arrived took an entirely different course than many expected. Although the United States was hit hard, the dollar was actually strengthened initially because investors fled from risk and US government securities were seen as a safe asset. The countries that had large current account deficits were, however, hit to a greater extent

---

[9] See for example Bernanke, 2009, White 2008 and King 2009.

[10] For example Krugman, 2007.

[11] See Bernanke, 2005.

[12] See Llaudes et al., 2010.

[13] See for example Caballero, 2006, Hoffman and Kuijs, 2006 and Bayoumi et al., 2010 for a discussion of this.

than countries with surpluses by major falls in housing prices.[14] This shows that current account deficits were often a reflection of underlying weaknesses, for example unsound lending practices and the build-up of debt.

However, the crisis itself and the subsequent recession reduced the imbalances, at least temporarily. The savings ratio increased in the United States at the same time as domestic demand increased more rapidly in China as a result of a fiscal policy stimulation package. The substantial fall in oil prices also played a role. The question is, however, whether the underlying causes of the imbalances have been corrected. The IMF believes that the imbalances will remain in place in the period ahead (see Figure 2). The oil price has also increased considerably during the last six months, which also indicates that the imbalances will remain. This is because this boosts net exports in oil-exporting countries, which tend to have current account surpluses, but increases costs for oil importers, who tend to have current account deficits.

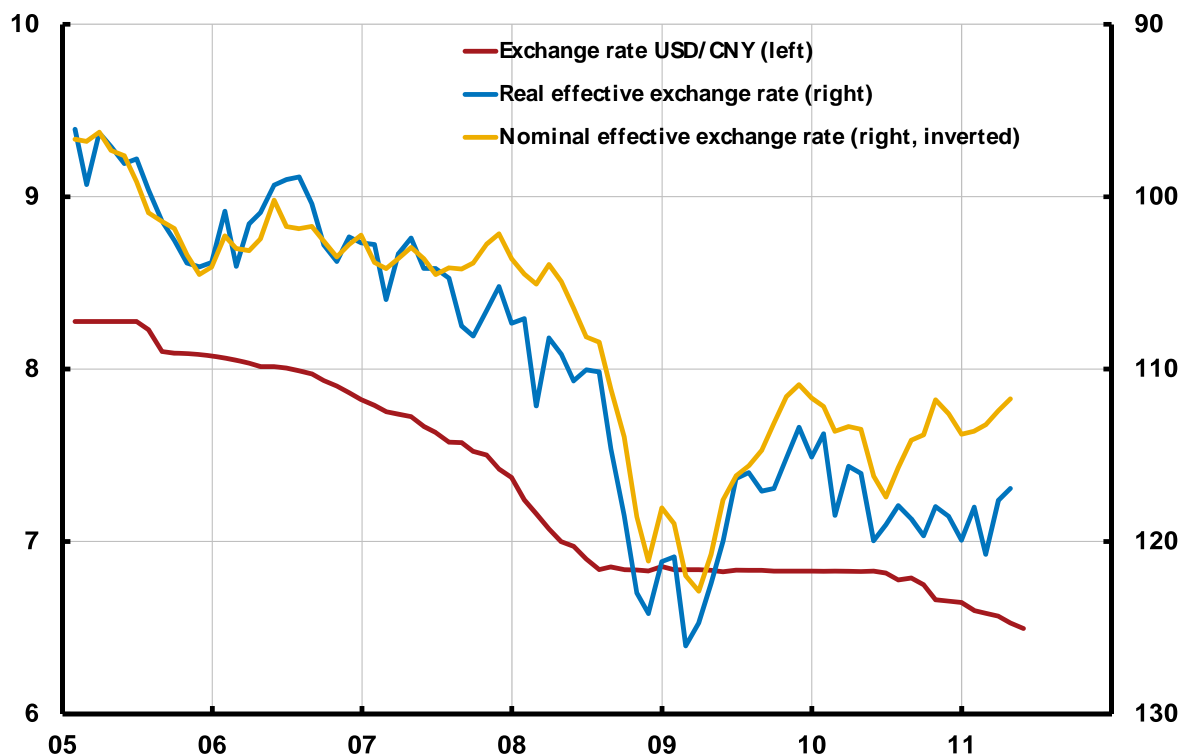
The G20 has pointed to the global imbalances as being an important factor for development in the global economy. One aspect that has been discussed is whether to adjust the nominal exchange rates in order to reduce the imbalances. If China, for example, maintains a fixed exchange rate against the dollar, this will make it possible to adjust the real exchange rate if China has a higher rate of inflation than the United States. However, this entails either a high rate of inflation in China, which the Chinese authorities are not likely to want, or to deflation in the United States, which the US authorities definitely do not want. In connection with the outbreak of the crisis, China stopped the appreciation of the renminbi that had been going on for several years and instead pegged the renminbi to the dollar until June last year. This meant that China's currency followed the depreciation of the dollar that came when the worst of the crisis was over and investors once again began to turn to higher-risk assets, for example by investing in assets in the emerging economies (Figure 3).

