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# UBS research focus

## The future of the US dollar

Powerful trends are eroding the US dollar's strength

Foreign financing of US deficits is a major risk

Many emerging market currencies poised to strengthen

Central banks will seek to diversify their forex reserves

A multi-currency reserve framework may slowly emerge

US dollar still unchallenged as a medium of exchange



**UBS** Wealth  
Management

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Dear reader,

The global economy is slowly emerging from the worst recession in seventy years. Strikingly, these seven decades coincide with the US dollar's reign as the world's dominant currency for trade and central banks' reserves. The financial crisis exposed some long-brewing global economic imbalances, and it has cast the US dollar's exalted status into question as never before. In this *UBS research focus* we examine the dollar's recent woes and assess its outlook for the next several years. Clearly, the dollar's fate will have profound consequences for the global economy and for individual investors.

The financial crisis first erupted in the US, but it did not end there, as our globalized trading and financial systems nearly seized along with frozen credit markets. Only the massive intervention of governments around the world shielded many economies from the pain of trimming the debt held in their households and financial sectors.

Whatever history's verdict on the stimulus measures may be, government debt is now poised to surge in many developed countries, and with it, longer-term inflation risks seem hard to avoid. Meanwhile, imbalances in global trade and investment flows persist and may even increase if the currencies of the export-driven economies, China's above all, remain artificially weak versus the dollar and the euro.

The US economy was already in a precarious state before the financial crisis erupted, as hindsight makes only more apparent. Its plight has since worsened, both in absolute terms and relative to other countries. Fiscal deficits have soared, households remain heavily indebted, and America still relies on other countries to finance its domestic investment and spending needs. Given our ten-year forecasts – see our March 2009 *UBS research focus*, “The financial crisis and its aftermath” – calling for slower growth and higher inflation expectations in the US than in many other developed economies, the US dollar clearly faces challenges to retaining its status as the world's dominant currency.

Central banks, financial institutions and investors around the world are monitoring the dollar's trials closely, and some are beginning to think out loud about alternatives. But change of any sort is itself a daunting challenge. An abrupt collapse in the US dollar would traumatize international trade and financial markets and devastate the value of dollar-denominated assets held throughout the world. But disruptive exchange-rate realignments can be avoided if, for example, emerging market currencies are allowed to appreciate, the world's central banks slowly diversify their reserve currency holdings, the US savings rate rises, inflation is kept under control, and the US dollar weakens further, but in an orderly manner.

Reserve currencies are no longer backed by hard assets like gold and silver. Their stability relies on the trust that investors place in them. In the present situation, we think a wise set of globally coordinated policies can preserve this trust while accounting for evolving realities like the greater role of emerging economies in the global economic system.

Given the complexity of the subject and the gravity of its implications, we think investors should take a good look at the possible consequences of sustained US dollar weakness. Our goal with this *UBS research focus* is to help investors ask the right questions and to guide them to some plausible strategies. We think it is not too early to take steps to limit the impact of this trend on portfolios. Investors, executives, and entrepreneurs with assets and income streams exposed to one end of the US dollar exchange rate should consider that recent US dollar weakness may continue for an extended period of time. They may want to consider how best to insulate their wealth from erosion, or even how to take advantage of other currencies' strength.



Andreas Höfert  
Global Head Wealth Management Research



Kurt E. Reiman  
Head Thematic Research

# The future of the US dollar

### **Powerful trends are eroding the US dollar's strength**

The US dollar has been battered lately, and it seems likely that the greenback will weaken on a structural basis. We expect that America's grim balance sheet – specifically, its high and increasing government debt levels and its large current account deficit – will weigh on the US dollar for the foreseeable future. Additionally, we expect the US may experience higher inflation than other countries, further burdening the dollar. However, there is no ready substitute for the dollar in global trade and as the world's reserve currency. Given that so many countries have their savings in the US currency, a dollar collapse would be universally resisted.

### **Foreign financing of US deficits is a major risk**

We think the acute global imbalances will weigh more on the US dollar than on the currencies of most other advanced economies. The dollar and the Japanese yen face huge challenges. Japan's debt-to-GDP ratio approaches 200%, and America's dependence on external financing of its fiscal deficit is daunting – as illustrated by its cumulative current account deficit that now totals more than 50% of its 2008 GDP. In our view, the euro currently enjoys the strongest fundamentals and therefore the best chance of appreciating. Of course, the Eurozone economies face their own difficulties in the aftermath of the financial crisis. However, the region's combined debt-to-GDP ratio, comparable to US levels and much lower than Japan's, remains mostly internally financed.

### **Many emerging market currencies poised to strengthen**

Many emerging market currencies have stabilized and even benefited from the strong performance of their economies and from substantial improvements in policies and governance. We would expect further improvement in the macroeconomic environment, including high economic growth rates and declining inflation, to raise productivity, encourage investment, increase domestic consumption, and lower interest rates. As a result, we expect a steep appreciation path for many emerging market currencies over the next decade. Nonetheless, we do not think they will form a major part of central bank reserves for at least a decade; nor will they compete directly with the currencies of advanced economies as stores of value or mediums of exchange.

### **Central banks will seek to diversify their forex reserves**

At present, only a major geopolitical or economic upheaval could unseat the US dollar as the world's reserve currency. The reason for the dollar's strong grip, despite its myriad problems, is straightforward: network effects – the cumulative benefits of having a single, dominant reserve currency – are of considerable value to the global economy. Given

America's profound economic problems and the general demand for a more diversified currency portfolio among official and private investors, we expect the share of dollars held in international portfolios to decline. In sum, we think the US dollar is likely to slowly lose its absolute dominance.

Over the past 20 years, the US has been able to deploy vast amounts of dollar-denominated assets around the globe thanks to the dollar's status as the world's reserve currency. But over the next several years, the US will continue to rely on foreign investment flows to finance its huge trade and fiscal deficits. This means that any shifts in foreign exchange reserve holdings must occur gradually and deliberately in order to prevent any risk of a dollar collapse.

### **A multi-currency reserve framework may slowly emerge**

While the euro may be the strongest contender for the US dollar's status as the world's reserve currency, the Eurozone's heterogeneous political structure limits its chances, much as Japan's towering debt-to-GDP ratio hinders the yen, while the limited convertibility of the Chinese yuan also creates obstacles for its adoption globally. Since there is no single currency waiting in the wings to take the dollar's place, we think a multicurrency reserve framework, with the US dollar playing a central role, seems the most likely development.

### **US dollar still unchallenged as a medium of exchange**

We expect little change in the dollar's role as a means of transaction and unit of account for international trade. A single, broadly accepted currency is efficient, and replacing it would entail enormous costs. Given that the US is still the world's largest currency area and that any change in the composition of foreign exchange reserves globally would be very difficult to orchestrate, we would expect the dollar's dominant role in international trade to continue for the foreseeable future.

## Introduction

# The US dollar under siege



## Shifting global imbalances

Although the US dollar did not collapse in the aftermath of the financial crisis, it has surely lost some stature. After appreciating sharply during the worst of the storm, it has again come under pressure in late 2009.

Acute imbalances in international trade and capital flows, the subject of our March 2008 *UBS research focus* entitled, "Currencies: a delicate imbalance," already posed significant threats to the US dollar before the financial crisis. Although some of these imbalances may no longer be growing as quickly as they did just a few years ago, they are still significant. The US current account deficit has narrowed thanks to lower oil prices and the recent, hefty balance-sheet deleveraging of households and businesses (see Fig. 1). But America must still import capital from abroad to finance its public and private spending needs, and, given its ambitious government spending programs, it will have to borrow at an even larger scale in future.

