



**External Balance Sheets of  
Emerging Economies:  
Low-Yielding Assets, High-Yielding Liabilities**

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## EXTERNAL BALANCE SHEETS OF EMERGING ECONOMIES

### *Low-Yielding Assets, High-Yielding Liabilities*

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The new millennium has witnessed a rapid expansion of external balance sheets and significant changes in the capital, currency and sectoral compositions of foreign assets and liabilities of emerging economies. While foreign lending and investment in these economies have reached unprecedented levels, even deficit emerging economies have acquired sizeable amounts of foreign assets thanks to large inflows of capital. These changes in the size, composition and leverage of external balance sheets have created new channels of transmission of global financial shocks through their effects on international capital flows. They have also amplified the susceptibility of outstanding stocks of foreign assets and liabilities and net external positions of emerging economies to financial conditions in major reserve-currency countries, resulting in large capital gains and losses particularly at times of severe international financial instability. Since a very large proportion of external assets and liabilities of emerging economies are with advanced economies, such capital gains and losses entail transfers of wealth between these economies. Furthermore, emerging economies run deficits on net international investment income not only because their external liabilities exceed assets, but also because the return on their foreign assets is lower than the return on their liabilities. Even some emerging economies with positive net foreign assets positions such as China are in deficit in net international investment income. By contrast, the return differential is positive in all major advanced economies, including those with negative net foreign asset positions such as the US and the UK. This disparity between return differentials of foreign assets and liabilities of emerging and advanced economies, including capital gains and losses, results in a transfer of resources from the former to the latter, averaged at some 2.7 per cent of GDP of emerging economies since the beginning of the new century. To avoid such transfers, they need not only improve their net financial asset positions but also change the nature and composition of their external assets and liabilities. Capital account policies can play an important role in these respects.

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## A. Introduction

The external balance sheets of emerging economies have expanded rapidly since the beginning of the new millennium, thanks to exceptionally loose monetary policies in advanced economies and financial liberalization in emerging economies. Volumes of their gross foreign assets and liabilities have increased significantly not only in absolute terms but also as a proportion of GDP. While foreign lending and investment in these economies have expanded rapidly, many of them have also acquired and accumulated foreign assets from current account surpluses and, more often, from inflows of capital, and have become important investors in markets abroad in various forms.

Rapid growth of external balance sheets of emerging economies has also been accompanied by significant changes in their structure, notably currency, instrument (capital) and sectoral compositions of gross assets and liabilities. There has been a widespread shift from debt to equity liabilities as domestic stock markets were opened and foreign direct investment (FDI) regimes were liberalized. In debt, bond issuance has grown relative to international bank loans. In several emerging economies the share of local-currency in sovereign external debt has increased as governments opened domestic debt markets to non-residents and increasingly resorted to local-currency debt issuance in international markets. A large proportion of external debt liabilities in dollars has come to be held by private corporations as a result of capital account liberalizations for residents.

As examined in some detail in Akyüz (2017), while addressing certain problems encountered in previous episodes of crisis, these policies and structural changes have created new channels of transmission of financial shocks through international capital flows. They have also amplified the susceptibility of gross external assets and liabilities and net foreign assets (NFA) positions to variations in assets prices and exchange rates, thus resulting in considerable capital gains and losses particularly at times of severe instability in international financial markets. These imply that changes in interest rates, asset prices and exchange rates in major reserve-currency countries impinge on economic and financial conditions in emerging economies not only through their impact on international capital *flows*, but also by altering the value of their *stocks* gross international assets and liabilities.

With the expansion of gross foreign assets and liabilities, investment income receipts and payments have gained importance in the current account. Generally, emerging economies run deficits on net international investment income not only because their external liabilities exceed their assets, but also because the rate of return on their foreign assets falls short of the rate of return on their foreign liabilities. Even some emerging economies with positive NFA positions such as China and Russia are in red in net international investment income balance. By contrast, the return differential is positive in all advanced economies examined here. The US registers the highest return differential and runs a surplus on its international investment income balance despite a large negative NFA position.

A very large proportion of external liabilities of emerging economies are held as external assets by advanced economies, and an equally large proportion of external assets held by emerging economies are claims on advanced economies. Thus, valuation changes generated by changes in asset prices and exchange rates entail large transfers of wealth between emerging and advanced economies. In the same vein, the disparity between return differentials of foreign assets and liabilities held by emerging and advanced economies implies transfer of resources from the former to the latter by around 2.7 per cent of GDP of emerging economies.

Assessment of implications of deepened global financial integration of emerging economies for external sustainability and vulnerability calls for a full account of the size, composition and leverage of external balance sheets. Until recently, external balance sheets received little attention and very little was known about the size and structure of external assets and liabilities of emerging economies. In the analysis of external sustainability and vulnerability to shocks, attention was focussed mainly on net capital flows, current account balances and net foreign debt positions, particularly the adequacy of international reserve assets in covering short-term debt liabilities. However, it is now increasingly recognized that the structure and leverage of external balance sheets are more important determinants of potential vulnerabilities than these traditional indicators (Allen *et al.* 2002, Al-Saffar *et al.* 2013; Joyce 2015). How external financial shocks are transmitted to an economy and whether or not they are amplified depends on the structure of its external balance sheet. When there are large discrepancies in net foreign asset (NFA) positions of different sectors or in the

presence of significant currency, maturity or liquidity mismatches between gross external assets and liabilities, even countries with strong reserve and net foreign assets positions and current account surpluses can face problems of illiquidity

There has also been a considerable progress in the provision of data and information on the size and structure of external assets and liabilities. At the beginning of the millennium, the IMF data on international investment positions (IIP) covered only a few emerging economies. Since then the coverage increased considerably as more and more countries reported their IIP. However, no common standards are observed for the valuation of external assets and liabilities in the data reported by the countries, notably for equity (IMF 2003). In this respect a major contribution was made by Lane and Milesi-Ferretti (2001) who provided estimates for external portfolios of 69 countries over 1970-1998, including stocks of equity and foreign direct investment adjusted for changes in market prices and exchange rates. This was extended to 145 countries from 1970 to 2004 (Lane and Milesi-Ferretti 2007a), and then to 210 countries until 2015 (Lane and Milesi-Ferretti 2017).

There are still important shortcomings in the data and information regarding the external balance sheets of emerging economies. Assets and liabilities and earnings and payments are not always correctly reported, investment and related income statistics are limited to very broad categories such as debt and equity, and little information is available on the currency, geographical and sectoral compositions and maturity profiles of international assets and liabilities. Domestically issued debt held by non-residents is not always included in external debt statistics of emerging economies, resulting in underestimation of their external debt.<sup>2</sup> Again, non-resident holdings of equities as reported by the IMF's CIPS database underestimate foreign participation in equity markets and figures from national sources for some countries suggest much higher levels of holding (Akyüz 2017). There are also important lags in the availability of different categories of assets and liabilities that constitute external balance sheets. Consequently, macroeconomic analysts and rating

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<sup>2</sup> For instance, when Bank Negara of Malaysia started using a new definition of external debt recommended by the Guide for Compilers prepared by the IMF and eight other organizations in the Inter-Agency Task Force on Finance Statistics in 2013, including all debt owed to non-residents irrespective of currency and place of issue, total external debt of Malaysia went up from 30.5 per cent of GDP to over 60 per cent (BNM 2014).

agencies often rely on readily available data instead of external balance sheets in assessing external vulnerability and creditworthiness. Despite these shortcomings, however, available data and information on the external balance sheets of major emerging economies and various factors affecting international assets and liabilities provide an adequate basis for an examination of the evolution of their size and structure, interaction with the balance-of-payments, and implications for external sustainability.

This is what this paper sets out to do. It aims at examining the size and structure of external balance sheets of emerging economies, the impact of fluctuations in international financial and currency markets on NFA positions and wealth transfers between emerging and advanced economies, and income streams generated by external assets and liabilities. It focusses on emerging economies members to the group of 20; namely, Argentina, Brazil, China, India, Indonesia, Mexico, Russia, South Africa and Turkey. For comparison purposes, four major advanced economy members of G20 are also chosen – Germany, Japan, the United Kingdom and the United States. These countries together account for around two-thirds of world income.

The next section will discuss the determinants of gross foreign assets and liabilities and NFA positions, including current account balances and valuation changes resulting from variations in asset prices and exchange rates. This is followed by an examination of expansion of external balance sheets, changes in NFA positions, and capital gains and losses of G20 emerging and advanced economies in the new millennium. Section D will examine the instrument and currency compositions of external balance sheets as key determinants of the incidence of capital gains and losses resulting from changes in asset prices and exchange rates. Section E will turn to transfers of wealth between emerging and advanced economies brought about by such changes. Section F will examine income streams generated by external assets and liabilities and discuss why emerging economies earn lower returns on their assets than they pay on their liabilities in comparison with advanced economies.

## **B. External balance sheets, current account balances and valuation changes**

In discussions on external assets and liabilities, attention is often focussed on current account balances. A country running a current account surplus is expected to improve its NFA position by adding to its external assets or reducing external liabilities. Similarly, a deficit country would see its gross liabilities rise or its gross assets fall, thereby experiencing a deterioration in its NFA position.

However, in a world of massive capital flows and highly unstable asset prices and exchange rates, the current account balance is not the only determinant of gross external assets and liabilities and the NFA position of an economy. Autonomous capital flows can significantly add to gross foreign assets and liabilities independent of current account balances. Likewise, swings in asset prices and exchange rates can alter the value of outstanding stock of gross external assets and liabilities and the NFA position regardless of whether the current account is in surplus or deficit.

Changes in gross assets and liabilities are often interrelated. Capital inflows by non-residents do not only add to gross external liabilities but could also allow acquisition of foreign assets. A country can accumulate gross foreign assets without running a current account surplus simply by drawing on capital inflows by non-residents; that is, its gross assets could increase simultaneously with its gross liabilities. If it is running a current account surplus, it would add to its gross foreign assets not only by the amount of the surplus, but also by the amount of non-resident capital inflows. Even a country running current account deficits can add to its gross foreign assets if net capital inflows by non-residents exceed the amount needed to meet the current account deficit. Thus, thanks to autonomous capital flows, external balance sheets can grow much faster than what could be expected on the basis of current account balances.

While the current account balance is an important determinant of the NFA position, a number of factors intervene in the relation between the two. The first is net errors and omissions in the balance of payments. It is not always easy to determine whether this represents unrecorded current transactions or unrecorded capital transactions. In the

estimates of gross assets and liabilities of emerging and developing countries, net errors and omissions are usually treated as unrecorded capital flows, or more specifically changes in the stock of debt assets held abroad by domestic residents. When they indicate unrecorded capital inflows, they are treated as a decline in the stock of debt assets held abroad by residents. When they show unrecorded outflows, they are registered as an increase in debt assets held abroad by residents.<sup>3</sup>

A second complication arises from unrequited capital transfers and debt reductions enjoyed without additions to foreign liabilities in other forms such as equities in debt-equity swaps. Capital transfers can finance current account deficits without a commensurate increase in foreign liabilities or a decline in net foreign assets. A country benefiting from debt relief could see its external liabilities fall even when it runs a current account deficit. Indeed, this is often the case since debt reliefs and cancellations often happen in countries with unsustainable balance of payment positions.

More importantly, outstanding stock of gross external assets and liabilities and NFA positions are highly susceptible to variations in market valuation of underlying financial and real instruments; that is, capital gains and losses. These gains and losses result from changes in asset prices and exchange rates. For debt assets and liabilities valuation changes occur primarily from exchange rate changes while price changes can be equally and even more important for valuation changes in equity assets and liabilities.

In the estimation of gross assets and liabilities, stock market values are often used for the valuation of portfolio equity assets and liabilities while different methods are employed to value FDI stocks according to data availability, including historical cost, book-value, replacement cost and market value – something that makes cross-country comparison difficult (IMF 2003). At times of sustained booms or busts in asset prices, gains and losses on outstanding stocks can account for an important part of changes in gross asset and liabilities.

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<sup>3</sup> On the methodology and assumptions used for the estimation of gross foreign asset and liabilities positions, see Lane and Milesi-Ferretti (2001 and 2007a).



For instance, it is found that a relatively large part of the increase in gross portfolio equity liabilities of emerging economies from the early 2000s until 2013 was due to price increases of stocks held by non-residents (Akyüz 2017).

Exchange rate movements also result in valuation changes in NFA positions since gross foreign assets and liabilities often include instruments denominated in several currencies in different proportions. Changes in the exchange rate of the domestic currency vis-à-vis foreign currencies can lead to capital gains or losses depending on the currency composition of gross assets and liabilities. When expressed as a proportion of GDP, gross external asset and liabilities and the NFA position of an economy can also manifest significant variations because of changes in exchange rates and asset prices relative to prices of goods and services that comprise GDP.

Capital gains and losses also arise from changes of exchange rates among third currencies, notably the reserve currencies. A general weakening (strengthening) of the dollar would raise (lower) the dollar values of gross external assets and liabilities denominated in non-dollar reserve currencies. It can also affect the NFA position unless gross foreign assets and liabilities have similar currency compositions. Exchange rate changes among reserve currencies can have a particularly strong effect on dollar values of gross external liabilities and NFA positions of emerging economies indebted in non-dollar reserve currencies.

Valuation changes resulting from large shifts in asset prices and exchange rates can have a significant impact on the NFA position compared to changes resulting from current account balances and new flows of capital. A country that runs a current account deficit could see its NFA position improve if the value of stock of foreign assets increases relative to liabilities as a result of asset price and exchange rate changes. The same could happen if it receives large amounts of capital transfers or enjoys a sizeable debt relief. In the same vein, current account surpluses are not always associated with improvements in NFA positions if, simultaneously, existing stock of assets goes down in value relative to liabilities.

These two main sources of capital gains and losses, exchange rate and assets price changes, are not always independent of each other. In practice they tend to be highly

correlated.<sup>4</sup> In emerging economies, they are both strongly influenced by capital flows and their valuation effects tend to reinforce each other. A surge in portfolio inflows may not only create bubbles in the equity market but can also exert upward pressures on the currency, thereby raising the dollar value of local-currency equity liabilities and creating capital gains for their holders. In the same vein, sharp currency declines in emerging economies are often accompanied by strong downward movements in asset prices.

It should be noted that capital gains and losses due to valuation changes are generally accounting concepts rather than gains and losses that could be expected to be fully realized in the event of liquidation of claims; that is, they are notional rather than real. This is particularly the case for capital gains and losses on local-currency external liabilities in emerging economies. Capital losses on such liabilities generated by domestic asset price bubbles and exchange rate appreciations are unlikely to be fully incurred in the event of a generalized exit of non-residents from deposit, debt and equity markets. For, in such an event, assets prices would fall and the currency would come under downward pressure. An important part of the consequent losses would fall on non-resident holders of local assets, mitigating the adverse macroeconomic impact of a widespread liquidation of local assets by non-residents.

This is much less so for gross foreign assets held by emerging economies, except when their holdings account for an important share of total global holdings, such as the Chinese international reserves in dollars. Because of the relatively small size of holdings, the sale of foreign assets by emerging economies would not have a significant impact on their prices or foreign exchange rates so that recorded capital gains on such assets can largely be realized. In other words, the markets for gross external assets of emerging economies, mainly the asset and currency markets in advanced economies, are much more liquid than the markets for their liabilities. This is another instance of “the importance of being unimportant” in

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<sup>4</sup> See Lane and Shambaugh (2010) for a discussion of correlation between exchange rates and asset prices in the context of impact of valuation changes on foreign asset positions.

international economics.<sup>5</sup> A generalized exit by holders of liabilities of emerging economies would exert a strong downward pressure on asset prices and exchange rates but this would not be the case for the liquidation of foreign assets held by emerging economies.

### C. Expansion of external balance sheets

The new millennium has witnessed a rapid expansion of external balance sheets of emerging economies. In G20 emerging economies taken together, gross external assets and liabilities increased not only in absolute amounts but also as a proportion of GDP (Charts 1 and 2). Close to 90 per cent of gross external assets and over 80 per cent of gross external liabilities outstanding in 2016 was accumulated after 2000. Gross external assets as a proportion of GDP increased in all G20 emerging economies while a large majority of them also saw a sizeable increase in their gross external liabilities as a proportion of GDP (Table 1).