[14] My own calculations in accordance with the method used by the IMF to identify major falls in house prices in WEO in October 2009 (a fall in house prices is defined as major if a four-quarterly moving average of the annual growth in real house prices falls below –5 per cent) shows that 2/3 of the countries that experienced falls in house prices had large current account deficits while only ¼ those that did not experience price falls had deficits.

Figure 3

China's nominal exchange rate against the dollar and real and nominal effective exchange rate indices

USD/CNY and index 2005=100



Note. The effective exchange rate index measures how the currency relates to a basket of other currencies that are weighted in terms of their relative importance to trade. The real index is also adjusted for relative differences in the CPI. A downward movement in the figure entails a strengthening of the exchange rate.

Source: Reuters EcoWin

This put some emerging economies with a floating exchange rate in an awkward position as they did not want to lose too much competitiveness in relation to China while at the same time large capital inflows tended to strengthen their exchange rates. The G20 has now agreed that in certain situations it may be justified to introduce temporary capital regulations to protect against volatile capital flows. The view is that in normal cases a country should use monetary or fiscal policy, or tools for macro prudential supervision, but that in exceptional cases it may be appropriate to introduce measures to control capital. Work is underway to set up common guidelines.[15]

Why does Sweden have such a large current account surplus?

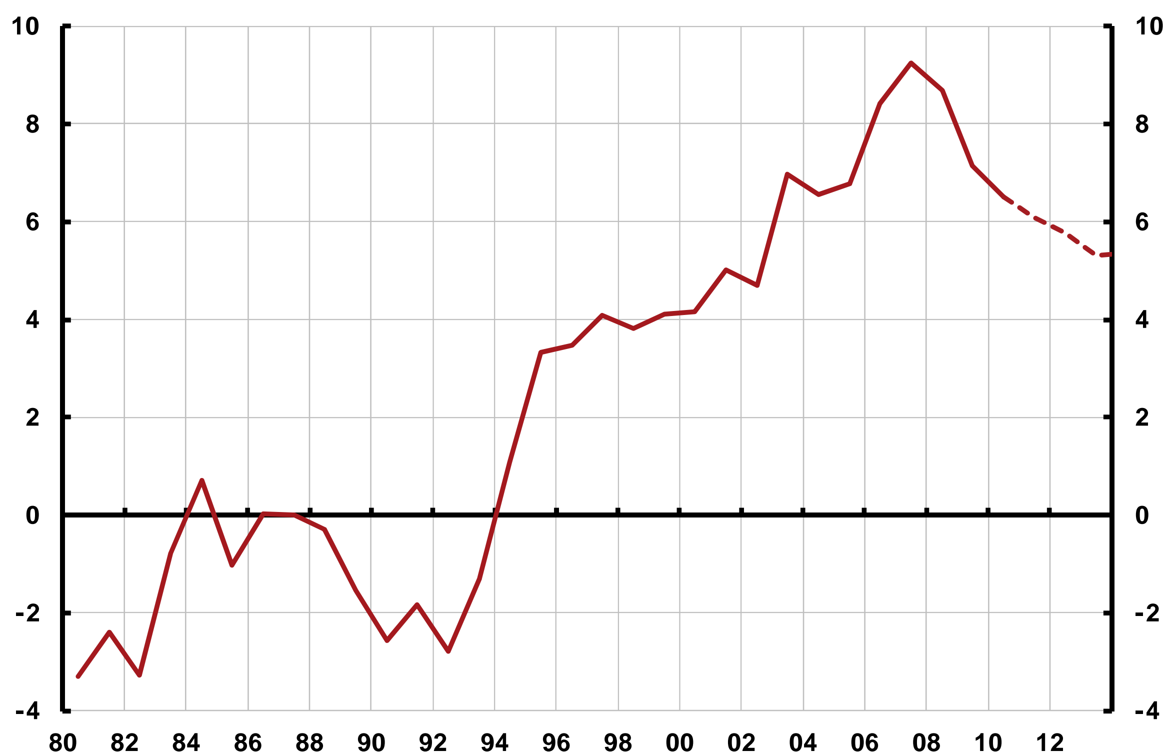
Prior to the crisis of the 1990s, it was usual for Sweden to have current account deficits for long periods of time (see Figure 4). After the crisis the krona weakened substantially at the same time as the deficit became a surplus. Since then, Sweden has not only had a surplus, it has had a very substantial and, to a certain extent, a growing surplus.