The skyrocketing US current account deficit in recent years is mirrored in the massive stockpiling of foreign exchange reserves, mostly denominated in US dollars, among the world's central banks (see Fig. 2). Reserve accumulation peaked at just over USD 7 trillion in the second quarter of 2008, dropping slightly thereafter as central banks reportedly sold dollars as the financial crisis deepened. That said, the People's Bank of China continues to amass enormous foreign exchange reserves, topping USD 2 trillion for the first time in the second quarter of 2009. Many countries that peg their currencies to the US dollar, or employ some

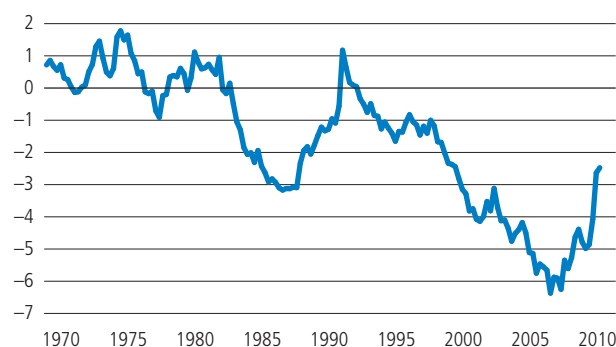
form of a managed exchange rate versus the dollar, continue to see their foreign exchange reserves swell, either because their currencies are set at artificially low levels or because they have seen windfalls from high commodity prices.

These global imbalances might have moderated had governments not intervened so robustly to boost their domestic economies in response to the financial crisis. But now another imbalance has grown in the aftermath of the crisis – this time on the liability side of government balance sheets, as authorities issue debt to finance massive spending programs aimed at resuscitating their ailing economies. Not surprisingly, the countries where debt issuance is greatest are those with the most highly leveraged household and financial sector balance sheets (see Fig. 3).

The US economy was already one of the world's most highly leveraged economies heading into the financial crisis. As the government rescue plan is implemented, the US is among the countries with the greatest projected increases in public-sector borrowing as a share of GDP. The mountain of government debt now being issued in response to the crisis will likely drag on US economic growth for years to come. Together with liquidity measures introduced by monetary policymakers to unfreeze credit channels and thus boost economic activity, the risk of inciting inflation expectations down the road, when the economy finally begins to operate on its own momentum, has clearly increased. In sum, the US dollar finds itself caught in a web of worrying fundamental trends.

**Fig. 1: Some improvement but still a massive deficit**

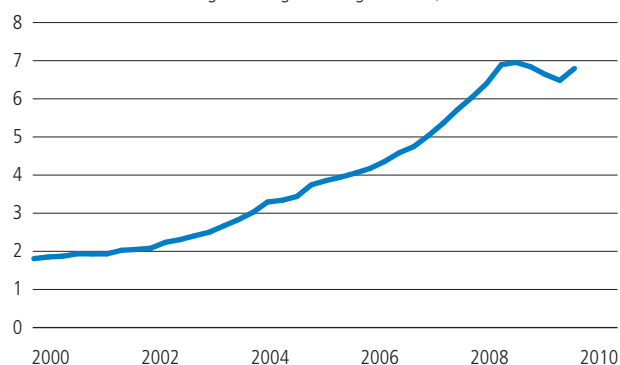
US current account balance as a share of GDP, in %



Source: Bureau of Economic Analysis, UBS WMR

**Fig. 2: Forex reserves again on the rise**

Official central bank holdings of foreign exchange reserves, in trillions of USD



Source: IMF COFER database, UBS WMR

## A safe-haven bounce

Because of the growing structural weaknesses in the US economy and the strengthening economic fundamentals in several major countries, the US dollar fell to massively undervalued levels in the years leading up to the financial crisis (see Fig. 4). When the crisis hit, the dollar rebounded as risk aversion mounted and global interest rates converged at low levels, sending investors in search of refuge to the world's most liquid financial markets and its premier reserve currency. In troubled times, the dollar beckoned.

But despite its perceived safe-haven status, the US dollar has been anything but stable during the past several years. For example, an investor who bought dollars in 2001 would have received roughly 80 US cents per euro. At its weakest point, at the height of the carry-trade frenzy in 2008, that investment was valued at half: one euro could purchase USD 1.60. And when the financial crisis peaked, the dollar again appreciated to 1.24 versus the euro, still significantly weaker than it was in 2001.

Why did the US dollar strengthen during the financial crisis, when it was already clear that structural factors were beginning to undermine its supremacy? Several reasons explain this seemingly anomalous behavior:

- Through the spring of 2008 many investors believed that the US would suffer alone from its burst real estate bubble and subprime mortgage debacle. When the global dimensions of the crisis became clear, other currencies, especially the euro, lost the premium they had enjoyed for supposedly being out of harm's way.
- As noted, the dollar was starkly undervalued versus the euro and other major currencies from a purchasing power parity perspective when the credit crisis began to unfold. PPP is the exchange rate that would make the price of a basket of goods in one country the same as in another country at a given point in time.

- The dollar appreciated precisely because of its status as the world's premier reserve currency. Investors seeking shelter from the storm demanded US dollars because the greenback is still seen as a store of value when market participants shun risky financial assets. This is not to deny the risks in the US economy, the role the US played in the financial crisis, or the other troubles with the US dollar. It is simply a validation of the benefits that accrue to the world's principal reserve currency, a status the US dollar still enjoys.

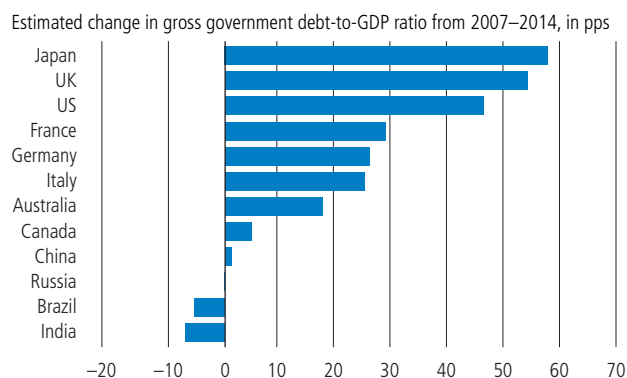
- Finally, the vast majority of assets written down during the financial crisis were denominated in dollars. Thus, to restore their balance sheets, many companies purchased US dollars after the initial wave of the crisis.

## Down but not out

The US dollar has been battered lately, and it seems quite likely that the greenback will weaken on a structural basis. America's twin deficits – the federal budget deficit and the current account deficit – are back with a vengeance. The US is the largest international and domestic debtor thanks to decades of accumulated borrowing to finance its current account deficit (see Fig. 5). Moreover, the economic growth outlook for the US is as bad, and in many cases worse, than for many other developed and developing countries, as is the inflation outlook.

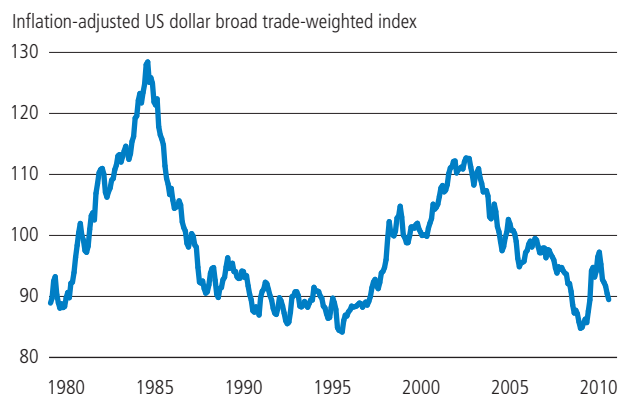
With such dire structural prospects weighing on the dollar, it is hardly surprising that market participants have begun to question its role as the principal international reserve currency and standard medium of exchange. But what could replace the dollar today? The question may be easily formulated, but it is not at all easy to answer. While the euro may be the strongest contender for the US dollar's status as the world's reserve currency, the Eurozone's heterogeneous political structure limits its chances, much as Japan's towering debt-to-GDP ratio hinders the yen, while the limited convertibility of the Chinese yuan also creates obstacles for its adoption globally.