For most emerging economies, notably those with persistent current account deficits, the surge in non-resident capital inflows that started in the early 2000s is a major reason for the rapid expansion of external balance sheets (Chart 3). This was the third post-war boom in international capital flows to emerging economies, triggered in large part by highly accommodating monetary policies and rapid expansion of liquidity in advanced economies, notably the US – the policies which culminated in the subprime crisis in the US and the debt crisis in the Eurozone. It surpassed the previous post-war booms in capital inflows in the 1970s and 1990s not only in absolute terms but also as a percentage of GDP of the recipient countries (Akyüz 2012; Chapter 4). The boom continued until the subprime crisis in the US when the collapse of Lehman Brothers in 2008 led to a sharp decline. However, the recovery was quick thanks to policies of zero and negative interest rates and quantitative easing pursued in the US, Europe and elsewhere in advanced economies in response to the global crisis. Although moderated as a proportion of GDP, capital inflows stayed up until 2015. They

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<sup>5</sup> The well-known case of “the importance of being unimportant” is in international trade, first suggested by Kindleberger (1968). It postulates that small economies cannot have much influence on world prices of goods they trade, and they benefit a lot more from trade than larger economies.

fell sharply in 2015 but were still at positive levels, followed by a rapid recovery over 2016-2017. Indeed, in aggregate, non-resident capital inflows to emerging economies have never been negative since the 1980s, implying a constant increase in their gross external liabilities (Akyüz and Yu 2017).

In the nine G20 emerging economies taken together, at the beginning of the millennium gross external liabilities exceeded gross external assets by around 60 per cent and the NFA position was negative at some 18 per cent of GDP. During 2000-2016 their gross assets increased by eightfold while gross liabilities by fivefold. Consequently, by 2016 assets almost matched liabilities (Chart 2).

The main reason for the improvement in the NFA position of these countries is the current account surplus they collectively ran in almost every year during 2000-2016, by a cumulative amount of over \$2 trillion (Table 2). About three quarters of this was generated before the 2008 crisis when many exporters of commodities ran surpluses thanks to the commodity price boom and China's surplus reached historical highs. Consequently, until the 2008 global crisis, gross foreign assets of these economies increased much faster than their gross foreign liabilities, and their NFA position became positive in 2008. After the crisis current accounts deteriorated in almost all G20 emerging economies and growth of foreign asset slowed compared to pre-crisis years while liabilities started to grow faster.

The improvement in the NFA position of G20 emerging economies in dollar terms during 2000-2016 is under 10 per cent of the cumulative current account surplus generated by them over the same period (Table 2). The difference is due to capital losses on gross assets and liabilities resulting from changes in asset prices and exchange rates and other factors such as capital transfers and debt relief, estimated in the way described in the Annex to this paper. Much of these capital losses were incurred by two major surplus economies, China and Russia, while many other G20 emerging economies enjoyed capital gains.

China had a cumulative current account surplus of over \$3 trillion during 2000-2016 while its gross foreign assets increased by over \$6 trillion. This means that it accumulated foreign assets partly from current account surpluses and partly from capital inflows.

However, the improvement in its NFA position between 2000 and 2016 fell short of its cumulative current account surplus by a significant amount as a result of large capital losses on its gross foreign assets and liabilities. Increases in the value of assets held by foreigners in China and the appreciation of the yuan against the dollar since the turn of the century no doubt played an important role.

Russia also ran a current account surplus throughout the period, with a cumulative amount of about \$1 trillion, but its NFA position improved little in dollar terms and in fact deteriorated as a per cent of GDP (Tables 1 and 2). This implies significant capital losses on account of valuation changes in its foreign assets and liabilities, capital transfers and cancellation of debt owed to it by several developing countries from the days of the Soviet Union. As of mid-2014 total debt cancelled was more than \$120 billion, including debt owed by Algeria, Cuba, Ethiopia, Iraq, Laos, Libya, Kyrgyzstan, Mongolia, North Korea, Syria, Vietnam (Sudakov 2011; Alexandrova 2014). Further cancellation was granted subsequently for Mongolia, Uzbekistan, Cuba, North Korea and several African countries for a total amount of some \$40 billion (Sputnik International 2017).

Between 2000 and 2016 the current account was in deficit almost constantly in India, Mexico, South Africa and Turkey. Argentina, Brazil and Indonesia generated surpluses during the pre-crisis commodity boom, but they started running deficits thereafter with the collapse of commodity prices and these deficits exceeded earlier surpluses, resulting in cumulative deficits for 2000-16 (Table 2). Thus, the entire acquisition of foreign assets by G20 emerging economies other than China and Russia came from capital inflows. In fact, additions to gross foreign assets fell short of capital inflows received and gross foreign liabilities incurred because part of the inflows was used to finance current account deficits, particularly after the 2008 crisis. However, the NFA positions of these economies did not always deteriorate because of capital gains on existing foreign assets and liabilities.

In Argentina, the debt crisis of the early 2000s and the default on sovereign debt is a main reason for the improvement of its NFA position. The abandonment of convertibilidad resulted in a sharp fall in the peso against the dollar, thereby reducing the dollar value of local assets held by non-residents. Furthermore, from 2003 onwards, the government pursued a

deliberate policy of debt cancellation. The debt restructuring offers in 2005 and 2010 resulted in significant declines in public debt both in absolute amounts and as per cent of GDP. Default on external sovereign debt also resulted in a sharp decline in non-resident capital inflows, reducing growth of gross external liabilities. This, together with the current account surpluses generated until 2010 allowed the economy to reduce its external debt and turn its NFA position from negative to positive. However, with sustained current account deficits, this process became unsustainable. With the election of a new government in 2015, the adoption of liberal policies and mounting fiscal deficits, external debt and gross foreign liabilities started to rise again (Cibils and Arana 2018). As its currency came under strong pressure, it approached the IMF for a standby agreement in July 2018. Argentina is very unlikely to maintain its net creditor position for long, given its persistent current account deficits, rapid accumulation of external debt and growing openness of the economy to international capital inflows. The IMF (2018) estimates a medium-term NFA position of -15 per cent of GDP.

The sharp increase in Indonesian gross external liabilities during the 1997 crisis was followed by moderation and improvement. After the turn of the century, Indonesian gross external liabilities fell in absolute terms and its NFA position improved as the economy started running sizeable current account surpluses and enjoying relatively rapid growth. After 2002, it also received a moderate amount of bilateral debt relief from Germany, the US, Italy and Australia in debt-for-development swaps whereby creditors cancelled debt owed to them in exchange for a commitment to mobilise and use equivalent local currency funds for social and environmental purposes (Cassimon *et al.* 2014). As commodity prices softened and the current account went into red, Indonesian external liabilities started to rise in absolute amounts, primarily as a result of private sector borrowing abroad. However, GDP growth remained strong and at the end of 2016, as a per cent of GDP Indonesian gross external liabilities were below and NFA position above the levels recorded at the beginning of the 2000s.

Of other deficit countries, Brazil, South Africa and Turkey have enjoyed capital gains on their holdings of foreign assets and liabilities since the beginning of the 2000s. An important proportion of these gains is due to declines in dollar value of local assets held by non-residents brought about by sharp depreciations of the currencies of these economies. In

some cases, gains were sizeable, reaching double-digit levels as per cent of GDP. Brazil and Turkey avoided a severe deterioration of their NFA positions as per cent of GDP despite persistent and large current account deficits. Thanks to capital gains on its external assets and liabilities, South Africa switched from a net debtor position at the beginning of the century to a net creditor position in 2016. Its NFA position was negative until 2015 when it started to move to positive values as a result of “substantial increase in the value of South Africa’s foreign assets alongside a decrease in the value of foreign liabilities” (RBS 2015). However, with a current account deficit of some 4 per cent of GDP, the country may not be able to remain a net creditor for long.

Unlike emerging economies, during 2000-2016 the four major advanced economies together avoided a significant deterioration in their aggregate NFA position despite substantial current account deficits, thanks to capital gains they enjoyed on their gross external assets and liabilities. Taken together these economies had a cumulative current account deficit of over \$4 trillion but their NFA position deteriorated by some 60 per cent of this amount.

Here too, like China and Russia, the two surplus countries, Germany and Japan, faced capital losses while two deficit countries, the UK and the US, enjoyed gains. Despite a large cumulative current account deficit, the UK NFA position shows a significant improvement due to capital gains on its foreign assets and liabilities. The UK economy turned from a net debtor position in 2000 to a net creditor position in 2016. Similarly, the deterioration of the NFA position of the US has been much smaller than would have been entailed by its massive current account deficits because of cumulative net capital gains in the order of \$1.4 trillion.

Thus, in the new millennium, major surplus countries both in the North and the South incurred capital losses while deficit countries enjoyed significant gains. Indeed, evidence suggests that capital gains and losses on existing assets and liabilities play a stabilizing role in external sustainability; in countries with persistent current account surpluses, capital losses on outstanding external assets and liabilities restrain the improvement in their NFA positions while in deficit countries capital gains limit the deterioration of the NFA positions. A main reason is that currencies and local assets of surplus economies tend to appreciate over time

relative to those of deficit countries, thereby raising the value of foreign investment in these economies relative to investment in deficit countries. Valuation changes are found to have had a stabilizing role in the post-crisis balance-of-payments adjustment among a broad sample of countries; those with the largest negative NFA positions experienced the greatest gains, largely due to debt write-offs and valuation changes in portfolio equity (Bergant 2017; see also Darvas and Hüttle 2017). Adler and Garcia-Macia (2018) find evidence on the stabilization effects of NFA returns, including yields and capital gains and losses, over 1990-2015 for a sample of 52 economies. Countries with large trade surpluses tend to face low yields on their assets compared to liabilities and suffer capital losses from valuation effects. However, they conclude that the stabilization effects of NFA returns were relatively small and persistent trade imbalances were the main driving forces of diverging NFA positions.

As suggested by large capital gains and losses, in the new millennium valuation changes have had a strong impact on the NFA positions of both emerging and advanced economies compared to current account balances. In both cases, NFA positions showed large fluctuations independent of current account balances throughout 2000-2016, particularly after the global crisis ([Charts 4 and 5](#)). For the nine emerging economies taken together, the NFA position changed in the opposite direction to the current account balance in the majority of years. In some years their NFA positions improved even though current accounts were in deficits, in others NFA positions worsened despite current account surpluses. For these economies, the correlation between current account balances and year-to-year changes in the NFA positions is weak, both in dollar terms and in per cent of GDP ([Table 3](#)). For the four major advanced economies as a whole, there is effectively no correlation between the two. Correlation is particularly weak or negative in economies that manifest significant financialization. Among the advanced economies this is the case in the US and the UK compared to Germany and Japan. Among the emerging economies, correlation is stronger in China, India and Russia than in the financially more open and liberal economies of Brazil, Indonesia, Mexico, South Africa and Turkey.<sup>6</sup>

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<sup>6</sup> On financial openness of G20 countries, see Yu (2011). Because Argentina was cut-off from international financial markets from the early years of the 2000s, it was less susceptible to shifts in asset prices and exchange rates and hence valuation changes, and its NFA position varied more closely with the current account balance.



These results stand in sharp contrast to an earlier study where correlations between current account balances and year-to-year changes in the NFA positions during 1970-1998 were found to be positive and generally strong for all emerging economies examined here.<sup>7</sup> This weakening of the correlation is the reflection of the growing importance of valuation effects resulting from asset price changes and exchange rate fluctuations relative to current account balances or the increased dominance of finance over trade in the determination of the NFA positions of emerging economies. The valuation effect on NFA positions has long been known to be strong for advanced economies (Gourinchas and Rey 2014). Its growing importance in emerging economies is the outcome of their deepened integration into the global financial system; the growing importance of autonomous capital flows relative to current account balances in the expansion of external balance sheets; significant changes in the composition of their assets and liabilities towards instruments more susceptible to price and exchange rate changes; and increased instability in financial and currency markets.

#### **D. Composition of external balance sheets**

There are significant variations in the composition of external balance sheets of different countries in two important respects. First, the instrument (capital) composition, particularly the relative importance of equity and debt in gross assets and liabilities. Second, the currency composition, particularly the share of domestic and foreign currencies. These differences play a central role in the impact of changes in asset prices and exchange rates and the incidence of capital gains and losses. Differences in these respects are particularly pronounced between advanced and emerging economies.

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<sup>7</sup> See Lane and Milesi-Ferretti (2001). Russia was not included in the sample of that study. The correlation was found to be positive for all four advanced economies studied here. As in this study, correlation was much higher for Germany and Japan than for the US and the UK. For a few countries, including Netherlands and Switzerland it was negative.

## 1. *Equity and debt*

Regarding the instrument composition of assets, emerging and developing economies are generally short in the so-called risky assets, portfolio and direct equity, and long in relatively safer debt assets, including bonds, deposits and international reserves while the opposite is the case in advanced economies (Gourinchas and Rey 2014). However, the new millennium has seen a widespread shift from debt to equity in external assets, particularly in emerging economies. The share of debt assets in their portfolios (including international reserve assets) fell from over three-quarters of their total gross assets in 2000 to under two-thirds in 2016 while the share of equity assets rose to reach one-third of total gross assets during the same period (Table 4).

The shift from debt to equity in gross external assets is less pronounced in advanced economies. During 2000-2016 the average share of debt in gross external assets of the four advanced economies in Table 4 fell, but the share of equities remained relatively stable. As a result, the ratio of debt to equity in gross external assets fell from over 1.5 in 2000-2001 to 1.3 in 2015-2016. This is associated with an increase in the share of derivatives, which accounted for, on average, some 12 per cent of gross assets of the four advanced economies in 2015-2016. The increase is more pronounced in the UK and the US, the leading economies in financialization, than in Germany and Japan.

Outward investment in portfolio equity is much less common for emerging economies than advanced economies, and much lower than investment in direct equity. A notable exception is South Africa where portfolio investment accounted for over one-third of gross assets in 2015-2016. In most G20 emerging economies the share of FDI in gross assets rose significantly between 2000 and 2016. It is particularly high in Brazil, Russia and South Africa where an important part of outward investment is in countries in their respective regions. In 2012 over three-quarters of Russian FDI stock was in the European Union and transition economies, over 60 per cent of Mexican and Brazilian outward FDI stock was in the Western Hemisphere, and 53 per cent of South African outward FDI stock was in Africa. Developed economies account for between 40 and 75 per cent of the stock of outward FDI of these economies. By contrast they have a much smaller share of Chinese FDI stock abroad, around

14 per cent in 2012 (UNCTAD 2014: Table 4). Although China has seen a rapid increase in its outward FDI in the new millennium and it now tops the list of outward investors from the Global South, its debt assets including reserves still account for three-quarters of its gross foreign assets.<sup>8</sup>

On the liabilities side, the share of debt has also been falling in both advanced and emerging economies (Table 5). In the former case, the share of equities has been relatively stable while the share of financial derivatives has been rising rapidly, again exceeding on average 12 per cent of gross external liabilities in 2015-2016. By contrast there is a large increase in the share of equities in gross liabilities of emerging economies. This is very much the outcome of deliberate policies pursued after recurrent debt crises in the 1990s and early 2000s. In order to reduce vulnerability to external debt crises, many emerging economies sought to move from debt to equity in external financing on grounds that equity liabilities are less risky and more stable. Foreign direct investment regimes have been liberalized, equity markets have been opened to non-residents, and overall limits and sectoral caps over direct and portfolio equity inflows have been relaxed or removed. As a result, non-resident holding of equities as a percent of market capitalization rose sharply, reaching 30–40 per cent and even exceeding 50 per cent in some emerging economies compared to under 20 per cent in the US (Akyüz 2017).

Almost all emerging economies saw an increase in the share of FDI in gross external liabilities during 2000-2016 (Table 5). Outside East Asia, a very large proportion of the stock of inward FDI in these economies is owned by residents in advanced economies, from over 60 per cent in India to 96 per cent in Mexico (UNCTAD 2014). By contrast in China almost half of the stock of inward FDI originates from Hong Kong – a financial centre which plays a disproportionately large role in the intermediation of intra-Asian FDI, through complex corporate structures including special purpose vehicles.<sup>9</sup>

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<sup>8</sup> In 2015 the share of China in total outward investment of developing countries was 36 per cent. It was 9 per cent for Russia, 6.5 for Brazil, 5.8 for South Africa and 5.4 for Mexico, followed by India, Malaysia and Chile; see Perea and Stephen (2018).

<sup>9</sup> On the growing disproportionate role of financial centers in crossborder holdings, see Lane and Milesi Ferretti (2017).

The share of portfolio equity in gross liabilities of emerging economies increased rapidly until the 2008 crisis. Despite the subsequent decline, it was significantly higher in 2016 than in 2000 for the G20 emerging economies taken together as well as in a large majority of them individually. The increase is particularly notable in India and South Africa.

The net equity position of all G20 emerging economies has been negative throughout the new millennium (Table 6). During 2015-2016 their gross equity liabilities, including portfolio and direct equity, averaged at around 35 per cent of GDP while gross equity assets were under 15 per cent. Despite a rapid increase in outward FDI in several of them, their net equity position did not show any improvement between 2000 and 2016 because of an even more rapid increase in inward equity investment, facilitated by liberalization in emerging economies and cheap financing available to international investors. This is true even for China. Available evidence shows that China's net position in FDI is negative with all main advanced economies, including the US, the Eurozone and Japan (Milesi-Ferretti *et al.* 2010). Only South Africa has a positive net equity position thanks to large capital gains it enjoyed in more recent years, as noted above.