15 "The G20 Seoul summit leader's declaration November 11–12, 2010" and IMF Global Financial Stability Report, 2011.

Figure 4

Sweden's current account

Percentage of GDP



Source: The IMF

There are many possible explanations for the large surpluses. As I have already mentioned, the current account surplus is due to the fact that domestic saving is higher than domestic investment. In Sweden, household saving increased following the economic crisis in the early 1990s, which may partly be because the tax reforms implemented at that time made it much more profitable for the households to save. The fiscal policy framework also led to an increase in public sector net lending. The pension reform of 1994 was probably another factor that contributed to the increase in household saving as future pension payments were linked more strongly to how much was paid into the system. Sweden also has an ageing population so one could claim that saving should be high to enable us to cope with increasing pension costs in the future.[16] But this applies to most of our trading partners too. The age dependency ratio, that is the ratio between people of pensionable age and people of working age, is expected to increase in Sweden from the current level of 30 per cent to 45 per cent by 2050. For Europe as a whole, however, the age dependency ratio is expected to increase from 25 per cent to 52 per cent. At the same time, of all the countries in the OECD only Norway, which is an oil exporter and Switzerland have larger current account surpluses as a percentage of GDP than Sweden.[17]

The crisis of the 1990s perhaps meant that the Swedish public accepted the demand for a consolidation of public finances in a different way than in other countries. In many cases, these countries are being forced to conduct similar budget consolidation processes now

---

[16] This is a somewhat controversial claim, however, as future generations can be expected to have higher real incomes due to the growth of productivity in the economy.

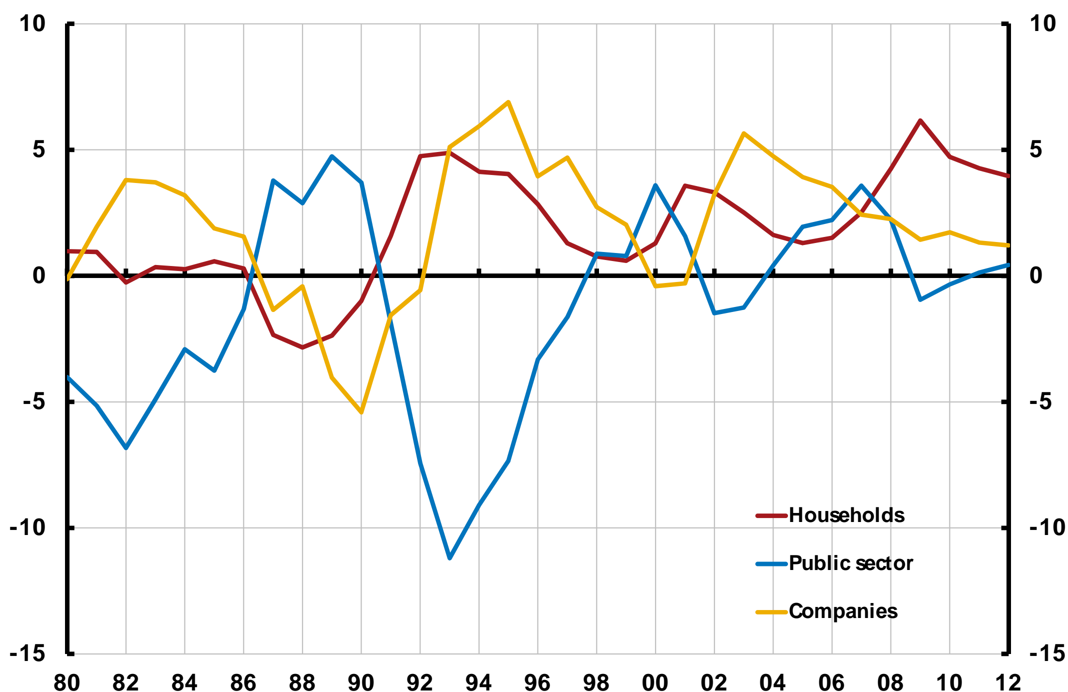
[17] The National Institute of Economic Research "Sparsamma hushåll har skapat ett stort överskott i den svenska bytesbalansen" ("Thrifty households have created a large surplus in Sweden's current account"). Article, 2011.