**Fig. 3: Housing crisis leads to public debt surge**



Note: IMF staff projections.  
Source: Horton et al. (2009), IMF World Economic Outlook database (2009), UBS WMR

**Fig. 4: USD materially weaker amid major risks**



Source: Federal Reserve, UBS WMR

And we would also stress that, in principle, the dollar's weakness need not automatically threaten its reserve currency status, or its broad acceptance as a medium of exchange for international trade. The dollar has experienced protracted periods of weakness before without jeopardizing its reserve currency status. But, unlike in previous such episodes, global central banks, especially China's, now have truly massive holdings of US dollar-denominated assets. For them, these issues of economic and currency supremacy are inextricably linked because US dollar weakness translates directly into a decline in their wealth (see Fig. 6).

In a thoughtful, widely cited paper in March entitled, "Reform the International Monetary System," People's Bank of China President Zhou Xiaochuan urged replacing the US dollar as the world's reserve currency with a diversified basket of major currencies controlled by the International Monetary Fund. While Zhou's idea is provocative and well-reasoned, it is utterly improbable since America is unlikely to simply retire the dollar from its position of power. In the meantime, Chinese authorities are taking small, seemingly innocuous steps that, in aggregate, could eventually spell trouble for the value of the US dollar's special status in international trade and finance.

At the beginning of 2009, the Chinese started to sign swap agreements in Chinese yuan with several countries including Argentina, Indonesia, Malaysia and South Korea. In May, the Chinese and Brazilian presidents, Hu Jintao and Luiz Inacio Lula da Silva, signed an agreement to drop the dollar for use in bilateral trade and instead use their local currencies, the yuan and the real. Finally, at the beginning of September, China announced it would buy notes issued by the International Monetary Fund and denominated in Special Drawing Rights (SDRs).

In another, less direct measure to reduce its US dollar dependence, the Chinese government now explicitly encourages its domestic companies to use their earned dollars for mergers and acquisitions of overseas companies

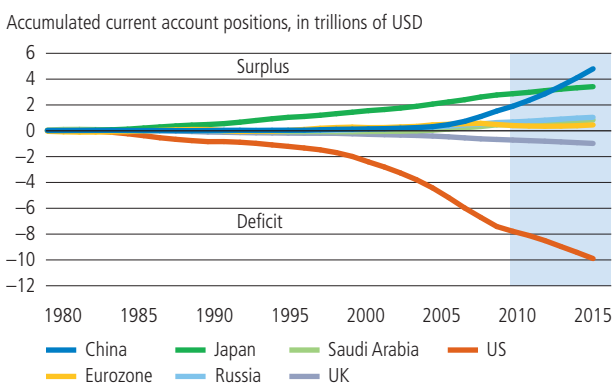
(especially in the energy and commodities sectors) instead of parking those dollars in US fixed income investments.

For the time being, the sums involved are relatively small. The swap agreements involving yuan amount to roughly 100 billion US dollars, the bilateral trade between Brazil and China was somewhere above 25 billion US dollars in 2008, the SDR investment will be around 50 billion US dollars, and the ten largest Chinese direct investments overseas so far in 2009 were, according to our estimates, slightly below 25 billion US dollars. Those numbers are obviously dwarfed by the trillions of US dollars in Chinese foreign exchange reserves.

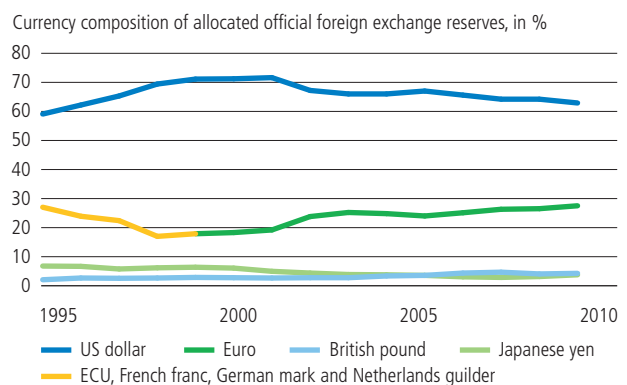
But the power of symbolic measures should not be underestimated. At the same time, wholesale policy shifts are in no one's interest since such measures could destabilize the delicate international imbalances that presently exist and could ultimately trigger a dollar crisis. Nonetheless, it is worth noting that several other emerging markets, among them Brazil and Russia, also expressed interest in an alternative reserve currency following China's SDR investment announcement.

While the days of the US dollar's dominance as the world's reserve currency are not yet over, many small cuts have begun to scratch its shine.

**Fig. 5: US the largest international debtor**



**Fig. 6: USD the most important reserve currency**



# A structurally weaker US dollar ahead



Prospects for high fiscal deficits and inflation will likely continue to weigh on the US dollar. The euro stands to gain thanks to its more stable macroeconomic environment. Some emerging market currencies should also appreciate versus those of developed countries.

## The dollar's weakening trend to continue

Stories abound in the media about the US dollar's decline, as do predictions of its imminent demise as the world's principal reserve currency. The issue flares up whenever there is sustained weakness in the US dollar, as we have seen in recent years. But a longer-term view reveals that these cycles are not new. The dollar has suffered bouts of protracted weakness in the past, for example, in the late seventies and in the mid-nineties, only to stage strong recoveries.

Since the Bretton Woods system of fixed exchange rates ended in 1973, the value of the US dollar against other major currencies has experienced large swings. For example, since its peak against the euro in 2001, the US dollar has lost nearly 50% of its value (see Fig. 1.1). With the dollar again near generational lows against the currencies of most of its trading partners, it seems reasonable to question whether the era of sustained US dollar weakness is coming to a close, or whether the greenback may be about to sink even lower.

Predicting exchange rates is fraught with uncertainty, especially when a forecast calls for a currency to deviate even further than it already does from its fundamental value, or purchasing power parity. PPP is the exchange rate that

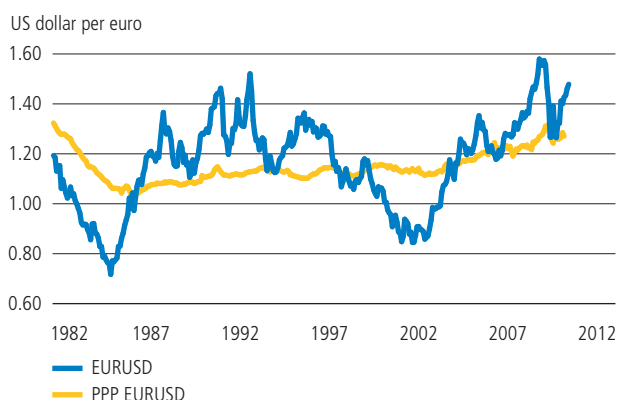
would make the price of a basket of goods in one country the same as in another country at a given point in time. While they may temporarily exceed or trail their PPP levels, currencies cannot deviate from these fundamental levels forever. However, PPP itself is not fixed; given enough time, even this long-term anchor can drift higher or lower depending on the inflation differential between two countries (see Fig. 1.1).

In our view, the US dollar will continue to weaken in the long term, even though it appears undervalued on a PPP basis against most major currencies at present and has already weakened considerably during the past several years. We also expect higher US inflation to lead to a gradual slide in PPP to levels that would imply a weaker fair value anchor for the US dollar, and we look for the dollar to remain weak relative to this new and lower measure. Meanwhile, we think there are strong reasons for the long-term appreciation of selected emerging market currencies versus the US dollar in the coming years.

## Relative differences in growth and inflation

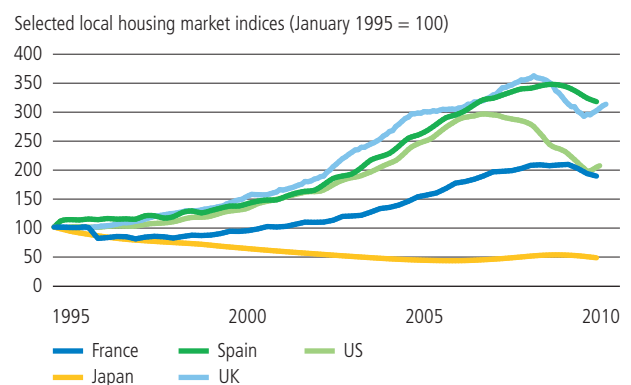
With currencies, *everything* is relative. The US dollar is not bound to weaken simply because of the US economy's

**Fig. 1.1: US dollar steadily weaker versus the euro**



Source: Thomson Reuters, UBS WMR

**Fig. 1.2: Sharp drop in housing prices**



Source: National Institute of Statistics and Economic Studies, Japan Real Estate Institute, Spain Ministry of Housing, Nationwide Building Society, S&P/Case-Shiller

structural problems; the situation has to be worse in the US than it is elsewhere for the dollar to fade. At present, there are many reasons to believe this is the case.