On average, the net debt position of G20 emerging economies (including reserves) is positive. During 2015-2016, their gross debt assets were around 36 per cent of GDP and much of that (almost two-thirds) was in international reserves while their gross debt liabilities were around 19 per cent of GDP. However, there are significant inter-country variations. Only Argentina, China and Russia had surplus in debt. Although all emerging economies in Table 6 had better net debt positions in 2016 than in 2000, in most of them there has been a deterioration since the global crisis. This is particularly the case in Turkey where the deficit on net debt is alarmingly high.

By contrast all advanced economies in Table 6 have positive net equity positions. In this respect they all enjoyed improvements after 2000. Their overall net debt position is negative because of the deficits of the US and to a lesser extent the UK. The two surplus economies, Germany and Japan, have positive net positions in both debt and equity.

## 2. *Currency composition of assets and liabilities*

Currency composition of external assets and liabilities play a central role in the impact of exchange rate changes on capital gains and losses and NFA positions. In this respect significant attention has focussed on the external balance sheet of the US as the issuer of the dominant international reserve currency and supplier of international reserve assets. It is long noted that external assets of the US are predominantly in foreign currencies and external liabilities are in dollars. On some accounts, almost all US external liabilities are in dollars while about two thirds of its external assets are in foreign currency (Gourinchas *et al.* 2012). It is true that for all advanced and emerging economies, equity assets are in foreign currency and liabilities are in local currency. But for the US this is also true for debt; that is, the US borrows in dollars and lends mainly in foreign currencies. According to the latest figures, only around 6 per cent of gross external debt of the US is in foreign currency (US Department of Treasury 2018). Under these conditions a depreciation of the dollar against other currencies would generate capital gains for the US. It would not alter the value of US external liabilities but raise the value of external assets. This is noted to have a stabilizing effect on US external balances; US current account deficits would not result in a significant deterioration of its NFA position since weak dollar associated with deficits would create large capital gains (Tille 2003). This also means that a weakening of the dollar would bring double benefits to the US in checking growth of its external liabilities; through improvements in its trade balance and capital gains on its gross foreign assets. This is a major factor in the US policy of benign neglect of the exchange value of the dollar.

In addition to this asymmetry in the currency composition of US external assets and liabilities, certain other features of US external balance sheets create significant benefits for it vis-à-vis other countries. As seen in [Table 6](#), the US external balance sheet is highly leveraged; a large negative net position in debt is associated with a positive net position in equity. Furthermore, US external liabilities (mainly debt) have shorter maturity and are more liquid than its external assets (mainly equity), implying maturity and liquidity transformation. This particular structure of the external balance sheet of the US is seen as the main reason for the “exorbitant privilege” it enjoys, earning higher return on its external assets than it pays on its external liabilities (Gourinchas and Rey 2014).

In other advanced economies too, external assets are mainly in foreign currencies and external liabilities in their own currencies. Many of them have a high degree of exposure to the dollar which constitutes an important part of their foreign asset holdings.<sup>10</sup> However, compared to the US, a relatively more important proportion of their external liabilities is in foreign currencies, notably in the US dollar. In other words, residents in these countries borrow abroad in dollars as well as in local currencies, mainly because of the role that the dollar plays as an international reserve currency. For instance, in Japan over two-thirds of external debt liabilities and 60 per cent of external debt assets of deposit-taking institutions, and 50 per cent of gross external portfolio assets are reported to be in dollars (Bank of Japan 2017). In the Eurozone in 2016, 44 per cent of external liabilities in debt securities were in non-euro currencies (mainly in dollars). The Eurozone countries also have a relatively high proportion of their external assets in euros – around 37 per cent for external assets in debt securities.<sup>11</sup>

In emerging economies too, external equity assets are in foreign currencies and external equity liabilities are in home currencies. However, the currency composition of external debt assets and liabilities differ significantly between advanced and emerging economies. A much larger proportion of external debt assets of these economies are in foreign currencies as they rarely lend in local currency.<sup>12</sup> On average, international reserves account for around 40 per cent of total gross external assets of emerging economies

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<sup>10</sup> Lane and Shambaugh (2010) gives estimates of currency compositions of external assets and liabilities for a sample of advanced and developing economies for 1990-2004; Lane and Milesi-Ferretti (2007b) estimates dollar exposure of several European countries, Japan and China on the eve of the crisis; Bénétix *et al.* (2015) examines the valuation effects generated by currency changes over the global boom-bust cycle, 2002-2012, using an aggregate foreign currency exposure index. In these estimates it is generally assumed that equity investment in each country is denominated in the currency of that country. Since countries do not generally report the currency composition of their debt positions, several assumptions are made and/or gravity models are used in estimating them.

<sup>11</sup> These estimates are based on the figures for euro-denominated external assets and liabilities in debt securities given in ECB (2017: Table A7) and total assets and liabilities in debt securities given in Obrzut (2018). In 2004, before the crisis, 30 per cent of external liabilities in debt securities issued by Eurozone residents were in non-euro and 45 per cent of foreign assets held by Eurozone residents were in euros; see, ECB (2005).

<sup>12</sup> China has started to depart from this pattern by lending in yuan, partly in order to bolster its status as a reserve currency.

compared to less than 5 per cent in advanced economies (Table 4). A very large proportion of their non-reserve debt assets are also in reserve currencies.

On the liabilities side, until recently most emerging economies were unable to issue local currency debt, suffering from the so-called original sin problem (Eichengreen *et al.* 2003). Thus, unlike advanced economies, their external debt liabilities were predominantly in foreign (reserve) currencies. However, since the beginning of the new millennium there has been a significant increase in the share of domestic-currency debt in total external debt of several emerging economies as a result of opening of their deposit and bond markets to foreigners and a rapid increase in the willingness of international lenders to assume the exchange rate risk in return for significantly higher yields than could be obtained in advanced economies (Akyüz 2017; Klingebiel 2014). Consequently, in these economies, foreign bond and deposit holdings have come to account for an important share of the markets, and in some cases even above those observed in some advanced economies. Some emerging economies have also been able to issue local-currency debt in international markets and established local-currency offshore bond markets.<sup>13</sup>

However, there are notable exceptions to the liberalization of domestic bond markets in the Global South. Foreign shares in Chinese and Indian sovereign bond markets are very small as these markets remain largely closed to non-residents. In fact, there has been very little sovereign external borrowing by these countries either in local or in foreign currency since 2000.

While governments in most major emerging economies now rarely resort to international borrowing in reserve currencies, there has been a large build-up of corporate external debt in dollars, particularly since the onset of the global crisis in 2008, raising their leverage towards vulnerable ranges (Alfaro *et al.* 2017; Lund *et al.* 2018). In emerging economies as a whole, the external debt of non-financial corporations now exceeds external sovereign debt (Chart 6). When the external debt of financial institutions is included, the

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<sup>13</sup> See Akyüz (2017). For the experience of India, Brazil and China with offshore local-currency bond markets, see Kohli *et al.* (2017); and for Asian corporations, see Mizen *et al.* (2018).

private sector accounts for around 75 per cent of total external debt liabilities of emerging economies and these are mainly in reserve currencies (Akyüz 2017).

For commodity-dependent, low-income developing economies, external debt is almost entirely in reserve currencies. In many of these economies, notably in the so-called frontier markets traditionally dependent on official lending, governments accumulated sizeable amounts of commercial external debt after the global economic crisis, taking advantage of increased risk appetite and low interest rates and issuing dollar-denominated sovereign bonds for the first time.

In terms of currency composition of external debt, one can thus distinguish between two groups of emerging economies. In one group, including China and India, frontier markets and poorer developing countries with rudimentary bond markets, external debt is predominantly in reserve currencies, particularly in dollars. In the other group, financially open emerging economies, debt liabilities to non-residents is partly in local currency. This latter group includes Indonesia, Mexico, South Africa, Brazil and Turkey where foreign ownership in local-currency debt ranges between 20 and 40 per cent of the market (Akyüz 2017; IMF/WB 2016).

The currency composition of total external liabilities of G20 emerging economies as a whole, including both debt and equity liabilities, is certainly tilted towards local currency because of high – and rising – share of direct and portfolio equity in total external liabilities (Table 5). This is also the case for most economies individually including China and India. In these latter countries although external debt liabilities are predominantly in reserve currencies, the share of local-currency equities in total gross liabilities is very high, reaching or exceeding 50 per cent. Argentina and Turkey are the only countries where more than half of gross external liabilities are in foreign currencies. In both countries the share of equities in gross liabilities are relatively small. In Argentina, almost all external debt is in reserve currencies. In Turkey, despite large foreign holdings of local-currency sovereign bonds, the share of domestic currency in total external debt liabilities is relatively low because of massive corporate external debt contracted in reserve currencies.



These suggest that the net domestic currency position (that is, gross assets minus gross liabilities in local currency) of emerging economies is negative since all equity liabilities and part of external debt are in domestic currency while external equity and debt assets are predominantly in foreign currency. Advanced economies are always long in the currencies in emerging economies; they do not borrow in the currencies of emerging economies but they have large stocks of equity claims on these countries.<sup>14</sup> Thus currency appreciations in emerging economies would generate capital losses and deteriorate their NFA positions while bringing capital gains for advanced-economy holders of their local-currency assets.

Since equity liabilities of emerging economies are all in local currency, the difference between gross assets (almost all in foreign currency) and total debt liabilities (mostly in foreign currency) gives a proximate measure of their net foreign currency position (that is, gross assets minus gross liabilities in foreign currency). This has been improving in recent years because of the shift from debt to equity in gross liabilities, faster growth of assets than liabilities due to current accounts surpluses in some major economies and growing issuance of sovereign external debt in local currency (Bénétrix *et al.* 2015). For G20 emerging economies taken together, it was clearly positive during 2015-2016; total gross assets averaged at more than 50 per cent of GDP while total debt liabilities were around 20 percent. This was also the case for most countries individually except Turkey where net foreign currency exposure was close to 20 per cent of GDP, taking into account the proportion of public external debt denominated in local currency. In Indonesia gross foreign assets more or less matched gross external debt liabilities, and net foreign currency position was probably moderately positive thanks to a relatively high share of local currency in total sovereign external debt.

A very large proportion of external debt assets of emerging economies, including international reserves, are in dollars. In countries with relatively large equity investment in the US, such as Mexico and to a lesser extent Brazil, the share of dollar in external equity

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<sup>14</sup> As pointed out by Bénétrix *et al.* (2015), in aggregate foreign currency positions do not add up to zero because what is a foreign currency for a country is a domestic currency for another one. However, positions should add up to zero for specific currencies such as the dollar, euro or yen.

assets is also high. Thus, in countries with sizeable positive net foreign currency positions, exposure to the dollar could be expected to be very high. Indeed, pre-crisis estimates for China showed a positive net dollar position in the order of 30 per cent of its GDP, even larger than the Eurozone, making it highly exposed to a depreciation of the dollar (Lane and Milesi-Ferretti 2007b). Although China has started making large investments outside the US since the crisis and moving reserves away from the dollar, its dollar exposure continues to be high. Of the other G20 emerging economies, Brazil, Mexico, South Africa and particularly Russia also appear to have large exposures to the dollar.

There is thus a significant mismatch between currency composition of external liabilities and assets of emerging economies. Their liabilities are no longer dominated by debt contracted in reserve currencies as in the past. Instead, they are now increasingly denominated in local currency thanks to a rapid expansion of foreign equity investment and growing issuance of local-currency sovereign debt. By contrast their gross assets are predominantly in reserve currencies, an important part of which consists of international reserves, namely claims on governments in major advanced economies, notably the US. This means that the foreign currency risk has shifted from the liabilities to the assets side of their balance sheets.

This mismatch implies that countries that are net creditors in dollars can face dilemmas at times of sharp swings in the dollar. A tightening of monetary policy in the US and firming of the dollar could improve the current account balances and generate capital gains for emerging economies that are net creditors in dollars, but they could also lead to outflows of capital and trigger currency crises. By contrast, loose monetary policy and a weak dollar can create a surge in capital inflows to emerging economies, but they would also worsen their trade balances and generate capital losses; that is, they would deteriorate their NFA positions through changes in trade flows and stocks of external assets and liabilities. This shift of foreign currency exposure from external liabilities to external assets of emerging economies could prove to be highly damaging. If the dollar ceases to be seen as a safe asset as a result of rising public debt of the US and goes into a free fall, emerging economies can face large capital losses on their net dollar assets and experience deterioration of their current account balances (Prasad 2011).

## E. Capital gains and losses and North-South redistribution of wealth

Capital gains and losses generated by changes in asset prices and exchange rates redistribute global wealth among countries since a country's foreign assets are liabilities of another country. Just as current account surpluses need to be matched at the global level by deficits elsewhere, negative NFA (net debtor) positions need to be matched by positive NFA (net creditor) positions elsewhere. Globally, net investment positions, like current account balances, need to add up to zero even though in practice this is not the case because of data imperfections.

A full account of linkages among different countries' capital gains and losses would no doubt call for identification of bilateral gross and net positions across countries. Unlike bilateral trade imbalances, however, bilateral financial linkages and imbalances have not received much attention until recent years. There is no comprehensive data on the geographical allocation of assets and liabilities for most of the countries examined here, notably the emerging economies. Discussions will thus rely on multilateral positions to make inferences about the distribution of capital gains and losses and relate them to instrument and currency compositions of external balance sheets, drawing on various estimates for bilateral investment positions and capital gains and losses generated by price and exchange rate changes.<sup>15</sup>

The respective instrument and currency compositions of assets and liabilities of emerging and advanced economies and their net positions in foreign and domestic currencies and debt and equity discussed above suggest that there are strong trade-offs between them in the distribution of capital losses and gains resulting from exchange rate and asset price changes. Although debtor-creditor relations within the Global South have been deepening since the beginning of the new century, a very large proportion of gross external financial

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<sup>15</sup> Kubelec and Sá (2010) provides estimates for the geographical composition of national external balance sheets for 18 economies for 1980-2005. In these estimates the proportion of missing data for emerging economies are in the order of 63-94 per cent. Gravity models designed mainly for trade where distance is an important determinant of trade costs are used to fill the gaps. Milesi-Ferretti *et al.* (2010) gives a snapshot of bilateral net and gross positions for 70 countries for 2007 using mainly measured data, and Gourinchas *et al.* (2012) extends it to 2009 to identify winners and losers from the valuation changes triggered by the crisis.

positions of major emerging economies, notably China, India, Russia and Brazil are still with advanced economies (Milesi-Ferretti 2010; Figure 12). These economies do not have large positions in the currencies or assets of each other. Among them China has the largest claims vis-à-vis other emerging and developing countries, but these are less than a quarter of its total gross assets.<sup>16</sup> Losses (gains) on net asset or currency positions incurred by emerging economies would have their counterpart mainly in gains (losses) of advanced economies. This does not mean that advanced economies would have capital gains and losses only vis-à-vis emerging economies. They also incur gains and losses against each other because of differences in their net currency and asset exposures noted above, particularly with respect to the dollar.

The existence of a North-South trade-off in external wealth distribution is supported by the evidence provided by Gourinchas *et al.* (2012) on bilateral capital gains and losses resulting from currency and price changes triggered by the global crisis of 2007-2008. A very large proportion of gains and losses of four major emerging economies, Brazil, China, India and Russia, on net equity, debt and FDI portfolios and their entire gains and losses on foreign exchange reserves were with four major advanced economies – the US, Eurozone, the UK and Japan. The biggest bilateral gains and losses within the Global South was between China and Hong Kong on net equity and debt. India, Brazil and China also had some gains and losses vis-à-vis emerging Asia. But these intra-South gains and losses were very small relative to those vis-à-vis advanced economies.

There is indeed a strong negative correlation between yearly *net* capital gains and losses of emerging and advanced economies studied here. For 2000-2016 the correlation coefficient is  $-0.75$ . This implies that asset price and currency movements can entail a redistribution of wealth between the North and the Global South. An inverse relation is also found when capital gains and losses are estimated separately on gross external assets and

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<sup>16</sup> China's claims on other developing and emerging economies consist of FDI and aid. On the basis of the geographical distribution of Chinese FDI noted in section D.1, its total FDI claims on emerging and developing economies are in the order of 16 percent of its total assets. On the other hand, it is estimated that China provided \$350 billion financing with little grant element to developing economies during 2000-2014 (Dreher *et al.* 2017). Even assuming that this was all debt and is still outstanding, its share in Chinese gross external assets would be less than 5 per cent.

liabilities in the way described in the Annex to this paper. During 2000-2016, the nine emerging economies taken together incurred capital losses both on their gross foreign assets and liabilities. The four advanced economies incurred capital losses on their liabilities, but their capital gains on assets were more than sufficient to compensate these losses. On a year-to-year basis, there is a relatively strong correlation between capital gains and losses on gross external **assets** of nine emerging economies and on gross external **liabilities** of four advanced economies. The correlation coefficient for 2000-2016 is 0.42. In other words, the greater the capital gains (losses) on gross external **assets** of emerging economies, the greater the losses (gains) on gross external **liabilities** of advanced economies. Similarly, capital gains (losses) on gross external **liabilities** of emerging economies are associated with capital losses (gains) on gross external **assets** by advanced economies, with a correlation coefficient of 0.49.