instead. If so, this suggests that the differences in saving compared to other countries will decline in the long term, and thus also the Swedish current account surplus. Another possible explanation for the high level of saving may be that the households underestimate how much is saved in the public pension system following the reform of the system.[18] If this is the case, our level of saving could be unjustifiably high and could remain so for some time to come. Figure 5 shows saving in different sectors in Sweden.

Figure 5

Finance balance in different sectors in Sweden

Percentage of GDP, current prices



Sources: Statistics Sweden and the National Institute of Economic Research

It may also be the case that the explanation has more to do with investment. Sweden has had a lower investment ratio than both the OECD and the EU averages since the 1990s. The difference is almost entirely explained, however, by the fact that investment in housing has been lower in Sweden (Figure 6). This has partly been an adjustment following the very high level of investment in housing in the 1980s, but also probably relates to changes in the regulation in connection with the tax reform of 1991 and the fact that a new housing finance system was introduced in 1993.[19] It is difficult to assess whether the level of investment in Sweden can be regarded as having being unjustifiably low during the period in which the current account surplus has grown. Above all it is difficult to find any kind of reform that would generally have been able to increase the return on Swedish investments in particular and thus have led to a higher investment ratio.

---

[18] The National Institute of Economic Research (2011) puts this forward as a possible explanation of the high level of household saving in Sweden.

[19] The so-called Danell system implied a quick winding down of interest subsidies compared to the previous rules.

Figure 6

Investment in the EU and Sweden

Percentage of GDP

Source: Statistics Sweden

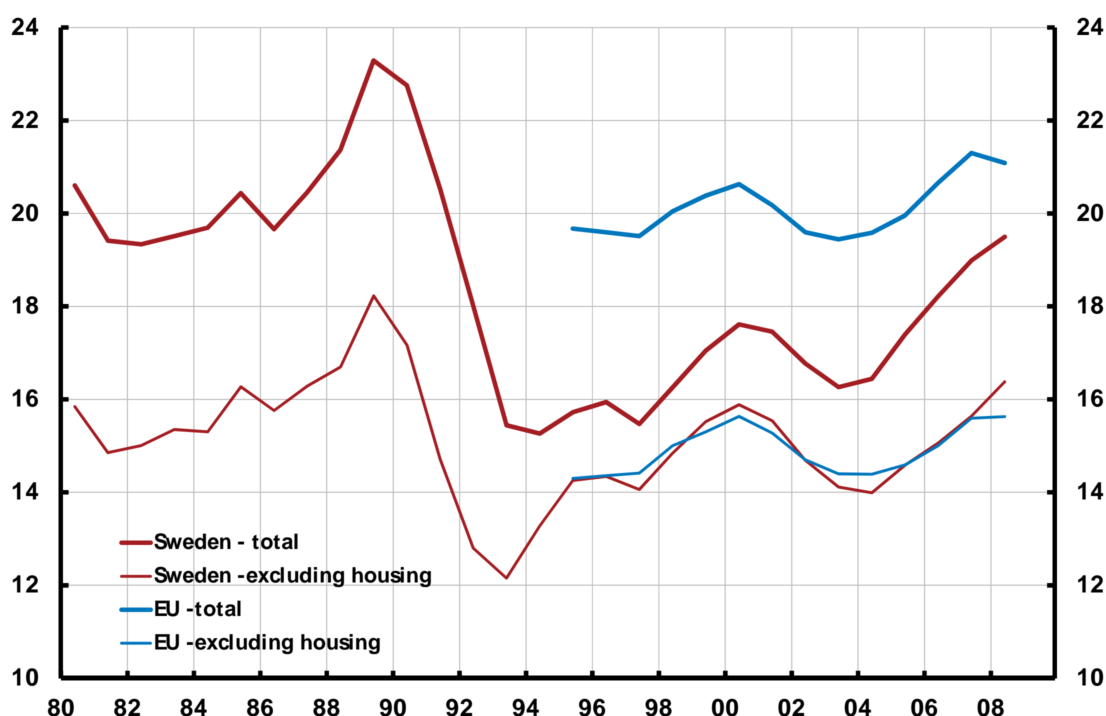
After the fixed exchange rate regime was abandoned in 1992, the krona depreciated by almost 30 per cent in trade-weighted terms. The krona has in principle not recovered from this weakening, although it has strengthened significantly recently. According to various statistical methods, there has been no clear trend for the real exchange rate since the mid-1990s (see Figure 7), which may indicate that the long-term value of the krona is close to the average during this period.[20] The period with large current account surpluses can thus not be associated with any tendency towards a real strengthening of the krona.