As we wrote in the *UBS research focus* in March 2009 entitled, "The financial crisis and its aftermath," deleveraging and reregulation are likely to restrain economic activity in developed countries for many years to come, especially where housing prices collapsed and household debt levels remain elevated (see Fig. 1.2). The UK and the US, as well as Spain, were heavily exposed to the housing crisis and debt accumulation. As a result, their trend rates of economic growth are likely to decline the most as they grapple with these structural impediments (see Fig. 1.3).

But even more worrisome are potential future trends in inflation expectations. In our view, the Eurozone's supranational governing structure, and its explicit mandate, forces European Central Bank policymakers to focus on containing inflation. Thus, we expect that its monetary stimulus will be removed as soon as the Eurozone economy shows signs of a self-sustaining recovery. The same cannot be said for the US and the UK, where national governments can more easily

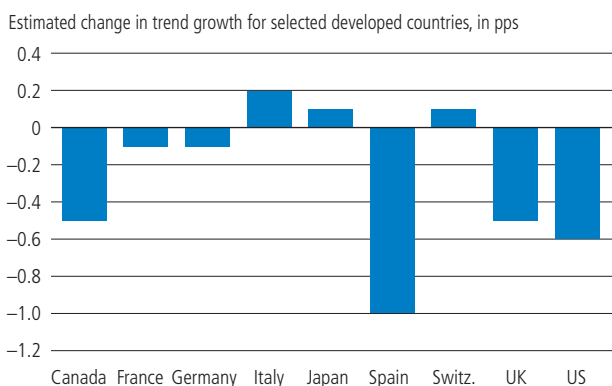
exert influence on their central banks. With limited scope to grow their way out of their debt problems, and deep political resistance in both countries to either raise taxes or cut government-funded services, the UK and the US may keep policies in place that could lead to sustained budget deficits and trigger higher inflation expectations down the road.

Both of these long-term economic projections – slower trend growth and higher inflation expectations relative to other developed countries – would tend to weigh on the US dollar and the British pound. In addition, we would expect the PPP valuation anchor for both of these currencies to weaken yet further with higher inflation in both of these countries.

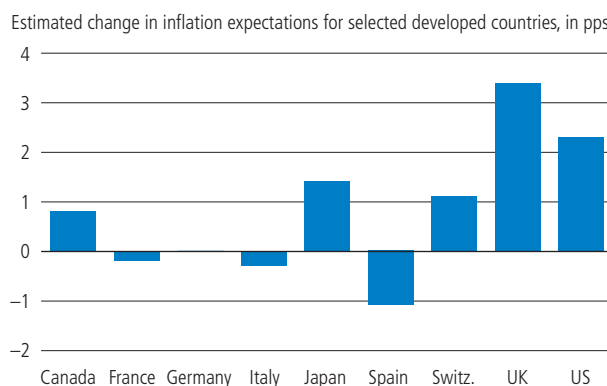
### US twin deficits unlikely to disappear soon

Policymakers in the US have heaped enormous costs on current and future generations of Americans in their effort to revive the economy from the depths of the financial crisis. The exact cost will not be known for some time, and, for the moment, much of the financing for these measures comes from foreign investment flows. While the aim of the spending measures was to boost economic activity in the

**Fig. 1.3: Trend economic growth to be weaker and inflation expectations higher**

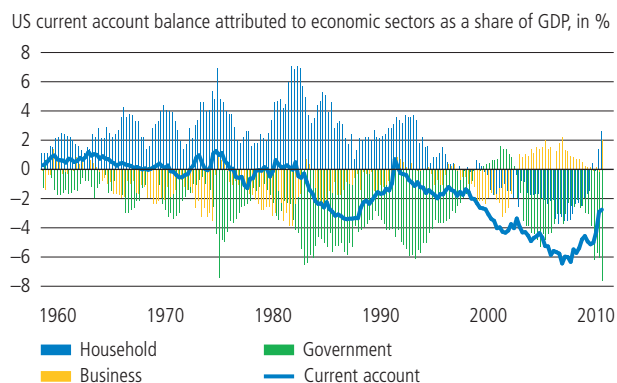
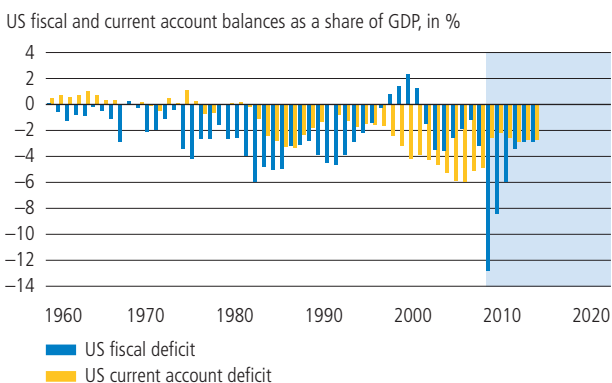


Source: UBS WMR



Note: Compares the 1998-2007 period to the forecasted or estimated trend in 2010-2020.

**Fig. 1.4: Fiscal deficit feeds sustained current account deficit**



Note: US fiscal deficit projections from the Office of Management and Budget, US current account deficit projections from the IMF's 2009 World Economic Outlook. Source: Bureau of Economic Analysis, IMF World Economic Outlook database (2009), Office of Management and Budget, UBS WMR

face of a deep and protracted recession, they also exacerbate the already towering US fiscal deficit and weigh on any potential improvement in the country's current account deficit. These so-called twin deficits are unlikely to disappear anytime soon (see Fig. 1.4).

The US government projects sustained deficits through the end of the next decade of around 3% of US GDP. It appears likely that the US will continue to rely on foreign investment flows to finance its spending. Even though domestic consumption fell during the recession, reducing the need for foreign financing a bit, the massive fiscal stimulus measures more than offset any benefit from consumer retrenchment (see Fig. 1.4). Moreover, US export competitiveness is unlikely to change overnight, even though the trade-weighted US dollar exchange rate is near its weakest level in more than a generation.

Freely floating exchange rates would normally correct such trade and financial imbalances. With a surge in exports and reduced demand for imported goods, a weaker US dollar would normally shrink the US current account deficit over time. However, if the greenback were to weaken abruptly, the US government could have difficulties financing its debt from foreign sources, who would be concerned that the value of their US-dollar assets was declining.

Along with a weaker US dollar, an increase in the US savings rate as consumers and businesses retrench could also ease these imbalances, but with heightened risks of hobbled economic growth. Therefore, the trend in the twin deficits will largely depend on future fiscal policy choices, assuming deficits remain as large as presently projected.

**Undervalued exchange rates threaten the system**

In our view, the main cause of the massive global imbalances today – even more than the US deficit-financing of its economy – is the policy stance of many emerging market countries to peg their exchange rates to the US dollar

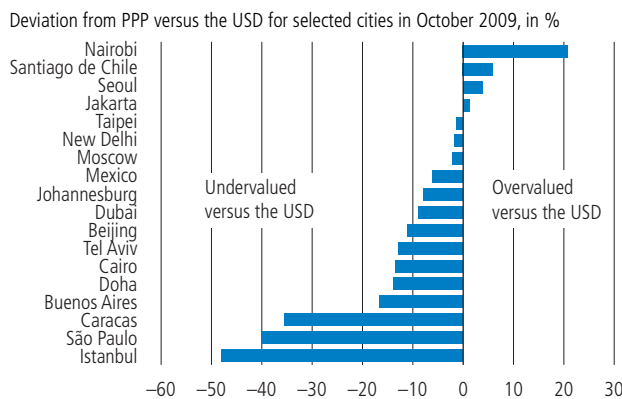
at grossly undervalued levels (see Fig. 1.5). These rates ignore, for example, the productivity gains these emerging economies have enjoyed over the last decade and longer. China, a big chunk of Asia ex-Japan, and the oil producers in the Middle East, have gained considerable competitive advantage by keeping their currencies more or less fixed versus the USD while their production capacities have increased.