The trade-off between capital gains and losses of emerging and advanced economies on their gross external assets and liabilities is also reflected by a strong negative correlation between year-to-year changes in the NFA positions of these economies. During 2000-2016, improvements (deteriorations) of the NFA position of emerging economies were closely associated with deteriorations (improvements) of the NFA position of advanced economies. The correlation coefficient is around  $-0.71$  for changes in NFA as measured both in billion dollars and as per cent of GDP. Correlation is stronger for the post-crisis period; for 2008-2016 the coefficients are  $-0.76$  and  $-0.80$  for changes in NFA measured in billion dollars and as per cent of GDP, respectively. This negative correlation between changes in the NFA positions of advanced and emerging economies is largely explained by the disparate impact of valuation changes on NFA positions rather than current account balances since, as discussed above, current account balances are not strongly correlated with year-to-year changes in NFA positions.

Crises tend to generate large transfers of wealth among countries because they result in sharp changes in asset prices and exchange rates. Indeed, the inverse correlation between the NFA positions of emerging and advanced economies became more visible with the onset of the global crisis in 2008 (Charts 7 and 8). Until 2008, the average NFA position of G20 emerging economies did not manifest sharp movements while that of the four G20 advanced economies had fluctuations around a rising trend. With the crisis in 2008, the NFA position

of emerging economies improved significantly while that of advanced economies deteriorated. The crisis led to a flight to the dollar, sizeable declines in the exchange rate of all emerging economies except China and sharp declines in equity markets including in emerging economies.<sup>17</sup> The combination of these generated significant capital gains for emerging economies and large losses for advanced economies, particularly the US.

Since emerging economies were long in the dollar and short in local currency, those that depreciated against the dollar enjoyed significant capital gains. China, by contrast, incurred losses because of appreciation of the yuan. Within advanced economies the UK was a big winner, thanks to a sharp decline of the pound sterling against the dollar while Japan and the US had large capital losses which exceeded, in aggregate, the gain by the UK (Bénétrix *et al.* 2015; Table 4). All emerging economies including China gained from declines in equity prices because they had negative net positions.<sup>18</sup> Altogether, the capital losses incurred by emerging economies on their gross foreign assets due to price and currency declines were small compared to their gains on their gross foreign liabilities. By contrast, for the four G20 advanced economies taken together, currency movements and declines in global markets resulted in losses on both gross foreign assets and gross foreign liabilities.

Subsequently, as interest rates were cut sharply and the dollar weakened, markets and currencies in emerging economies recovered. These created capital gains for international investors in these economies. The NFA position of advanced economies improved while that of emerging economies deteriorated. The negative association between

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<sup>17</sup> With the deepening of the crisis in the US in summer 2008, currencies of several emerging economies fell sharply while the dollar shot up. From July 2008 to March 2009, the nominal effective exchange rate of the dollar increased by some 18 per cent. By the end of 2008 the Argentinian peso and Indian rupee were down by 15 per cent against the dollar; Indonesian Rupiah, South African Rand, Russian Rouble by 25-30 per cent; Turkish lira and Mexican peso by 35-40 per cent and the Brazilian real by almost 50 per cent. By contrast the Chinese yuan rose against the dollar by some 7 per cent between the end of 2007 and end of 2008. After the Lehman collapse in 2008, the MSCI index fell to some 40 per cent of the level reached in 2007. However, most currencies and stock markets recovered sharply in the course of 2009 with the adoption of ultra-easy monetary policy in the US and recovery in capital inflows; see Akyüz (2013).

<sup>18</sup> Gourinchas *et al.* (2012) estimates that valuation changes due to currency movements over 2007-2009 were positive for the UK, Brazil, India and Russia but negative for the US, China, Japan and the Eurozone. The UK, Eurozone and Japan as well as all four emerging economies, Brazil, China, India and Russia, gained on net equity portfolios because of short positions.

changes in the NFA positions of advanced and emerging economies broadly continued subsequently as markets and currencies of emerging economies occasionally came under pressure as a result of uncertainties created by a series of events such as the taper tantrum in May 2013 when the Federal Reserve declared its intention to taper its bond purchases; the tapering of bond purchases after January 2014; and the interest rates increase by the Federal Reserve in December 2015.

#### **F. Return on gross external assets and liabilities**

With rapid growth in external balance sheets, international investment incomes paid on liabilities and received from assets gain added importance in the current account relative to payments and receipts for international trade in goods and services. Their precise impact on the current account depends on the NFA position of the country concerned and the rates of return on its gross assets and liabilities. Generally, countries with positive NFA positions are expected to earn net investment income. However, a positive NFA position is neither necessary nor sufficient for a country to run a surplus on international investment income account. Positive NFA positions can be associated with negative international net investment income balances and vice versa. This is because there are large differences among the rates of return on different types of financial and real assets as well as between the rates of return earned by different countries on similar assets.

**Table 7** compares and contrasts NFA positions and net investment income balances of G20 emerging economies with those of four major advanced economies. It is notable that all emerging economies have negative net international investment income balances but not all of them have negative NFA positions. Both China and Russia have sizeable positive net foreign assets but they both run deficits in the international investment income account. By contrast, all advanced economies have positive net investment income balances, but not all of them have positive NFA positions. The US and the UK have surplus in investment income even though they have negative NFA positions. The US has in fact managed to combine rising net investment income with a secular decline in its NFA position (**Chart 9**).

Furthermore, net foreign asset positions and investment income balances do not always move in parallel. NFA positions can vary as a result of sharp swings in asset prices and exchange rates unrelated to changes in the rate of return on assets and liabilities. In fact, NFA positions and net investment income balances can even move in opposite directions. The average NFA position of advanced economies in [Table 7](#) deteriorated between pre- and post-crisis periods but their net investment income balances improved. This is largely due to the US. Sharp cuts in US interest rates in response to the crisis and the boom in equity markets certainly played a major role since the US is short in debt and long in equities. Among the emerging economies, Chinese international investment income balance barely shows an improvement in the post-crisis period even though its NFA position was markedly better. The Russian and South African NFA positions improved between the two periods but their investment income balances deteriorated. Turkey saw an improvement in its net investment income balance despite a deterioration in its NFA position, thanks to the decline in interest rates since the country had a large deficit in debt.

The disparity between NFA positions and net international investment income balances suggests significant variations among the rates of return on assets and liabilities both within and across countries. [Tables 8 and 9](#) report, respectively, *ex post* dollar rates of return (yields) on gross assets and liabilities and total rates of return including capital gains and losses expressed as a percentage of gross assets and liabilities as described in the Annex, and [Table 10](#) gives return differentials and components of total return.<sup>19</sup> In all emerging economies, yield differentials between gross assets and gross liabilities are negative. This is true not only for 2000-2016, but also for pre-crisis and post-crisis periods. By contrast, in advanced economies the yield on gross external assets exceeds the yield on gross liabilities. From 2000 to 2016 the four major advanced economies had higher yields on their gross assets and lower yields on their gross liabilities than the G20 emerging economies.

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<sup>19</sup> Real rates of return are often derived by deflating dollar yields by the US rate of inflation. However, this would not be needed here since the purpose is to compare rates of return across assets and liabilities and among countries.



The picture is not much different for total rates of return, including capital gains and losses (Tables 9 and Charts 10 and 11). Again, for 2000-2016 the average rate of return on gross liabilities exceeds the average rate of return on gross assets in all G20 emerging economies. The return differential for the G20 emerging economies taken together is –5.3 percentage points and half of this is due to yield differentials and half due to capital losses (Table 10). By contrast the return differential is positive for all four major advanced economies. Their average return differential is 1.6 percentage point and again half is due to yield differentials and half to capital gains.<sup>20</sup> On average, during 2000-2016, the G20 emerging economies earned about 3.5 percentage points less on their gross assets and paid 3.4 percentage points more on their gross liabilities than advanced economies; that is, the return differential of advanced economies were almost 7 percentage points higher than that of emerging economies. During 2000-2016 the US earned much higher return on its gross external assets than other major advanced economies, and at 3 percentage points, its return differential was higher than the return differentials of the other three advanced economies. These conclusions are also broadly consistent with the findings of a recent study for a sample of 52 economies over 1990-2015 that emerging economies' return differentials were 5 percentage points lower than those of advanced economies and among reserve-currency economies the US displayed a significantly higher return differential (Adler and Garcia-Macia 2018).

Yields and returns on both assets and liabilities were lower in the post-crisis years in both emerging and advanced economies. In emerging economies, post-crisis declines in yields on assets and liabilities were moderate, and in fact there was a small improvement in the yield differentials between the two periods, largely reflecting the decline in credit spreads. However, in several of them return on gross assets became negative during 2008-2016 due to significant capital losses. On the other hand, as they enjoyed capital gains on liabilities, their average return differential improved from –6.6 percentage points to –4.1 percentage points. Advanced economies, suffered capital losses on both assets and liabilities after the

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<sup>20</sup> For advanced economies, the rates of return both on gross assets and liabilities over 2000-2016 were lower than earlier estimates for 1983-1998; see Lane and Milesi-Ferretti (2002; Table 3). A factor that accounts for this is the secular decline in nominal and real interest rates resulting from progressively looser monetary policies in G7 countries in search of debt-driven growth – See Hannoun and Dittus (2017) and Akyüz (2017).

crisis. As their yield differentials remained relatively high, they were able to maintain a positive return differential during 2008-2016.

The large difference between the rates of return on gross external assets and liabilities of emerging economies, including capital gains and losses, implies significant resource losses. Using the average rate of return over 2000-2016 and the volume of gross assets and liabilities outstanding at the end of 2016, the difference between the returns on gross liabilities and gross assets comes to \$610 billion per annum for the G20 emerging economies taken together. The carry cost of “borrowed” gross assets is slightly lower, \$570 billion per annum or 2.7 per cent of the combined GDP of G20 emerging economies.<sup>21</sup> This constitutes a resource transfer mainly to advanced economies since, as noted, assets and liabilities of emerging economies are predominantly with advanced economies. About half of this is transfer of income due to the nominal (dollar) return differentials and half due to capital losses on existing assets and liabilities.

Average rates of return on gross external assets and liabilities depend on the rates of return on their individual components and their shares in gross external assets and liabilities. This is because there are differences among rates of return on different components of external balance sheets. Furthermore, within each class of instruments, such as debt and equities, returns depend on the specific instrument chosen for investment; for instance, the return earned on portfolio equity investment depends not only on the average movement of the market, but also on the composition of the equity portfolio chosen. Similarly, there can be important differences in rates of return earned on direct investment according to its allocation among sectors and countries, the privileges enjoyed by and the constraints imposed on investors by host countries, and the efficiency with which investment is operated. Again, yields on debt assets and liabilities differ according to their risk premia, maturity profile, currency denomination and jurisdiction under which they are issued.

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<sup>21</sup> That is, net cost of assets accumulated from additional liabilities. The entire gross assets of G20 emerging economies taken together are borrowed assets since their NFA position is negative. This is also true for a large majority of them, with notable exceptions of China and Russia where assets also came from current account surpluses.

As noted above, equities generally carry higher risk than debt but they also bring higher yields. Estimates for advanced countries show that there is a strong positive correlation between the share of equities in gross external assets and liabilities and average returns on gross assets and liabilities (Lane and Milesi-Ferretti 2003; Figure 8). This is a main reason why the rate of return on gross external assets of emerging economies is lower than the rate of return on their gross external liabilities since they are short in equity (Table 6). For the same reason emerging economies tend to earn lower return on their gross assets and pay more on their gross liabilities than advanced economies.

For several reasons emerging economies also earn less than advanced economies on their FDI assets and pay more on their FDI liabilities. These economies have become important investors abroad only in recent years. Like in trade, entry to foreign markets as investors involves initial fixed costs to overcome various entry barriers. New entrants are also inclined to practice penetration pricing, offering low prices in order to attract customers and establish themselves in the market. Major investors such as China tend to focus on projects with significant long-term strategic value rather than short-term return. Efficient operation in foreign markets also calls for adjustment to foreign culture for tapping local opportunities and involves a costly learning process. Furthermore, most transnational companies from advanced economies investing globally enjoy privileges and protection provided by bilateral investment treaties, but this is not always the case for investors from emerging economies (South Centre 2015).

Indeed, the yield differentials on gross FDI assets and liabilities estimated using the direct investment income figures available in the IMF balance-of-payments database strongly support these considerations. For 2000-2016, the average yield on FDI liabilities of G20 emerging economies was in the order of 7.5 per cent while the average yield on gross FDI assets was 4 per cent. By contrast in the four advanced economies, the average yield on gross FDI assets was around 7 per cent against an average yield of 4 per cent on gross FDI liabilities. For all major investors among the emerging economies, the yield differential was negative while the two deficit advanced economies enjoyed higher return differentials than all the others, both advanced and emerging (Chart 12). The US again had the highest yield differential on its FDI assets and liabilities; a major factor that accounts for why the US

receives net international investment income despite a large and growing negative NFA position.<sup>22</sup>

Emerging economies also earn less on their debt assets than they pay on their debt liabilities. An important part of their gross debt assets consists of low-yielding international reserves, mainly the treasury bonds of reserve-currency countries, notably the US. By contrast, their debt liabilities carry sizeable risk premia. This is true even for debtors from emerging economies with strong NFA positions because credit assessments and ratings by financial firms from advanced economies tend to be biased towards advanced and against emerging economies (Gültekin-Karakaş *et al.* 2011). This risk premium is captured mainly by lenders in advanced economies that hold an important part of debt liabilities of emerging economies.

The shift from foreign-currency to local-currency debt by governments in emerging economies has widened the return differential between external debt liabilities and assets since yields on local-currency debt are generally higher than yields on debt contracted in reserve currencies. First, local-currency debt carries exchange rate risks for foreign investors. Governments can only pass this risk by paying a compensation. Compensation tends to rise with increased volatility of the currency and exchange rate uncertainties. There is evidence that this has particularly been the case since May 2013 when the US Federal Reserve announced its intention to taper bond purchases, resulting in greater instability in capital inflows and exchange rates in emerging economies (Gadanecz *et al.* 2014). When the currency comes under pressure, governments often intervene and use reserves to stabilize it in order to moderate the compensation to be paid to lenders. But by doing that they also limit the decline on the yield earned on local currency bonds and prevent lenders from incurring the currency risk they assumed.

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<sup>22</sup> See Curcuru *et al.* (2013) and Darvas and Hüttle (2017). Curcuru and Thomas (2012) explains the reason why the US direct investment abroad earns more than foreign direct investment in the US in terms of US taxes owed by the parent on foreign earnings, the sovereign risk and sunk costs associated with investing abroad, and the age of foreign direct investment in the US. Bosworth *et al.* (2007) finds that about one-third of the excess return earned by US corporations abroad can be explained by the diversion of income to low-tax jurisdictions.

Second, locally issued sovereign debt comes under local jurisdiction which allows the power and the means for the sovereign to inflict losses on creditors when debt becomes unpayable according to its original terms and conditions, including through write-downs and capital controls.<sup>23</sup> In principle, since governments have the option of printing money and inflating out of local-currency debt, there should be little default risk and hence credit spread on such debt. However, governments may prefer default rather than inflation because the latter could trigger a free fall in the currency, leading to bankruptcies of corporations heavily indebted in foreign currency. Inflicting losses on creditors rather than inflation may also be preferred on social grounds. For these reasons, governments are charged positive and sizeable credit spreads when they borrow in their own currency (Du and Schreger 2016a and 2016b). In any case, since inflating out of local-currency debt would inflict exchange losses on their foreign holders, the exercise of this option would imply higher currency risk spreads. Thus, the combination of the exchange rate risk and the jurisdiction risk tend to push the yield on local-currency bonds above those issued internationally in reserve currencies.

Since emerging economies generally pay higher rates on their external liabilities than they can earn on their external assets, they would need a positive and relatively strong NFA position to avoid deficits on the international investment income account. Otherwise, they would have to run a trade surplus to offset the investment income deficit and attain current account balance. To improve the NFA position they would need to run an even greater trade surplus. The surplus would need to be generated by national firms since foreign enterprises outside mining do not generally create sufficient export surpluses to meet their income transfers even in countries such as China where they are strongly export-oriented (Akyüz 2017; Chapter 6). Without adequate trade surplus the NFA position would deteriorate, raising the deficit on net international investment income. The deficit can increase further since the risk premium tends to rise with the deterioration of the NFA position. A vicious circle can thus emerge whereby investment income deficits weaken the NFA position which in turn raises the risk premium and hence the deficit on investment income. As the NFA position

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<sup>23</sup> A case in point is the Greek restructuring in 2012 when the government inserted unilaterally and retrospectively a collective action clause to existing sovereign bonds governed by Greek law.

deteriorates, it could become increasingly difficult to attract foreign capital even by offering higher yields, and the process can end in an external financial crisis. In other words, the risk-return profiles of gross assets and liabilities of emerging economies do not only entail significant transfer of resources to advanced economies, but they also pose a potential threat to their financial stability.