[20] Lagerwall and Nessén, 2009.

Figure 7

Real and nominal exchange rate, TCW index

Index, 18 November 1992=100



Source: The Riksbank

In this context it is worth noting that Sweden, despite so many years with a large current account surplus, is estimated to have a negative net external position.[21] In other words, the value of Swedish assets abroad is lower than the total value of Swedish liabilities abroad. Last year, Swedish liabilities abroad were 2.5 times greater than GDP. The fact that stocks on both the asset and liability sides are large means that variations in the value of these stocks are important to the development of the external position. The current account on the other hand, which constitutes a flow that adds to or subtracts from these stocks, is less important.[22] Changes in the valuation of the assets and liabilities are affected to a great extent by changes in the exchange rate.[23] There are, however, considerable shortcomings in the statistics in this area. The values of some types of asset are definitely underestimated, as there is a lack of statistics on the Swedish households' direct investments abroad. The net position can also be measured in different ways depending on whether direct investments are accounted at market value or at book or nominal value. However, both methods give a net position that is much lower than that given by the accumulated current account surplus (see Figure 8).

---

[21] The nominal external position was –22 per cent of GDP in 2010, while the market-value net position was +4 per cent of GDP according to statistics from Statistics Sweden.

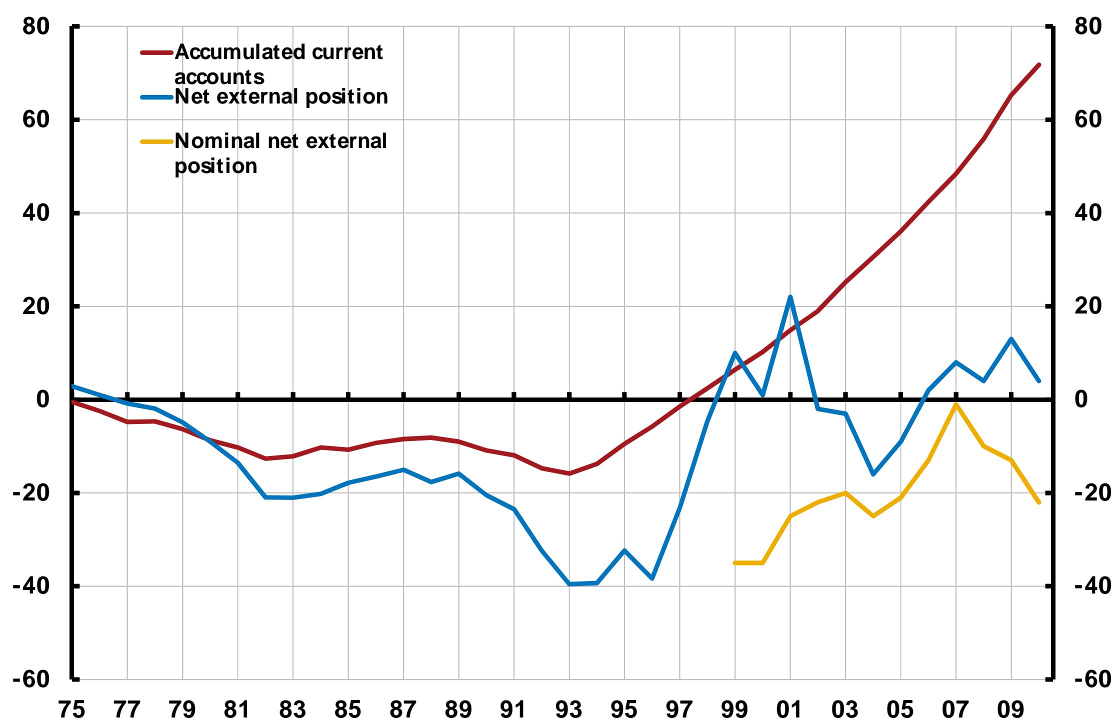
[22] This is also found by Lane (2006) in an analysis of the Swedish exchange rate.