Textbook economics teaches that relative prices and salaries should converge as levels of technical innovation and production do so across countries. But this adjustment process has been officially hampered in emerging Asia. Thus, their cheap products at first benefitted Western consumers, but since relative prices were not allowed to adjust, Asian manufacturers still enjoy an undue pricing advantage that no longer reflects their levels of development. As these low-cost producers move higher up the value chain, their artificially low currencies enable them to undercut the prices of high-value-added manufacturing industries in advanced economies.

Again, holding exchange rates at undervalued levels results in trade imbalances that feed the steady accumulation of foreign exchange reserves for the low-cost exporters. Either exchange rates or relative prices must move to rebalance trade relationships. If exchange rates are to accomplish this rebalancing, then most emerging currencies would need to appreciate sharply today. An adjustment in relative prices, on the other hand, implies higher wages in emerging markets or price inflation relative to advanced economies.

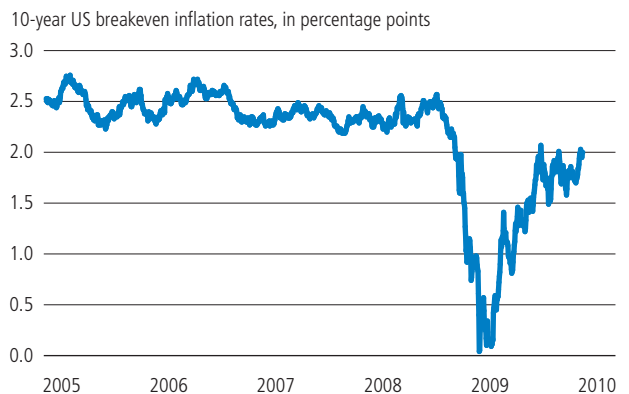
Had governments and central banks not intervened as aggressively as they did during the financial crisis, advanced economies would likely have entered a pronounced deflationary phase (see Fig. 1.6). Despite the widespread aversion to deflation, especially with massive debt overhangs throughout the world, the harsh medicine of a relative price adjustment probably would have brought

**Fig. 1.5: Emerging market currencies undervalued**



Source: *Prices and Earnings* (2009), Thomson Reuters, UBS WMR

**Fig. 1.6: Deflation fears surged during the crisis**



Source: Thomson Reuters, UBS WMR

the trade relationships between emerging and advanced economies back into balance.

The relative merits of intervention versus non-intervention will be the stuff of academic debate for years to come, no doubt. But, in the end, the interventionist path was chosen by the advanced economies (and by China, too) and its consequences will emerge in due course. For now, the reflationary measures undertaken by the advanced economies, on the one hand, and the intransigence of emerging markets to keep their currencies undervalued, on the other, create considerable uncertainty about how global trade imbalances will finally correct.

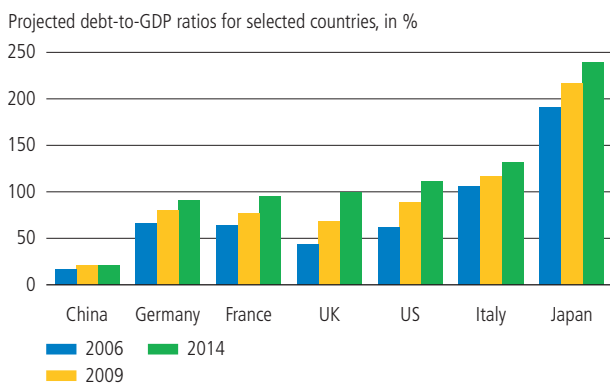
### Global imbalances hit the US dollar hardest

Ultimately, we think the acute global imbalances will weigh more on the US dollar than on the currencies of most other advanced economies. Exchange rates reflect relative prices between countries, so it is impossible for all currencies to depreciate simultaneously. And while the liquidity needs of financial market participants generally benefit the most widely traded currencies – the dollar, the euro, and the yen – oftentimes this advantage will accrue at the expense of one or both of the other two.

In our view, the euro currently enjoys the strongest relative fundamentals and therefore the best chance of appreciating. The dollar and the Japanese yen face huge challenges. Japan's debt-to-GDP ratio approaches 200%, and America's dependence on external financing of its fiscal deficit is daunting – as illustrated by its cumulative current account deficit that now totals more than 50% of its 2008 GDP. Of course, the Eurozone economies face their own difficulties in the aftermath of the financial crisis. However, the region's combined debt-to-GDP ratio, comparable to US levels and much lower than Japan's, remains mostly internally financed (see Fig. 1.7).

But the countries comprising the Eurozone remain vastly dissimilar, making a single monetary policy less than ideal.

**Fig. 1.7: Debt share of GDP to double in the UK and US**



The fact that European governments place little government debt abroad, especially on net, means that the euro does not yet offer deep enough markets in which to park liquidity. In contrast, the magnitude of US government debt and the fact that so much of it is held by foreigners allows the US dollar to be regarded as a vehicle for international savings. Nonetheless, the Eurozone economies will continue to consolidate and converge, and, in time, the euro will likely become a close substitute to the US dollar in the eyes of international investors.

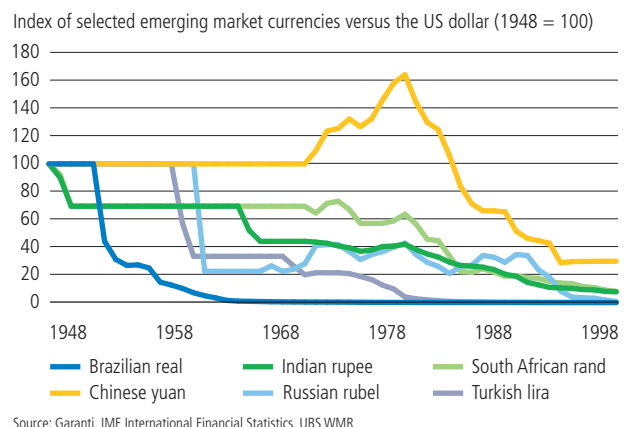
### The dollar's growing competitors

The dollar's position in the years ahead depends as much on domestic factors as on the international environment. After all, the relative attractiveness of any currency hinges on both. We see many trends underway outside the US that argue for the dollar to weaken against a number of currencies, especially those of emerging markets.

The most significant development since the early 1980s has been the steady increase in investment alternatives to US domestic assets. This dramatic change in the global business landscape has occurred not only in emerging markets, which we discuss below, but also in industrialized countries. Consider the transformation of "old" Europe. A handful of Western European economies have formed an economic union with a combined output now rivaling that of the US. There is no longer a need to worry about a potential devaluation of the Italian lira or the Portuguese escudo – and eventually this will also be true for the Hungarian forint and Polish zloty.

The broad reduction in capital controls is another development that increases competition for the US dollar. Until fairly recently, the dollar used to be almost unique as a medium of exchange because of the absence of US exchange controls. In 1980, exchange controls were the norm, even in the advanced economies of Japan and Australia, among others. Now, most countries have substantially reduced or eliminated these controls. This means

**Fig. 1.8: Widespread weakness versus the US dollar**



that tourists no longer need to have US dollar travelers' checks in their wallets to tour the world. These days, standard credit cards, invoiced in Brazilian real or Turkish lira, are universally accepted.