## **G. Conclusions**

The size of international balance sheets of emerging economies has grown and its structure has changed significantly in the past two decades as a result of rapid liberalization of the capital account and favourable global financial conditions resulting from progressively looser monetary policy in major advanced economies, notably the US. Their gross assets grew alongside gross liabilities, but much of that growth was due to capital inflows themselves rather than current account surpluses.

The more important consequences of growing integration of emerging economies into the global financial system are related not so much to the pace of expansion of their international balance sheets as to changes in their structure, particularly the shift towards a class of liabilities with higher return and more susceptible to shocks from international financial markets. Direct and portfolio equity liabilities increased much faster than debt liabilities as governments sought to move from debt to equity in external financing, foreign presence in local equity markets reached unprecedented levels, and links with mature markets strengthened significantly. Similarly, in several countries, an important part of locally issued sovereign debt has come to be held externally, enhancing the influence of debt markets in advanced economies on the terms and conditions of local-currency debt in emerging economies.

These structural changes engender greater exposure of emerging economies to external financial shocks via flows and stock. On the one hand, new channels have emerged for the transmission of external financial shocks through international capital flows, examined in some detail in Akyüz (2017). On the other hand, the external balance sheets of emerging

economies have become more susceptible to changes in asset prices and exchange rates, resulting in significant capital gains and losses on their existing assets and liabilities, and redistribution of external wealth between emerging and advanced economies, particularly at times of severe international financial instability. Thus, changes in global financial conditions, interest rates, asset prices and exchange rates in major reserve-currency countries, impinge on economic and financial conditions in emerging economies not only through their impact on capital *flows*, but also by altering the value of their *stock* of gross international assets and liabilities and NFA positions.

Another implication of structural changes in the external balance sheets of emerging economies concerns income streams generated by gross foreign assets and liabilities. On average, the rate of return on their gross assets is much less than the rate of return on their gross liabilities, while advanced economies enjoy positive return differentials. This is because almost without exception, all emerging economies, including large direct investors such as China, are short in high-yielding equity. Moreover, they earn much less on their debt assets than they pay on their debt liabilities. Generally, they hold large amounts of safe, liquid debt assets, including international reserves in dollars, against high-risk, high-yielding liabilities. By contrast all major advanced economies are long in equities. In particular the US external balance sheet is highly leveraged. It has a large net negative position in debt, supplying short-term, low-yielding, liquid debt assets to the rest of the world, notably to emerging economies, to acquire longer-term, higher-yielding assets, thereby providing maturity and liquidity transformation and enjoying large capital gains in return.

Furthermore, for several reasons examined above, the return the emerging economies earn on their direct equity assets is lower than the return they pay on their direct equity liabilities and less than the return earned by advanced economies on their outward FDI stocks. Emerging economies also earn less on their debt assets than they pay on their debt liabilities because of risk spreads, partly resulting from their negative NFA positions but also because of the bias in credit rating by western agencies. The shift to domestic currency debt by governments has widened this gap because the exchange rate risk assumed by investors needs to be compensated. As a result of all these, the rate of return on gross liabilities of emerging economies, mainly held by advanced economies, exceeds the rate of return on their

assets, mainly debt instruments issued by advanced economies, by a large margin, resulting in a large transfer of resources from the former to the latter.

Despite high resource costs, external balance sheets long in debt and short in equity typical of emerging economies are favoured because of their resilience to financial shocks such as those generated by the global crisis.<sup>24</sup> Highly liquid debt assets in reserve currencies held against less liquid liabilities tend to reduce the likelihood of liquidity crises. Further, as noted, asset price declines and currency depreciations caused by shocks serve to strengthen external balance sheets by reducing liabilities and incomes paid on them. However, large foreign holdings of equities tend to increase the susceptibility of external balance sheets to valuation gains and losses brought about by asset price changes in global markets, decouple the NFA position from trade balances and increase domestic financial instability. Furthermore, a positive net debt position would not always provide adequate protection against shocks since corporate debtors do not always have adequate liquid foreign assets to meet their liabilities. Governments often bear an important part of costs by providing public insurance for the currency risks assumed by the private sector by holding large amounts of low-yielding reserves acquired through issuance of high-yielding securities.

A way out for countries with positive NFA positions and trade surpluses such as China is to reduce exposure to the dollar, move from low-yielding debt assets to equities – a process already under way – and improve the return earned on FDI assets. They would also need to reduce external borrowing and leveraging by corporations. In emerging economies with large negative NFA positions and persistent current account deficits, the solution to external vulnerability would not be found simply in replacing debt with equity liabilities but in improving trade balances and NFA positions. In all these respects, capital account policies would play an important role by influencing the size and composition of external balance sheets.

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<sup>24</sup> For a review of the arguments, evidence and the literature, see Joyce (2015).



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### Annex: Capital gains and losses and rates of return

#### Capital gains/losses

Without capital gains/losses, total gross assets at  $t$  would be:

$$A^*(t) = A(t-1) + C(t) + I(t)$$

where  $C$  = current account balance;  $I$  = capital inflows; and  $A(t-1)$  gross foreign assets at  $t-1$ . Therefore, capital gains/losses on gross assets is given by:

$$K^a(t) = A(t) - A^*(t) = A(t) - [A(t-1) + C(t) + I(t)]$$

That is, there is a capital gain (loss) if assets increase more (less) than the sum total of the current account balance and capital inflows. Similarly, without capital gains/losses, gross liabilities at time  $t$  would be given by:

$$L^*(t) = L(t-1) + I(t)$$

where  $L(t-1)$  is gross liabilities at  $t-1$ . Thus, capital gains/losses on liabilities will be given by:

$$K^b(t) = L^*(t) - L(t) = I(t) - [L(t) - L(t-1)]$$

That is, there is a capital gain (loss) if gross liabilities increase less (more) than capital inflows.

Net capital gains/losses on gross assets and liabilities would then be equal to:

$$T(t) = K^a(t) + K^b(t) = [A(t) - L(t)] - [A(t-1) - L(t-1)] - C(t) = N(t) - N(t-1) - C(t)$$

where  $N(t)$  and  $N(t-1)$  are NFA positions at  $t$  and  $t-1$ . Therefore, there is a net capital gain (loss) if the NFA position changes more (less) than the current account balance.

#### Yields and return:

Yields (dollar rates) on gross assets:  $Y(t)/A(t-1)$

Yields (dollar rates) on gross liabilities:  $X(t)/L(t-1)$

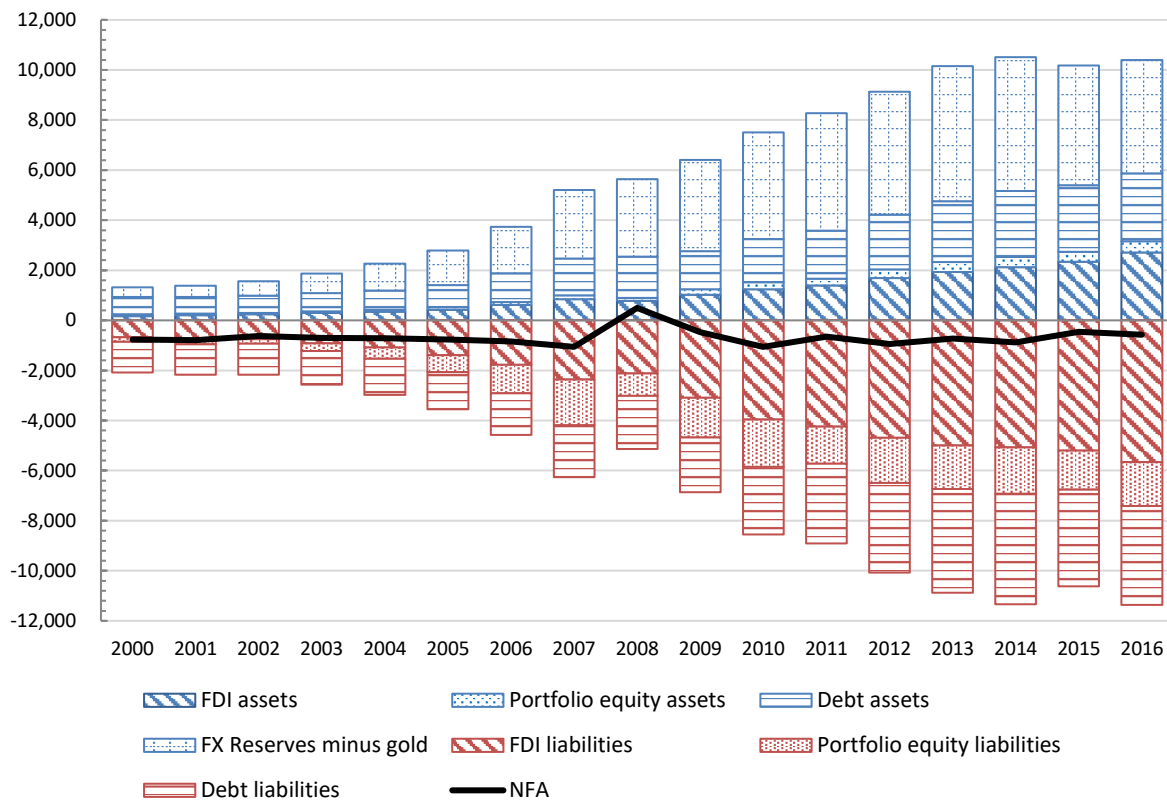
where  $Y$  = dollar income received on gross assets and  $X$  = dollar income paid on gross liabilities.

Total rates of return including capital gains/losses:

on gross assets:  $[Y(t) + K^a(t)] / A(t-1)$

on gross liabilities:  $[X(t) + K^b(t)] / L(t-1)$

**Chart 1: Gross External Assets and Liabilities of G20 Emerging Economies**  
*(in billions of US dollars)*

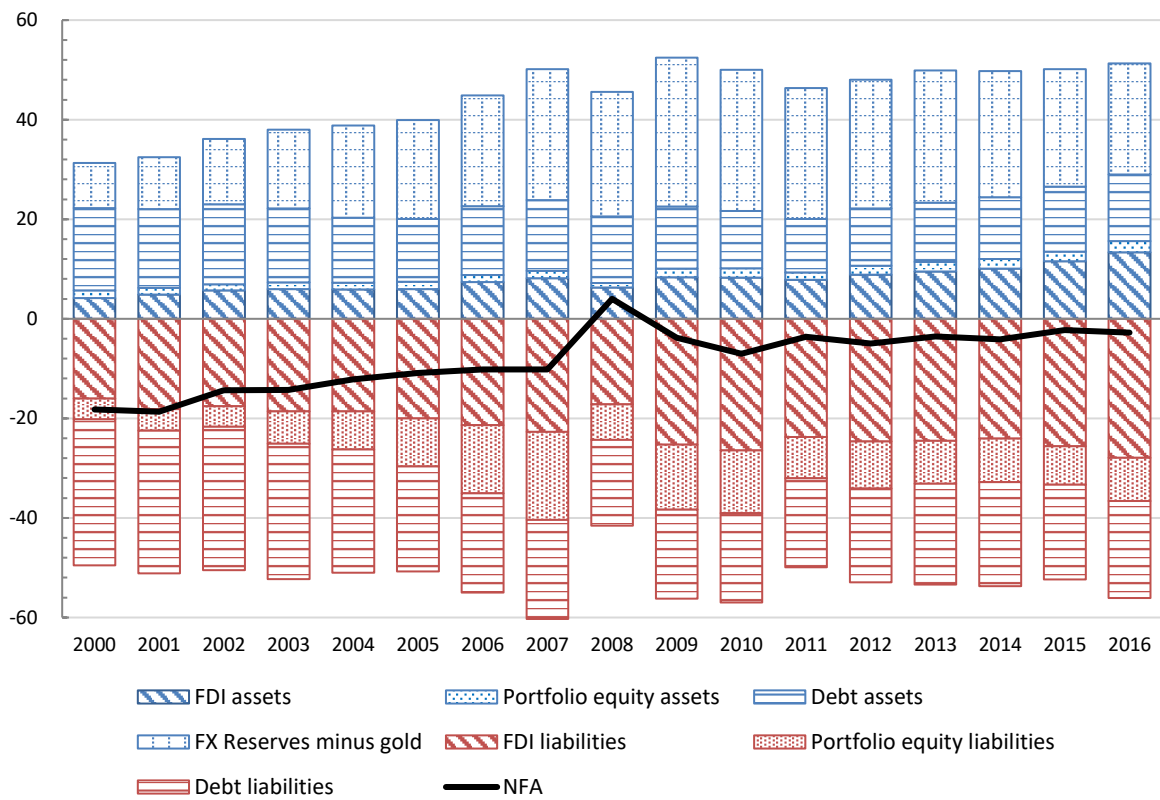


**Source:** Author's estimates based on IMF IIP database and Lane and Milesi-Ferretti (2017).

**Notes:** Debt assets equal to "portfolio investment: debt securities" plus "other investment". The same applies to the category "debt liabilities".

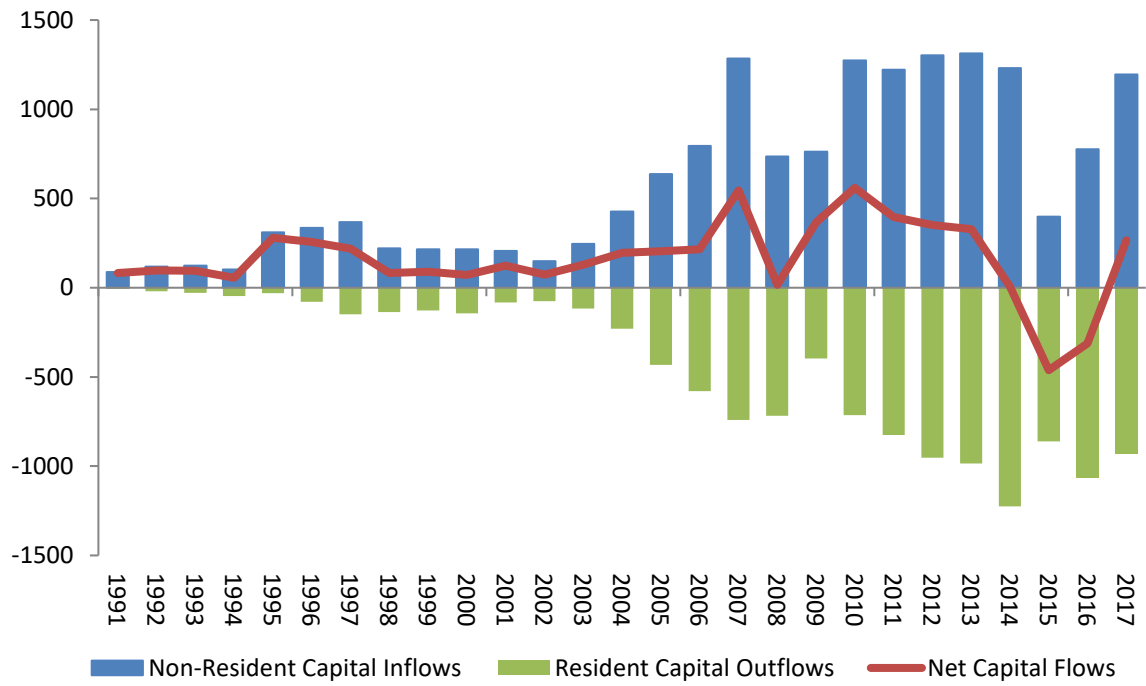
G20 EMEs include Argentina, Brazil, China, India, Indonesia, Mexico, Russia, South Africa, and Turkey.