[23] For a more detailed analysis of the external position see Blomberg and Falk, 2006.

Figure 8

Sweden's net external position and accumulated current accounts

Percentage of GDP



Sources: Statistics Sweden and the Riksbank

If it is the case that Sweden has no particularly large net claim internationally then this will have some significance for the prospects for the real exchange rate. In theory, countries with a strong external position should in the long term experience appreciating real exchange rates, and vice versa. There is also empirical support for the link between the net position and real exchange rates when studying different countries.[24] With a net claim close to zero one would not necessarily expect any strengthening of the real exchange rate despite a large current account surplus. The fact that Sweden's external position appears to be close to zero suggests that there is no need for the real exchange rate for the krona to move in any particular direction for this reason. Other factors also affect the real exchange rate, for example relative GDP growth, relative inflation and the terms of trade. In our latest forecasts, however, none of these factors has suggested that there will be any significant changes in the exchange rate for the krona in the period ahead.[25]

The krona does not need to be strengthened, but Sweden is still affected by the global imbalances

Despite the fact that Sweden has had a substantial current account surplus for 15 years there is nothing to suggest that this surplus must become a deficit within the near future to

[24] See for example Lane and Milesi-Ferretti, 2002.

[25] For a more detailed discussion of the long-term development of the krona see Lagerwall and Nessén, 2009.

prevent Sweden from accumulating a large net claim in relation to the rest of the world. Nor is there anything to suggest that the Swedish krona should appreciate in real terms to enable a shift in the current account from a surplus to a deficit. As Sweden, as far as we can see, does not have any significant positive net external position, there is nothing to say that the real exchange rate needs to be strengthened for reasons relating to the net position.

A general reduction in the global imbalances could, however, have consequences for Sweden. Apart from the fact that this would reduce the risk of a new international crisis, it would mean that a larger part of global demand would come from those countries that currently have a surplus, for example China, and a smaller part from the United States. It is difficult to know, however, what impact this would have on the demand for Swedish export goods. To the extent that Chinese households and companies demand different types of goods than households and companies in the United States, this largely depends on whether Swedish companies are flexible enough to adapt their production to meet changes in the pattern of demand. The Asian countries that have surpluses are a long way from Sweden and geo-graphical distance is a factor that has a clear negative link to the propensity of countries to trade with each other.[26] However, there are countries with substantial surpluses that are close to Sweden, for example Germany. It is therefore not obvious what the overall impact would be on the demand for Swedish exports if there was a general reduction in current account surpluses and deficits. It is also conceivable that the United States would import more investment goods if its current account deficit decreased, as this would probably entail an expansion of the export-oriented industrial sector at the expense of the more domestically-oriented service sector. This in turn would entail an increased demand for the type of industrial goods that Sweden exports quite a lot of.

Reduced global imbalances could also entail rising long-term interest rates globally when the Asian countries with surpluses cut back their purchases of US government securities. This would probably also entail a weaker real exchange rate for the dollar. However, it is difficult to assess the consequences of this for the Swedish economy.