The elimination of capital controls has removed the US dollar's unique status as the principal medium of exchange in retail markets, although it remains dominant in international finance and trade. Therefore, a key question for investors is whether the US dollar will continue to act as a store of value. Will the US dollar maintain its purchasing power relative to other currencies or not? For much of the world, this question used to be quite straightforward. As Fig. 1.8 shows, in the second half of the twentieth century, residents of emerging markets were better off putting their savings in dollars than their own currency.

The Chinese yuan peaked at CNY 1.50 per US dollar in 1980. But by 2000, it cost nearly five times more to purchase one US dollar, CNY 8.27, representing a loss of over 80% in US dollar terms. Theoretically, Chinese parents who planned to send a child born in, say, 1990 to a US univer-

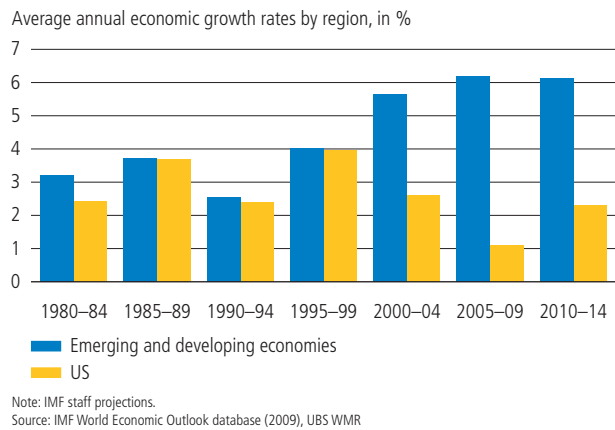
sity should have saved in US dollars rather than in yuan (acknowledging that capital controls would have prevented them from doing so).

**Emerging markets come of age**

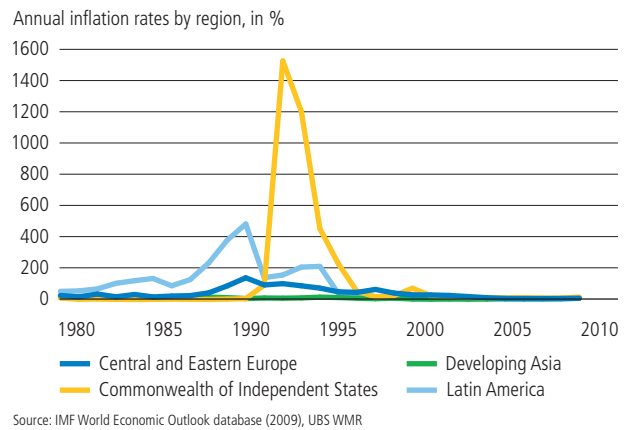
There have been substantial improvements in the economic policies and the performance of many emerging market economies over the past two decades. We can quantify this in many different ways, for example, in the emerging markets:

- Average economic growth rates have exceeded those of the US for much of the past decade (see Fig. 1.9).
- Average inflation rates have been substantially lower in the new century than they were during the second-half of the old one (see Fig. 1.10).
- Governments that need to borrow in US dollars – and quite a few have not recently – can do so at substantially lower spreads over US Treasuries than a decade ago (see Fig. 1.11).

**Fig. 1.9: Emerging market convergence gains traction**



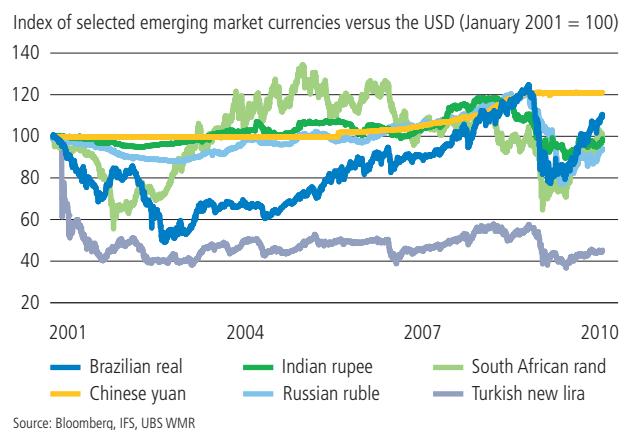
**Fig. 1.10: Bouts of emerging market inflation subsided**



**Fig. 1.11: Emerging markets borrow at lower spreads**



**Fig. 1.12: Recent stabilization versus the US dollar**



These trends reflect the improving economic conditions in emerging market countries in absolute terms and relative to the US in the first decade of this century (see Fig. 1.12). The Brazilian real, Indian rupee and South African rand are unchanged relative to early 2000. Only the Turkish lira, devalued in 2001 but trending sideways against the greenback since, has weakened in nominal terms.

These developments signify a paradigm shift for many residents of emerging markets, who were long accustomed to seeing their money lose value against the dollar. Even recognizing that exchange rates during much of the twentieth century were either managed or adhered to the Bretton Woods regime, the trends are clear. However, even today, emerging market exchange rates do not float freely. The Chinese yuan, for example, would likely be much stronger if the People's Bank of China did not systematically intervene to keep it from appreciating.

Including interest payments on deposits since January 2001, it becomes evident that emerging market currencies substantially outperformed the US dollar over this period (see Fig. 1.13), turning the old historical trend on its head.

### Emerging market currencies to appreciate further

We see a number of compelling reasons for many emerging market currencies to continue to appreciate against the US dollar in the coming years:

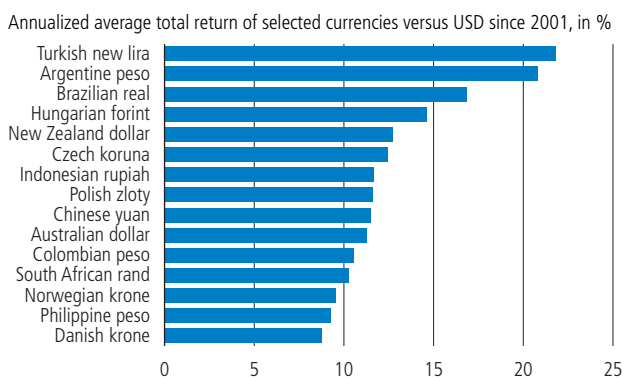
- For one thing, we think the inflation differential between the main emerging market currencies and the US dollar is likely to shrink over the next decade compared to the previous one, and certainly compared to the levels that prevailed over the last two decades of the twentieth century (see Fig. 1.14). Keep in mind that inflation differentials are critical to establishing the general exchange rate that prevails between two countries by roughly equalizing price levels. Smaller inflation differentials reduce pressure for emerging market currencies to weaken; lower inflation in emerging markets is clearly beneficial.

■ We also note that many emerging countries now have independent central banks with explicit inflation targets. Thus, their improved standards of governance along with their increasingly more stable economic fundamentals confirm that emerging economies are converging with developed economies. We would expect an improved macroeconomic environment to encourage investment, increase domestic consumption, and lower interest rates in these countries (see Fig 1.15). These developments would in turn support the appreciation of emerging market currencies even if inflation were somewhat higher than in developed countries.

■ Another factor favoring their currencies' appreciation is the growing share of emerging economies' production in overall global economic output. Thus, we think it inevitable that more trade will be invoiced in currencies other than the US dollar, especially if those currencies start to be seen as stores of value in their own right, with an adverse effect on the greenback. In the past, emerging market sellers of goods and services preferred to be paid in "hard" currency – a vague term that generally included the US dollar and the deutschmark, but might also be extended to Levi's blue jeans and Marlboro cigarettes. Today, though, the residents of the more prosperous emerging markets prefer to be paid in their own currency simply because it has been able to hold its value quite well lately. Looking ahead, we expect more emerging market currencies to compete with both the US dollar and the euro as a store of value, which reinforces their appreciation potential.