**Chart 2: Gross External Assets and Liabilities of G20 Emerging Economies**  
(% of GDP)



**Source:** As table 1.

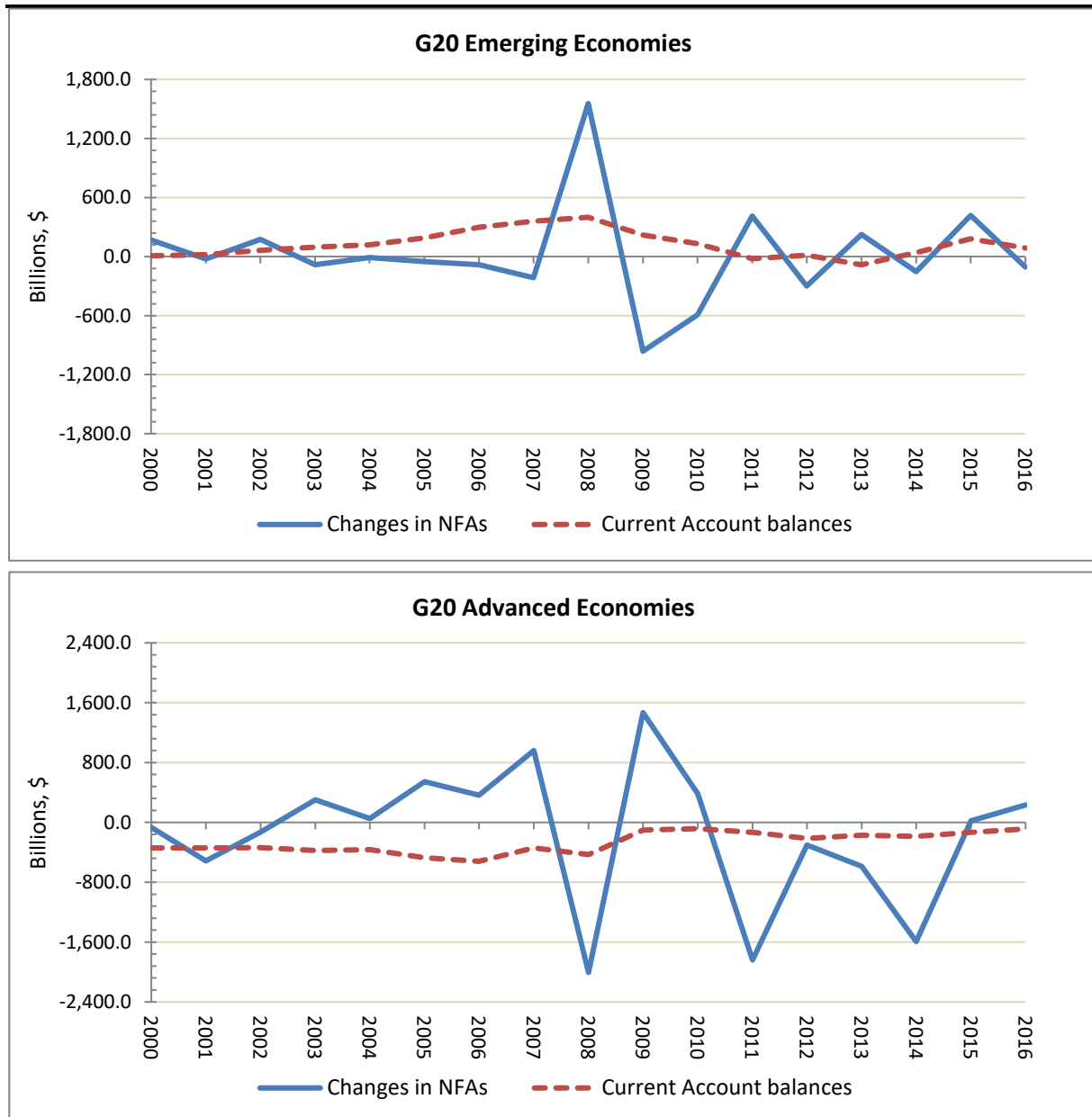
**Chart 3: Capital Flows to Emerging Economies**  
(in billions of US dollars)



**Source:** Institute of International Finance.

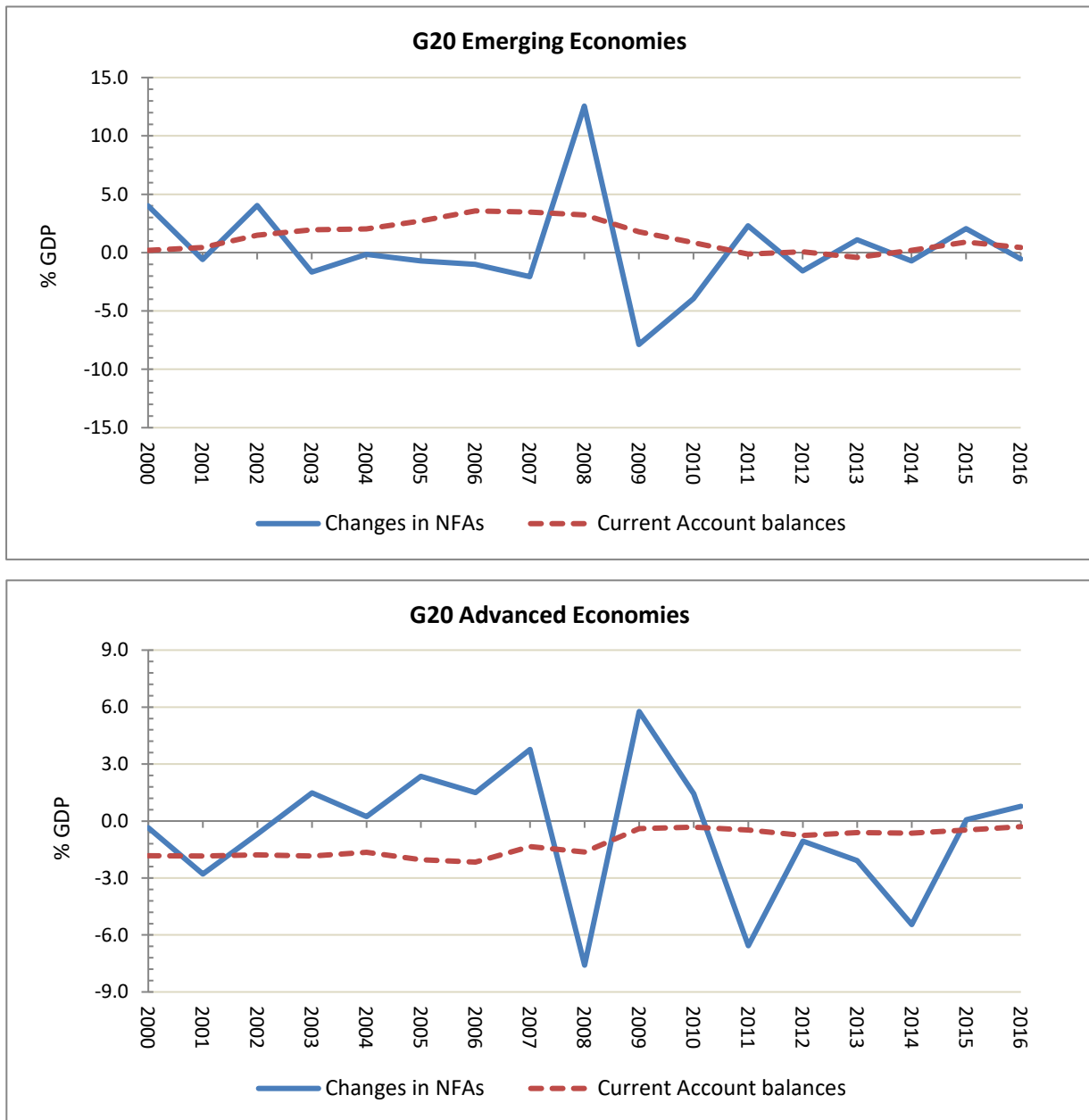


**Chart 4: Current Account Balances and Changes in NFA Positions**  
(in billions of US dollars)



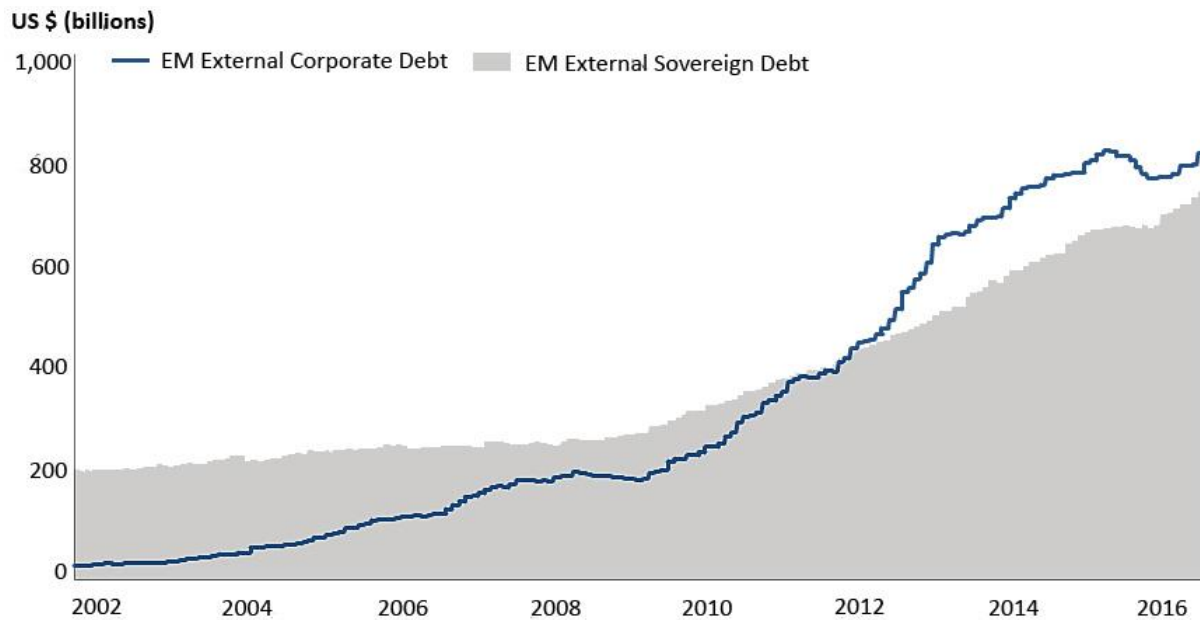
**Source:** As chart 1.

**Chart 5: Current Account Balances and Changes in NFA Positions**  
(in per cent of GDP)



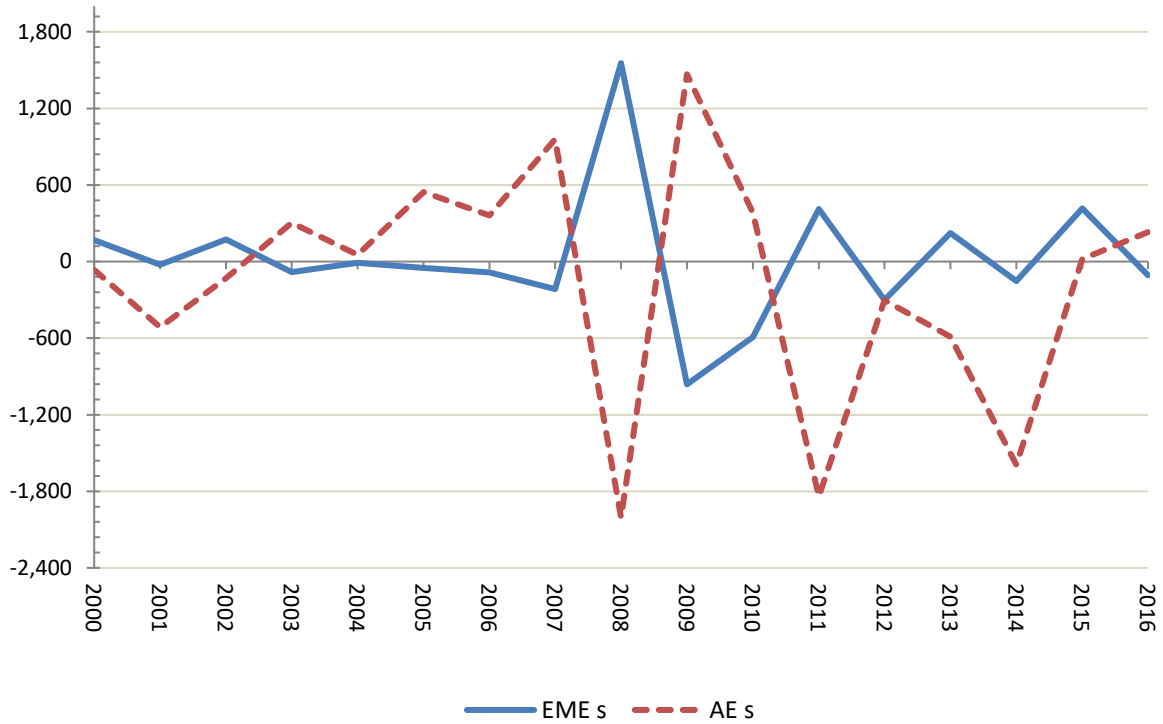
**Source:** As table 1.

**Chart 6: External Debt of Emerging Economies**  
(in billions of US dollars)



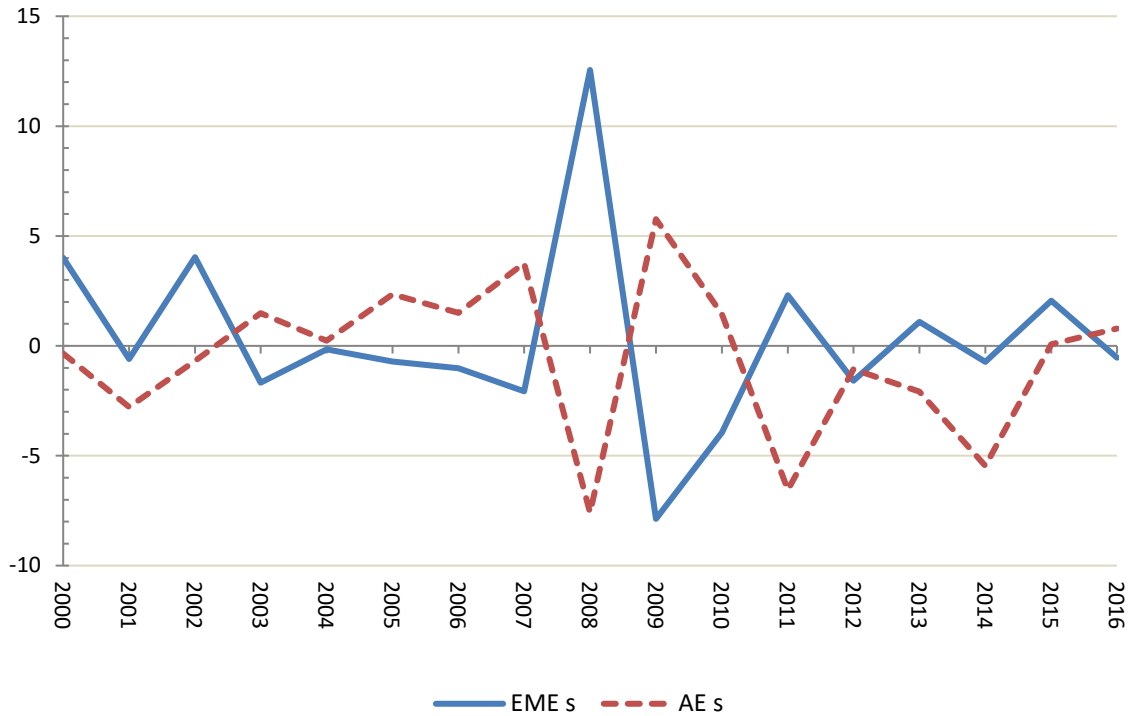
Source: Bell (2017)

**Chart 7: Changes in NFA Positions in G20 Advanced Economies and Emerging Economies**  
(in billions of US dollars)



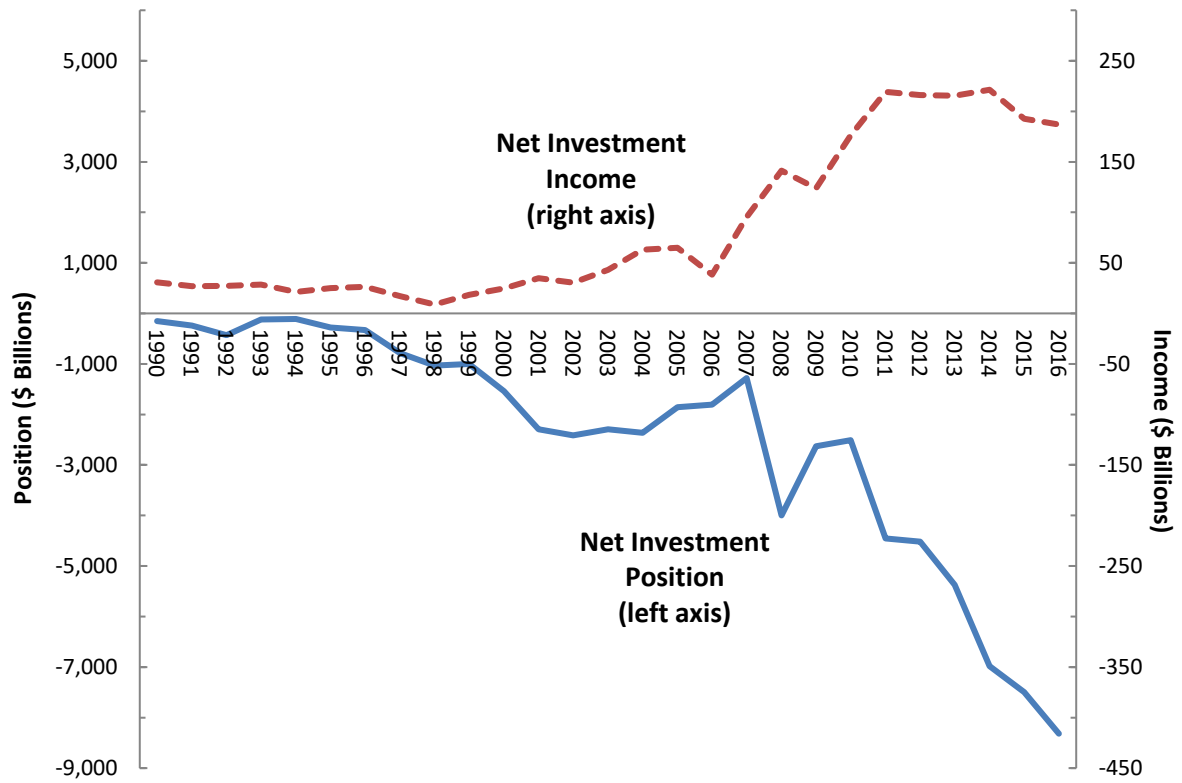
**Source:** As chart 1.