There will always be current account surpluses and deficits as conditions differ from country to country. The fact that capital flows to rapidly-developing economies, where the return on capital is relatively high, also entails a redistribution of capital that makes the global economy more effective. Therefore, in my view, we should not set targets for the size of current account surpluses or deficits. Sweden can be seen as an example of the fact that a large surplus is not necessarily an expression of an underlying imbalance in the economy.

However, significant deviations in the current account may be a sign that something is not quite right in the economy. They can also interact with other weaknesses, for example weaknesses in the financial system, as was the case before the financial crisis. It is therefore important to continue monitoring the development of global imbalances and to understand what lies behind major deviations. Although considerable improvements in the regulation of the financial markets are underway, there is always a risk that new weakness will develop that we do not see until it is too late. Moreover, the fact that the crisis that arrived at the end of the 2000s was not the one that was expected does not mean that the expected crisis will not arrive at all. There is still a risk of a rapid correction of the global imbalances. This could lead to major problems for the global economy, which has hardly recovered yet from the crisis that we have just experienced.

---

[26] See for example Krugman and Obstfeld, 2009.

References

Bayoumi, T. Tong, H. and Wei, S-J. 2010. “The Chinese corporate savings puzzle: a firm-level cross-country perspective”. IMF Working Paper no..

Bernanke, B. 2005. “The Global Saving Glut and the U.S. Current Account Deficit”, Sandridge Lecture, Richmond, Virginia, March 10.

Bernanke, B. 2009. ”Financial Reform to Address Systemic Risk”, Speech at the Council on Foreign Relations, Washington, DC, March 10.

Blomberg, G. and Falk, M. “How do large current-account surpluses co-exist with a weak international investment position?” Sveriges Riksbank Economic Review 2006:1

Braconier, H. and Ekholm, K. 2011. ”Global imbalances and their consequences for the Swedish economy”, in ”Den orädde debattören. En vänbok till Bo Södersten” ("The fearless debater. A friend book Bo Södersten "), Mats Lundahl, Ekerlids Förlag, 2011

Caballero, R. J. 2006. ”On the Macroeconomics of Asset Shortages”, NBER Working Paper No. 12753.

Feldstein, M. 2007. ”Why is the dollar so high?”, NBER Working Paper 13114.

Hausmann, R. and Sturzenegger, F. 2005. “U.S. and Global Imbalances: Can Dark Matter Prevent A Big Bang”, Working Paper, Kennedy School of Government, Harvard University, November.

Hofmann, B. and Kuijs, L. 2006. “Profits Drive China’s Boom”, *Far Eastern Economic Review*, 169(8): 39–43.

National Institute of Economic Research 2011. “Sparsamma hushåll har skapat ett stort överskott i den svenska bytesbalansen” (“Thrifty households have created a large surplus in Sweden’s current account”). The Swedish Economy, article.

King, M. 2009. Speech given to the CBI Dinner, Nottingham, January 20.

Krugman, P. R. 2007. ”Will there be a dollar crisis?”, *Economic Policy* July pp. 435–467.

Krugman, P. R. and Obstfeld, M. 2009. International Economics: Theory and Practice, eighth edition. Addison-Wesley, Boston.

Lagerwall, B. and Nessén, M. 2009. ”The long-term development of the krona”. Economic Commentary no. 6, 2009, Sveriges Riksbank.

Lane, P.R. 2006. “The Swedish external position and the krona”. Sveriges Riksbank Working Paper Series 200.

Lane, P. R. 2010. “A European perspective on external imbalances”. SIEPS 2010:5.

Lane, P.R. and Milesi-Ferretti, G.M. 2002. ”External wealth, the trade balance, and the real exchange rate”. *European Economic Review* 46.

Llaudes, R. Salman, F. and Chivakul, M. 2010. ”The impact of the great recession on emerging markets”. IMF WP 10/237.

Obstfeld, M. and Rogoff, K. 2005. “Global Current Account Imbalances and

Exchange Rate Adjustments.” *Brookings Papers on Economic Activity* 1: 67–146.

White, W. R. 2008. “Past financial crises, the current financial turmoil, and the need for a new macrofinancial stability framework”, Speech at the LSE Financial Markets Group and Deutsche Bank Conference "The structure of regulation: lessons from the crisis of 2007", London, March 3.