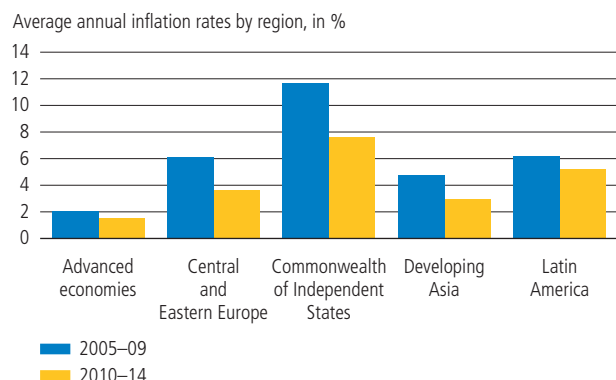
While we expect emerging market currencies to continue to appreciate, none are yet at the point where they can be regarded as serious reserve currencies. As we discuss in more detail in Chapter 2, capital markets in emerging market countries are small, granting they will likely grow and

**Fig. 1.13: EM currencies outperformed USD since 2001**



Note: Total return includes interest.  
Source: Bloomberg, UBS WMR

**Fig. 1.14: Lower trend inflation in emerging markets**



Note: IMF staff projections.  
Source: IMF World Economic Outlook database (2009), UBS WMR

deepen over time. As liquidity remains low in these countries relative to the US, Europe and Japan, large moves in spot rates are not uncommon. Even with improved institutional frameworks and greater credibility, many emerging market currencies are still highly managed by their central banks, and most lack truly open capital markets. In sum, we expect a steep appreciation path for emerging market currencies over the next decade, but no direct competition with advanced economy currencies as stores of value or mediums of exchange.

### The outlook for specific emerging market currencies

Given the vast differences in the economic fundamentals of emerging economies, all emerging market currencies will not perform equally well. We can see from Fig. 1.14 that the emerging Asian economies are projected to have the lowest average inflation rates over the next five years, followed by Central and Eastern Europe, and then Latin America. Thus, the appreciation paths of emerging currencies against the US dollar and the euro will differ from region to region and from country to country. A long position in emerging market currencies against a short position in the US dollar will not perform well if the wrong emerging market currencies are in the basket. Diversification and careful selection remain essential.

Since we expect inflation differentials between emerging Asia and the advanced economies to narrow, we think the currencies of China, India, Indonesia, the Philippines, and South Korea will likely appreciate against the US dollar over the next few years. However, we expect this to be gradual, as many Asian economies are decidedly export-oriented and therefore will tend to prefer a somewhat weaker currency. India currently has the highest inflation rate in the region. If the Reserve Bank of India fails to significantly lower inflation in the years ahead, we think the long-term appreciation potential of the Indian rupee is severely limited.

In Central and Eastern Europe, prospects for appreciation trends also appear intact, especially for those countries tar-

geting Eurozone membership. The Maastricht criteria for adopting the euro require, among other things, relatively low inflation rates. Therefore, we see appreciation potential for the currencies of accession countries, such as the Czech koruna, the Hungarian forint, and the Polish zloty, until, of course, they adopt the euro.

The central banks of South Africa and Turkey also have explicit inflation targets, and we think their inflation differentials should also narrow over time. We still expect inflation to remain quite volatile in both these countries, however, which makes specific forecasts difficult. Regarding Russia's ruble, we think a prolonged appreciation against the US dollar is unlikely as long as Russia's inflation rate stays high and the exchange rate remains managed.

In Latin America, the inflation outlook is mixed. We think Argentina and Venezuela will likely have more problems controlling inflation, and therefore we see little appreciation potential for their currencies. With a relative improvement of the monetary and fiscal policy frameworks in Brazil, Chile, Colombia, and Mexico, the situation in these countries looks decidedly more promising. If these economies and their institutions adhere to adopted reforms, we see a fair chance that their inflation rates will remain below 5% in the coming years; thus, we would expect their currencies to structurally appreciate against the US dollar.

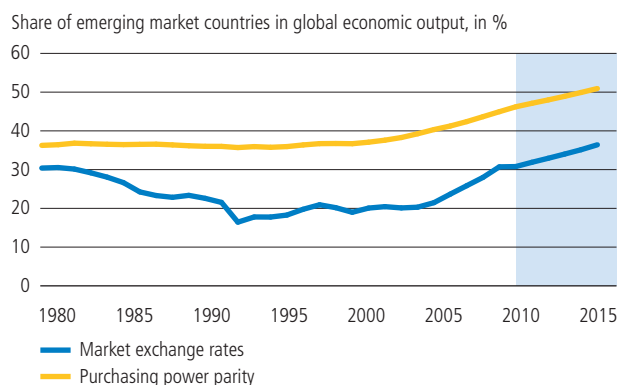
### US dollar weakness has its limits

In our view, US dollar weakness has its limits, primarily because of the geopolitical implications of a sudden US dollar collapse. Clearly, the US is running a risky strategy – accumulating current account deficits that now approach 50% of its 2008 GDP. If financial market participants ever became uneasy about holding US dollar-denominated assets, the dollar could experience a precipitous drop in value. However, given the extent of official and individual holdings of dollar-denominated assets, there is widespread interest in making sure this does not happen.

Countries with vast dollar-based foreign exchange reserves, such as China, Japan and Russia, would not want to even whisper any intent to aggressively sell their dollars, since that could trigger a widespread dollar exodus and destroy their accumulated savings. Moreover, a dollar collapse would force many central banks to intervene to prevent a sharp appreciation of their own currencies. With the US economy and its consumer base still the largest in the world, most countries would not welcome a rapid appreciation of their currency versus the US dollar, as their export competitiveness would surely suffer under such a scenario.

However, this does not mean that the US can accumulate infinite debt. As the custodian of the world's primary reserve currency, the US government is accountable to its lenders for keeping its finances in check. If the US government were unable to pay the interest due on its public debt each year, thus compounding America's overall debt burden, the seeds would be sown for broad distrust of US

**Fig. 1.15: Growing contribution of EM economies**



dollar-denominated assets. Thus, a degree of fiscal responsibility is in America's own self-interest.

A US dollar collapse would have profound geopolitical implications and could even destabilize the international balance of power. Proposals by some central bank officials to diversify their reserves according to an SDR- or GDP-weighted portfolio effectively imply selling an amount of US dollars equivalent to the sum of the past two years of US current account deficits. Transactions of that scale would cause profound economic dislocations globally. Central bankers realize this and are sure to exert every effort to prevent such an event from happening.

Risks persist, however, from unforeseen and undesired events, including a rout of the world's principal reserve currency that may one day alter the geopolitical landscape. With the current imbalances in the global economy, the strong incentives to reduce US dollar purchases and diversify portfolio holdings suggests the US dollar will remain weak for quite some time to come.

### **Conclusion**

We expect that America's grim balance sheet – specifically, its high and increasing government debt levels and its large current account deficit – will weigh on the US dollar for the foreseeable future. Additionally, we expect the US may experience higher inflation than other countries, further disadvantaging the dollar. Pegged and quasi-pegged exchange rates inflate demand for US dollars overseas, as countries keep their currencies artificially low versus the greenback to underpin their export-based economies. We expect that other developed countries as well as a number of emerging markets will experience higher growth and lower inflation than the US, driving their currencies up relative to the dollar. However, there is no single substitute for the dollar on the horizon, and given that so many countries have their savings in dollars, a dollar collapse would be universally resisted.

# The US dollar's shifting status



The US dollar is slowly losing its dominance as the principal international reserve currency. While a multicurrency reserve framework may emerge in time, we think the dollar's widespread use as a medium of exchange in international trade is not threatened.

### Tried and tested

The US dollar has had its share of troubles since its postwar rise to become the world's principal reserve currency. According to an article published by William F. Butler and John V. Deaver in *Foreign Affairs*, "broader understanding of the forces impinging on the nation's balance of payments is essential if the US is to react properly to the changes in its role in the world economy." What makes this quote so interesting is that it was published in October 1967 but could easily be applied to today's situation.