**Chart 8: Changes in NFA Positions in G20 Advanced Economies and Emerging Economies**  
(in per cent of GDP)



**Source:** As table 1.

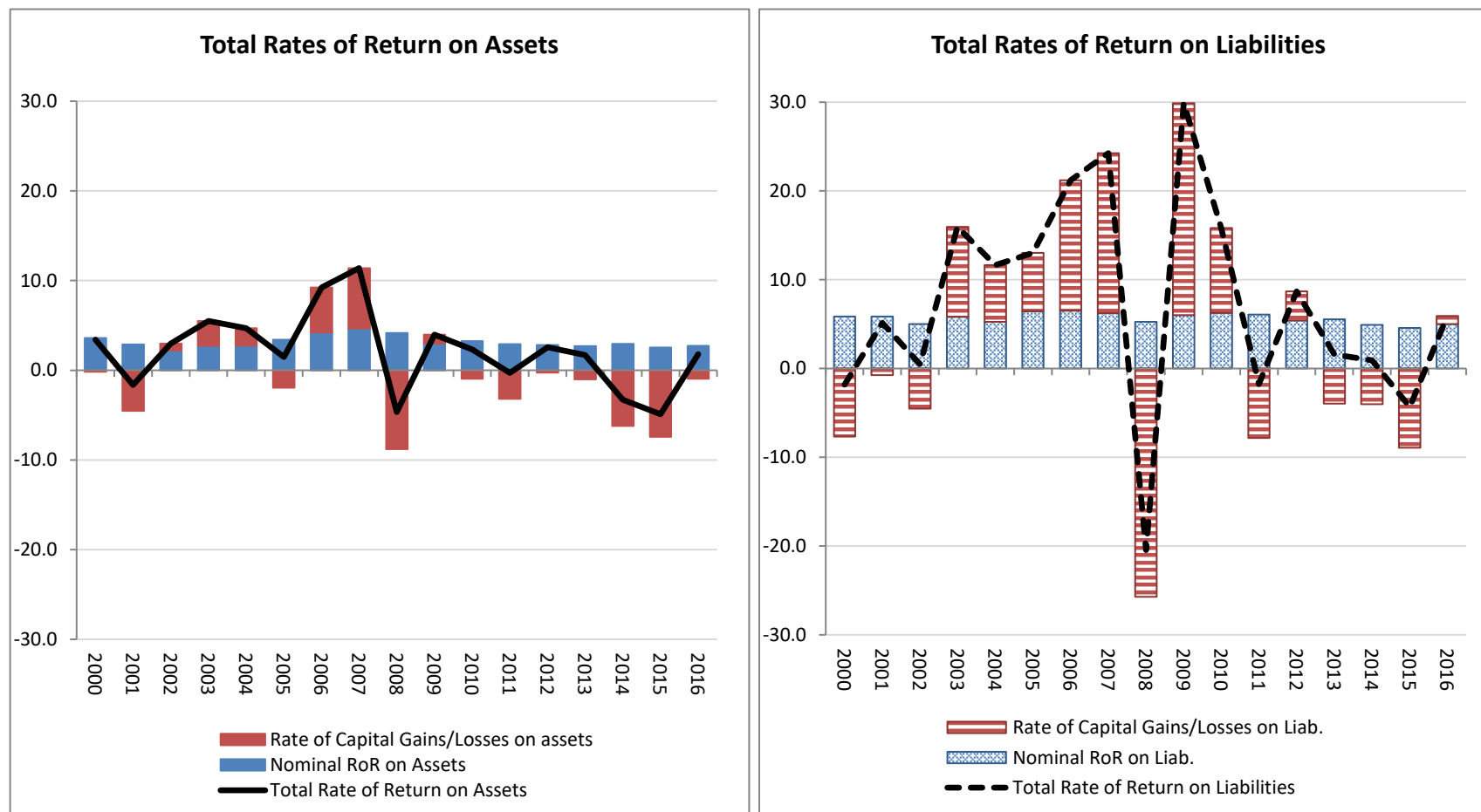
**Chart 9: US Cross-Border Investment Income and Position**



**Source:** Bureau of Economic Analysis (BEA), US Department of Commerce.

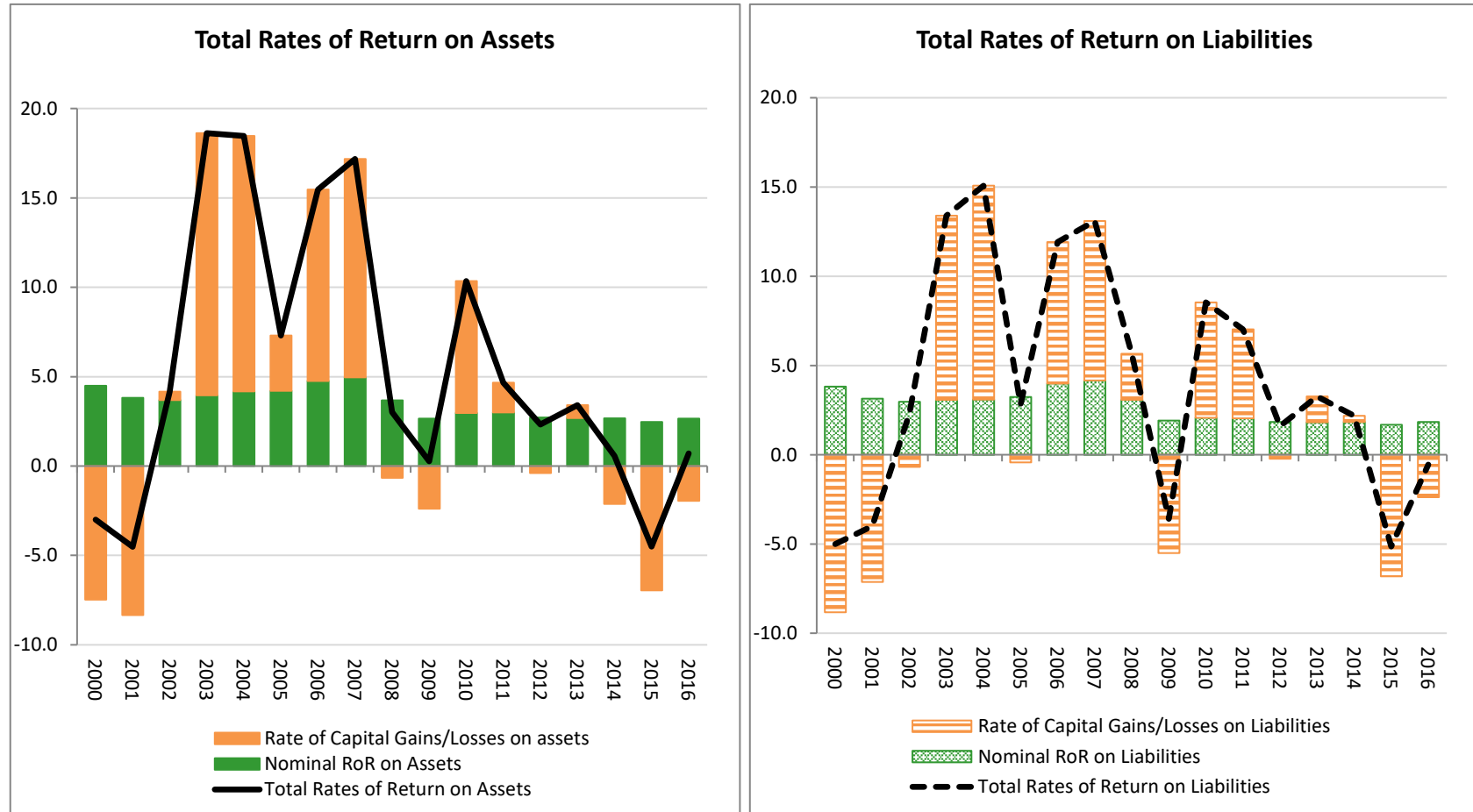
**Chart 10: Total Rates of Return on Gross Assets and Liabilities for G20 Emerging Economies**

(in percent)



Source: As table 1.

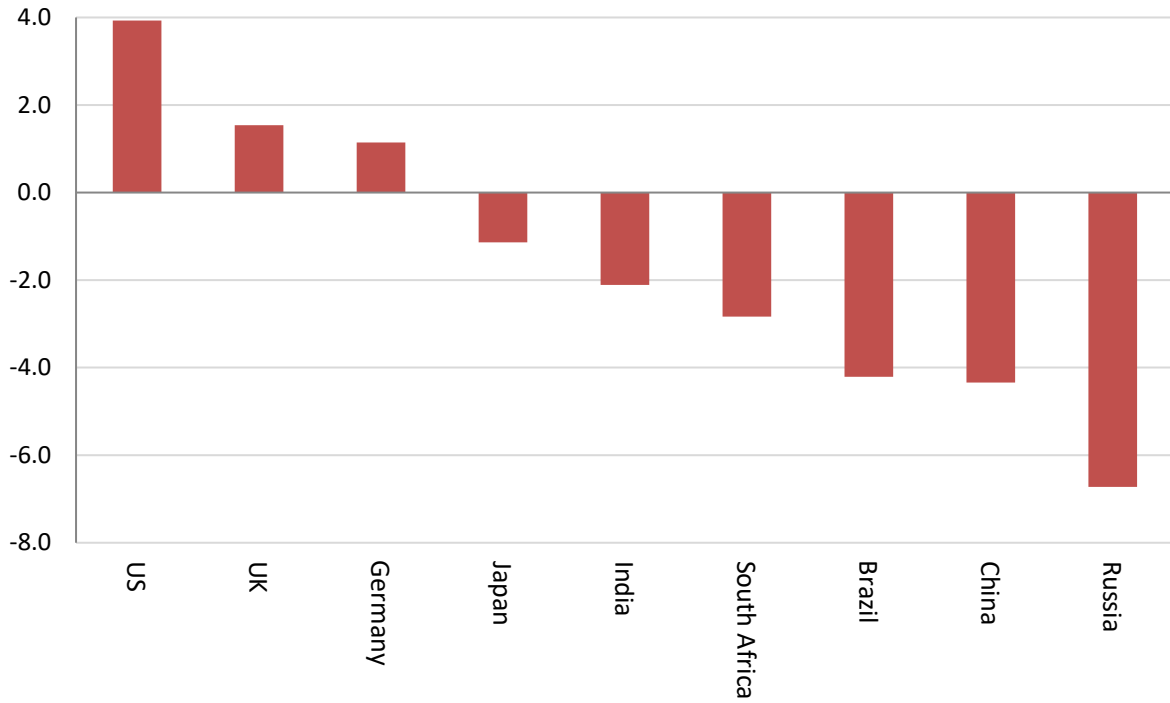
**Chart 11: Total Rates of Return on Gross Assets and Liabilities for G20 Advanced Economies**  
(in percent)



Source: As table 1.



**Chart 12: Dollar Return Differentials on FDI in G20 Economies**  
(per cent)



**Source:** As table 1.

**Table 1: Gross External Assets and Liabilities***(in per cent of GDP)*

|              | Year 2000 |             |       | Year 2016 |             |       |
|--------------|-----------|-------------|-------|-----------|-------------|-------|
|              | Assets    | Liabilities | NFA   | Assets    | Liabilities | NFA   |
| Argentina    | 48.8      | 71.9        | -23.2 | 51.4      | 47.7        | 3.7   |
| Brazil       | 18.1      | 57.9        | -39.8 | 43.0      | 82.6        | -39.6 |
| China        | 35.1      | 31.7        | 3.4   | 57.6      | 42.7        | 14.8  |
| India        | 12.2      | 29.2        | -17.0 | 23.3      | 49.1        | -25.8 |
| Indonesia    | 24.8      | 96.9        | -72.1 | 31.9      | 67.0        | -35.1 |
| Mexico       | 19.1      | 51.0        | -31.9 | 59.1      | 102.4       | -43.3 |
| Russia       | 87.9      | 66.0        | 21.9  | 92.9      | 78.0        | 14.9  |
| South Africa | 64.6      | 73.5        | -8.9  | 139.7     | 137.3       | 2.4   |
| Turkey       | 19.7      | 55.5        | -35.8 | 23.0      | 66.3        | -43.2 |

**Source:** Author's estimates based on IMF IIP and WEO databases and Lane and Milesi-Ferretti (2017).

**Table 2: Current Account Balances, NFA Positions and Capital Gains (+)  
and Losses (-): 2000-2016**

| <b>Country</b> | <b>Cumulative<br/>current account<br/>(billion dollars)</b> | <b>Change in<br/>NFA<br/>(billion dollars)</b> | <b>Capital gains/<br/>losses<br/>(billion dollars)</b> | <b>Capital gains/<br/>losses<br/>(% of 2016 GDP)</b> |
|----------------|---|--|--|--|
| Argentina      | -17   | 92   | 109  | 20.0   |
| Brazil         | -536  | -452   | 83   | 4.6  |
| China          | 3,020   | 1,623  | -1,397   | -12.4  |
| India          | -389  | -502   | -113   | -5.0   |
| Indonesia      | -52   | -198   | -146   | -15.7  |
| Mexico         | -229  | -237   | -8   | -0.8   |
| Russia         | 976   | 130  | -846   | -65.9  |
| South Africa   | -166  | 19   | 185  | 62.7   |
| Turkey         | -497  | -275   | 222  | 25.7   |
| <b>EMEs</b>    | <b>2,111</b>  | <b>199</b>                                     | <b>-1,912</b>  | <b>-9.4</b>  |
| Germany        | 2,927   | 1,670  | -1,258   | -36.2  |
| Japan          | 2,177   | 1,813  | -364   | -7.4   |
| UK             | -1,187  | 682  | 1,869  | 71.1   |
| US             | -8,218  | -6,814   | 1,404  | 7.5  |
| <b>AEs</b>     | <b>-4,301</b>   | <b>-2,649</b>                                  | <b>1,652</b>   | <b>5.6</b>   |

**Source:** As table 1.

**Table 3: Correlation Between Current Account Balances  
and Changes in NFA Positions**

|                    | In billion dollars | In per cent of GDP |
|--------------------|--------------------|--------------------|
| Argentina          | 0.5                | 0.6                |
| Brazil             | -0.1               | -0.3               |
| China              | 0.5                | 0.7                |
| India              | 0.2                | 0.2                |
| Indonesia          | -0.1               | 0.3                |
| Mexico             | -0.4               | -0.6               |
| Russian Federation | 0.5                | 0.4                |
| South Africa       | -0.2               | -0.2               |
| Turkey             | -0.1               | 0.1                |
| <b>EMEs</b>        | <b>0.2</b>         | <b>0.1</b>         |
| Germany            | 0.4                | 0.4                |
| Japan              | 0.5                | 0.4                |
| United Kingdom     | -0.3               | -0.3               |
| United States      | -0.1               | -0.2               |
| <b>AEs</b>         | <b>0.0</b>         | <b>-0.1</b>        |

**Source:** As table 1.

**Table 4: Composition of Gross International Assets**  
(% of total)

|                     | FDI         |             |             | Portfolio equity |             |             | Debt        |             |             | FX Reserves minus gold |             |             |
|---------------------|-------------|-------------|-------------|------------------|-------------|-------------|-------------|-------------|-------------|------------------------|-------------|-------------|
|                     | 2000-01     | 2006-07     | 2015-16     | 2000-01          | 2006-07     | 2015-16     | 2000-01     | 2006-07     | 2015-16     | 2000-01                | 2006-07     | 2015-16     |
| Argentina           | 15.3        | 14.6        | 14.3        | 5.2              | 7.2         | 5.6         | 65.4        | 57.7        | 68.9        | 14.0                   | 20.5        | 11.0        |
| Brazil              | 42.1        | 40.0        | 39.9        | 2.5              | 1.5         | 2.4         | 27.1        | 19.5        | 11.6        | 28.3                   | 39.0        | 47.0        |
| China               | 5.9         | 5.1         | 19.6        | 1.4              | 0.8         | 3.0         | 50.6        | 30.6        | 24.5        | 42.1                   | 63.5        | 50.7        |
| India               | 5.4         | 12.7        | 27.0        | 1.2              | 0.4         | 0.9         | 25.6        | 8.3         | 7.8         | 67.8                   | 78.5        | 64.8        |
| Indonesia           | 0.8         | 10.6        | 21.4        | 1.2              | 0.9         | 2.1         | 34.6        | 36.5        | 24.9        | 63.4                   | 52.0        | 43.6        |
| Mexico              | 20.3        | 24.3        | 24.9        | 3.4              | 6.2         | 6.2         | 49.3        | 40.2        | 38.1        | 27.0                   | 29.2        | 28.8        |
| Russian Federation  | 12.8        | 32.6        | 34.1        | 0.1              | 0.3         | 0.8         | 75.8        | 25.7        | 36.5        | 11.3                   | 41.3        | 27.9        |
| South Africa        | 27.3        | 24.0        | 40.6        | 48.2             | 37.1        | 34.8        | 15.3        | 21.6        | 11.1        | 8.4                    | 13.2        | 10.5        |
| Turkey              | 7.8         | 6.7         | 18.7        | 2.6              | 1.4         | 1.2         | 50.7        | 49.0        | 32.6        | 38.9                   | 42.9        | 46.2        |
| <b>EMEs average</b> | <b>15.3</b> | <b>19.0</b> | <b>26.7</b> | <b>7.3</b>       | <b>6.2</b>  | <b>6.3</b>  | <b>43.8</b> | <b>32.1</b> | <b>28.4</b> | <b>33.5</b>            | <b>42.2</b> | <b>36.7</b> |
| Germany             | 21.3        | 20.2        | 23.0        | 19.4             | 13.4        | 11.5        | 57.3        | 65.7        | 56.1        | 2.0                    | 0.6         | 0.8         |
| Japan               | 10.0        | 10.0        | 16.0        | 8.4              | 10.8        | 16.3        | 68.7        | 60.3        | 47.2        | 12.8                   | 18.3        | 14.7        |
| United Kingdom      | 24.3        | 15.0        | 13.8        | 13.8             | 11.2        | 12.1        | 61.1        | 58.1        | 49.8        | 0.8                    | 0.3         | 0.9         |
| United States       | 37.4        | 29.5        | 30.5        | 23.6             | 26.1        | 29.9        | 38.2        | 34.0        | 29.2        | 0.8                    | 0.3         | 0.5         |
| <b>AEs average</b>  | <b>23.2</b> | <b>18.7</b> | <b>20.8</b> | <b>16.3</b>      | <b>15.4</b> | <b>17.5</b> | <b>56.3</b> | <b>54.5</b> | <b>45.6</b> | <b>4.1</b>             | <b>4.9</b>  | <b>4.2</b>  |

**Source:** As chart 1.

**Note:** Debt equals to portfolio debt securities plus other investments (loans and deposits). The shares do not add to 100 because of financial derivatives.

**Table 5: Composition of Gross International Liabilities**  
(% of total)

|                     | FDI         |             |             | Portfolio equity |             |             | Debt        |             |             |
|---------------------|-------------|-------------|-------------|------------------|-------------|-------------|-------------|-------------|-------------|
|                     | 2000-2001   | 2006-2007   | 2015-2016   | 2000-2001        | 2006-2007   | 2015-2016   | 2000-2001   | 2006-2007   | 2015-2016   |
| Argentina           | 32.5        | 36.1        | 36.2        | 1.3              | 3.3         | 4.0         | 66.2        | 57.9        | 59.7        |
| Brazil              | 31.6        | 35.7        | 51.3        | 10.8             | 36.3        | 14.4        | 57.6        | 27.9        | 34.2        |
| China               | 57.2        | 48.0        | 62.2        | 3.4              | 25.7        | 12.5        | 39.4        | 26.3        | 25.1        |
| India               | 16.1        | 17.2        | 27.2        | 12.7             | 46.4        | 30.9        | 71.1        | 36.3        | 42.9        |
| Indonesia           | 11.1        | 30.1        | 40.5        | 3.5              | 14.7        | 14.7        | 85.5        | 55.1        | 45.5        |
| Mexico              | 41.1        | 45.0        | 45.2        | 14.0             | 23.7        | 11.9        | 44.9        | 31.3        | 43.0        |
| Russia              | 21.0        | 37.0        | 43.4        | 9.4              | 25.9        | 14.3        | 69.6        | 37.1        | 42.3        |
| South Africa        | 43.2        | 42.4        | 34.7        | 21.6             | 34.5        | 33.5        | 34.7        | 20.3        | 28.9        |
| Turkey              | 13.6        | 29.7        | 24.6        | 4.5              | 11.5        | 6.5         | 81.9        | 58.9        | 68.8        |
| <b>EMEs average</b> | <b>29.7</b> | <b>35.7</b> | <b>40.6</b> | <b>9.0</b>       | <b>24.7</b> | <b>15.9</b> | <b>61.2</b> | <b>39.0</b> | <b>43.4</b> |
| Germany             | 18.8        | 18.1        | 19.7        | 11.0             | 12.0        | 10.5        | 70.2        | 69.9        | 58.6        |
| Japan               | 3.2         | 4.1         | 4.1         | 27.5             | 41.4        | 29.4        | 69.1        | 53.3        | 56.4        |
| United Kingdom      | 13.9        | 10.8        | 12.6        | 19.3             | 11.1        | 11.5        | 66.8        | 62.6        | 53.4        |
| United States       | 31.3        | 19.7        | 22.2        | 17.3             | 15.0        | 20.5        | 51.5        | 56.4        | 50.2        |
| <b>AEs average</b>  | <b>16.8</b> | <b>13.2</b> | <b>14.6</b> | <b>18.8</b>      | <b>19.9</b> | <b>17.9</b> | <b>64.4</b> | <b>60.5</b> | <b>54.6</b> |

**Source:** As chart 1.

**Note:** Debt equals to portfolio debt securities plus other investments (loans and deposits). The shares do not add to 100 because of financial derivatives.

**Table 6: Net Positions in Equity and Debt**  
(in % of GDP)

|                | Equity       |              |              | Debt        |              |              |
|----------------|--------------|--------------|--------------|-------------|--------------|--------------|
|                | 2000-2001    | 2006-2007    | 2015-2016    | 2000-2001   | 2006-2007    | 2015-2016    |
| Argentina      | -16.1        | -11.5        | -7.4         | -13.2       | 15.5         | 11.7         |
| Brazil         | -17.5        | -32.1        | -32.0        | -24.7       | -1.0         | -0.8         |
| China          | -17.1        | -28.3        | -18.6        | 20.0        | 48.8         | 31.6         |
| India          | -7.6         | -26.6        | -22.8        | -9.0        | 5.1          | -4.3         |
| Indonesia      | -13.2        | -23.1        | -30.9        | -56.0       | -12.6        | -12.1        |
| Mexico         | -23.4        | -36.1        | -39.7        | -7.1        | -1.0         | -6.1         |
| Russia         | -9.5         | -26.5        | -9.7         | 26.5        | 19.7         | 27.6         |
| South Africa   | -1.5         | -33.2        | 14.3         | -10.8       | 4.2          | -7.7         |
| Turkey         | -8.9         | -25.9        | -16.4        | -30.3       | -16.1        | -28.3        |
| <b>EMEs</b>    | <b>-15.4</b> | <b>-28.5</b> | <b>-20.4</b> | <b>-3.1</b> | <b>18.4</b>  | <b>16.9</b>  |
| Germany        | 16.0         | 12.8         | 24.7         | -13.6       | 5.2          | 22.8         |
| Japan          | 0.6          | -7.4         | 18.7         | 26.9        | 51.4         | 44.6         |
| United Kingdom | 11.1         | 18.9         | 11.5         | -19.9       | -27.8        | -9.3         |
| United States  | -0.4         | 22.7         | 3.8          | -18.6       | -35.5        | -47.8        |
| <b>AEs</b>     | <b>2.5</b>   | <b>15.5</b>  | <b>9.4</b>   | <b>-7.0</b> | <b>-13.4</b> | <b>-21.2</b> |

**Source:** As table 1.

**Note:** Net positions in equity equal to portfolio equity securities plus FDI; and debt (including reserves) equals to portfolio debt securities plus other investments plus reserve assets.

**Table 7: NFA Position and Net International Investment Income**  
(in per cent of GDP)

|              | Net Foreign Assets |             |             | Net International Investment Income |             |             |
|--------------|--------------------|-------------|-------------|-------------------------------------|-------------|-------------|
|              | 2000-2007          | 2008-2016   | 2000-2016   | 2000-2007                           | 2008-2016   | 2000-2016   |
| Argentina    | -24.6              | 5.3         | -8.8        | -4.1                                | -2.5        | -3.3        |
| Brazil       | -39.5              | -31.1       | -35.1       | -3.0                                | -2.3        | -2.6        |
| China        | 11.4               | 19.6        | 15.7        | -0.7                                | -0.5        | -0.6        |
| India        | -15.9              | -23.9       | -20.2       | -0.7                                | -1.0        | -0.8        |
| Indonesia    | -47.7              | -38.1       | -42.6       | -3.6                                | -2.8        | -3.2        |
| Mexico       | -32.2              | -39.9       | -36.3       | -1.9                                | -2.1        | -2.0        |
| Russia       | 3.0                | 9.2         | 6.3         | -2.1                                | -2.5        | -2.3        |
| South Africa | -18.9              | -9.3        | -13.8       | -2.3                                | -2.5        | -2.4        |
| Turkey       | -37.4              | -43.1       | -40.4       | -1.6                                | -1.0        | -1.2        |
| <b>EMEs</b>  | <b>-13.6</b>       | <b>-3.1</b> | <b>-8.1</b> | <b>-1.6</b>                         | <b>-1.3</b> | <b>-1.5</b> |
| Germany      | 6.5                | 28.4        | 18.1        | 0.1                                 | 1.9         | 1.1         |
| Japan        | 35.4               | 57.1        | 46.9        | 2.0                                 | 3.2         | 2.6         |
| UK           | -8.4               | -6.1        | -7.2        | 1.4                                 | -0.1        | 0.6         |
| US           | -17.7              | -32.5       | -25.5       | 0.4                                 | 1.2         | 0.8         |
| <b>AEs</b>   | <b>-2.6</b>        | <b>-5.4</b> | <b>-4.1</b> | <b>0.8</b>                          | <b>1.5</b>  | <b>1.2</b>  |

**Source:** As table 1.



**Table 8: Dollar Rates of Return (Yields) on Gross External Assets and Liabilities**  
(in per cent)

|              | Gross Assets |            |            | Gross Liabilities |            |            |
|--------------|--------------|------------|------------|-------------------|------------|------------|
|              | 2000-2007    | 2008-2016  | 2000-2016  | 2000-2007         | 2008-2016  | 2000-2016  |
| Argentina    | 3.3          | 1.3        | 2.2        | 6.5               | 7.4        | 7.0        |
| Brazil       | 2.7          | 2.2        | 2.4        | 6.3               | 5.1        | 5.7        |
| China        | 3.1          | 3.4        | 3.3        | 6.2               | 6.4        | 6.3        |
| India        | 4.6          | 2.4        | 3.4        | 4.7               | 3.4        | 4.0        |
| Indonesia    | 3.8          | 1.7        | 2.7        | 6.7               | 5.9        | 6.3        |
| Mexico       | 2.7          | 2.0        | 2.3        | 4.6               | 3.7        | 4.1        |
| Russia       | 3.5          | 3.4        | 3.5        | 7.3               | 7.9        | 7.6        |
| South Africa | 3.1          | 1.6        | 2.3        | 5.6               | 3.8        | 4.6        |
| Turkey       | 4.4          | 2.6        | 3.4        | 4.6               | 2.4        | 3.5        |
| <b>EMEs</b>  | <b>3.3</b>   | <b>3.0</b> | <b>3.1</b> | <b>5.9</b>        | <b>5.4</b> | <b>5.7</b> |
| Germany      | 4.0          | 2.8        | 3.4        | 4.1               | 2.2        | 3.1        |
| Japan        | 3.6          | 3.3        | 3.4        | 1.7               | 1.5        | 1.6        |
| UK           | 4.3          | 1.8        | 3.0        | 3.7               | 1.8        | 2.7        |
| US           | 4.6          | 3.5        | 4.0        | 3.4               | 2.2        | 2.8        |
| <b>AEs</b>   | <b>4.3</b>   | <b>2.8</b> | <b>3.5</b> | <b>3.4</b>        | <b>2.0</b> | <b>2.7</b> |

Source: As table 1.

**Table 9: Total Rates of Return on Gross External Assets and Liabilities***(in per cent)*

|              | Gross Assets |             |            | Gross Liabilities |            |            |
|--------------|--------------|-------------|------------|-------------------|------------|------------|
|              | 2000-2007    | 2008-2016   | 2000-2016  | 2000-2007         | 2008-2016  | 2000-2016  |
| Argentina    | 2.2          | 0.6         | 1.4        | 2.9               | 3.6        | 3.3        |
| Brazil       | 4.2          | -1.7        | 1.1        | 12.0              | 3.4        | 7.4        |
| China        | 4.2          | 1.8         | 2.9        | 8.0               | 9.2        | 8.6        |
| India        | 7.7          | -5.9        | 0.5        | 15.1              | -1.6       | 6.3        |
| Indonesia    | 2.0          | -0.9        | 0.5        | 10.3              | 9.2        | 9.7        |
| Mexico       | 7.2          | -1.3        | 2.7        | 7.2               | 1.4        | 4.1        |
| Russia       | 2.7          | -5.1        | -1.5       | 24.3              | 3.8        | 13.4       |
| South Africa | 12.0         | 6.7         | 9.2        | 13.9              | 2.6        | 7.9        |
| Turkey       | 7.2          | 2.3         | 4.6        | 10.7              | -3.2       | 3.4        |
| <b>EMEs</b>  | <b>4.6</b>   | <b>-0.1</b> | <b>2.1</b> | <b>11.2</b>       | <b>4.0</b> | <b>7.4</b> |
| Germany      | 8.4          | 0.1         | 4.0        | 9.1               | 0.9        | 4.7        |
| Japan        | 3.4          | 3.8         | 3.6        | 1.2               | 2.9        | 2.1        |
| UK           | 10.5         | 1.3         | 5.6        | 9.0               | 0.0        | 4.3        |
| US           | 11.2         | 3.5         | 7.1        | 4.9               | 3.5        | 4.1        |
| <b>AEs</b>   | <b>9.2</b>   | <b>2.3</b>  | <b>5.6</b> | <b>6.2</b>        | <b>2.1</b> | <b>4.0</b> |

*Source:* As table 1.

**Table 10: Returns, Yields and Capital Gains and Losses for Emerging and Advanced Economies**  
(Per cent)

|                  | Total Return |             |              | Yield  |             |              | Capital Gains/Losses |             |       |
|------------------|--------------|-------------|--------------|--------|-------------|--------------|----------------------|-------------|-------|
|                  | Assets       | Liabilities | Differential | Assets | Liabilities | Differential | Assets               | Liabilities | Total |
| <b>2000-2016</b> |              |             |              |        |             |              |                      |             |       |
| EMEs             | 2.1          | 7.4         | -5.3         | 3.1    | 5.7         | -2.6         | -1.0                 | -1.7        | -2.7  |
| AEs              | 5.6          | 4.0         | 1.6          | 3.5    | 2.7         | 0.8          | 2.1                  | -1.3        | 0.8   |
| <b>2000-2007</b> |              |             |              |        |             |              |                      |             |       |
| EMEs             | 4.6          | 11.2        | -6.6         | 3.3    | 5.9         | -2.6         | 1.3                  | -5.3        | -4.0  |
| AEs              | 9.2          | 6.2         | 3.0          | 4.3    | 3.4         | 0.9          | 4.9                  | -2.8        | 2.1   |
| <b>2008-2016</b> |              |             |              |        |             |              |                      |             |       |
| EMEs             | -0.1         | 4.0         | -4.1         | 3.0    | 5.4         | -2.4         | -3.1                 | 1.4         | -1.7  |
| AEs              | 2.3          | 2.1         | 0.2          | 2.8    | 2.0         | 0.8          | -0.5                 | -0.1        | -0.6  |

*Source:* Tables 8 and 9.