After World War II, the world needed a stable currency framework as countries sought to repair and rebuild, and the US dollar emerged as the global monetary standard. Its status was cemented in the Bretton Woods system, with member countries maintaining a fixed exchange rate versus the US dollar, and the US committed to a gold price of USD 35 per ounce. Thus, the dollar essentially replaced the international gold standard, with the added benefit that dollar investments could pay interest, unlike gold holdings. Bretton Woods imposed no limit on the issuance of US dollars (see Fig. 2.1). Ultimately, sustained fiscal deficits during the 1960s and the discretionary growth in the US money

supply prompted a run on US gold reserves, eventually leading to the demise of the Bretton Woods system in the early 1970s (see Fig. 2.2).

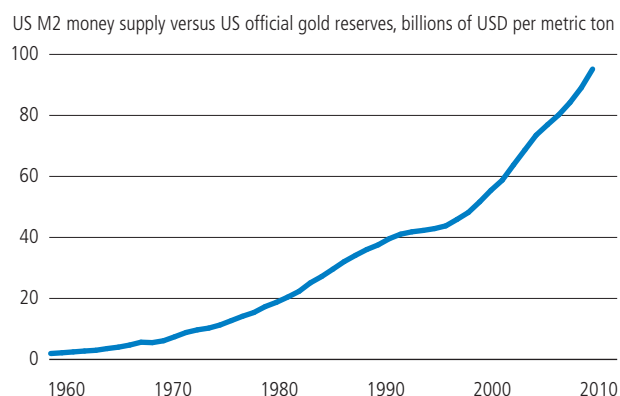
The collapse of Bretton Woods was in fact a US dollar crisis. However, the crisis did not destroy the US dollar's role as an international monetary standard. With no other alternatives at hand, the US dollar's status persisted and its influence may have even grown in the years leading up to the financial crisis that erupted in 2008.

However, this time around, the sustained dollar weakness is different. Much has changed since the early 1970s – including the emergence of the Eurozone, an economic region that rivals the US, and the economic might of many emerging market countries. The dollar remains the preeminent international reserve currency, but how long this status lasts is less certain these days than ever before, especially if another full-blown dollar crisis were to erupt.

### The makings of a reserve currency

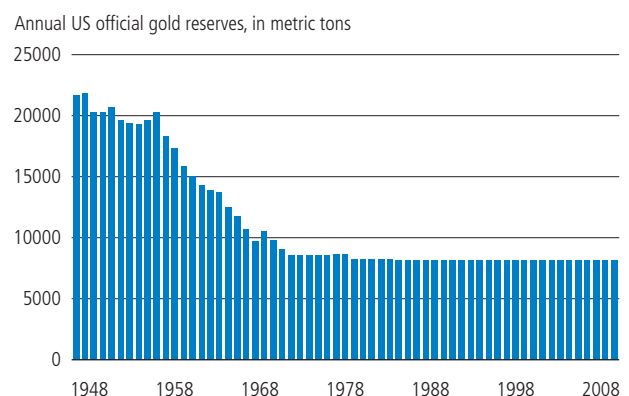
To better understand the risks to the US dollar's status as the world's principal reserve currency, it may be helpful to

**Fig 2.1: Money supply increased versus gold reserves**



Source: World Gold Council, Federal Reserve, UBS WMR

**Fig. 2.2: US gold reserves dropped in the 1960s**



Source: World Gold Council, UBS WMR

look at the factors that made it so dominant in the first place. In general, a reserve currency is widely held by central banks and other financial institutions. It also tends to be a recognized means of exchange, particularly for commodities like oil and gold.

For central banks and global financial institutions to be confident enough to store a part of their country's wealth in another nation's currency, that currency must meet several important criteria:

- **Large.** Reserve currencies tend to be issued by large, competitive economies that play a major role in global trade and financial flows. Such economies are more likely to generate enough trading volumes in their currencies to lower transaction costs.
- **Liquid.** Well-developed and liquid financial markets are another prerequisite. They allow efficient and low-cost financial intermediation through a wide range of financial instruments and ancillary services.
- **Stable value.** By extension, a reserve currency must be perceived as sound and must provide stable purchasing power. Firm exchange rates and low inflation tend to increase confidence in the currency as a store of value.
- **Stable politics.** Nobel economics laureate Robert Mundell noted in 1998 that "when a state collapses, the currency goes up in smoke." This criterion is also relevant to a monetary union like the Eurozone; potential differences among sovereign member nations are a risk to the common currency.

With such a demanding set of criteria, it is no wonder that the US dollar maintained its principal reserve currency status throughout the second half of the twentieth century. However, the environment supporting the US dollar's status has been changing in recent years:

- The US dollar's stability and its future purchasing power seem very much in doubt given our outlook for higher inflation in the US relative to most other currency areas, as well as due to America's need to finance its fiscal deficit externally.
- The Eurozone economy rivals the US in terms of size, even if the region's financial markets are not quite as large. That said, concerns about political stability, legitimate or not, continue to detract from the euro's appeal.
- Potential political instability in China, as well as its limited currency convertibility and relatively modest financial market depth, detract from the Chinese yuan as a potential reserve currency. Nevertheless, the Chinese economy is steamrolling ahead and financial market reforms are more a matter of when, not if.

Therefore, it would appear unlikely that the US dollar will be unseated as the world's principal reserve currency any-time soon, although its dominant position may erode over time.

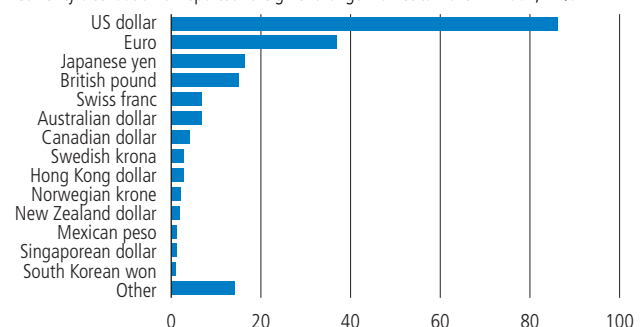
### The strong not only survive, they thrive

At present, only a major geopolitical or economic upheaval could force the US dollar to fall out of favor as a reserve holding. The reason for the dollar's strong grip, despite its myriad problems, is straightforward: the network effects – the cumulative benefits of having a single, dominant reserve currency – are of considerable value to the global economy. For example, it greatly simplifies international transactions and reduces many associated costs. Consider invoicing transactions in several different currencies, such as the New Zealand dollar against the Mexican peso or the South African rand against the Singaporean dollar. These would require additional bilateral foreign exchange markets, each with less liquidity and larger bid/ask spreads than exist for a single dominant currency. As a result, the strongest and most stable currency tends to become even stronger, leading eventually to the dominant, even monopolistic, position as a reserve currency (see Fig. 2.3).

There is also a welcome degree of simplification in quoting prices for commodities, such as oil and gold, in US dollar terms, as well as the convenience of hedging currency risks against a single currency. The fact that the US dollar is not only the world's principal reserve currency but also its primary medium of exchange between countries goes hand in hand. Additional bilateral trade arrangements that allow for the exchange of goods in local currencies, such as the recently announced agreement between Brazil and China, may emerge from time to time. But these relationships are unlikely to dominate, and the significant network efficiencies of quoting and trading in a single currency will likely limit their broad proliferation, in our view.

**Fig. 2.3: US dollar dominates forex transactions**

Currency distribution of reported foreign exchange market turnover in 2007, in %



Note: Because two currencies are involved in each transaction, the sum of the percentage shares of individual currencies thus totals 200%, not 100%.  
Source: Bank for International Settlements Triennial Central Bank Survey (2007), UBS WMR

**Too much of a good thing?**

But perhaps the US dollar has become too much of a good thing over the past several years. China's central bank and others have amassed vast stockpiles of foreign exchange reserves, much of which are denominated in US dollars, by keeping their currencies artificially weak and stimulating their export industries (see Fig. 2.4). Central bank reserves have grown tremendously during the past decade, both in absolute terms and as a percent of global GDP. Global central bank reserves as a share of global GDP grew from roughly 5% in 1995 to 12% in 2009 (see Fig. 2.5).

This mercantilist explanation for amassing foreign exchange reserves – promoting growth through exports – appears reasonable. But central banks will also hold foreign exchange reserves as a precautionary measure to protect their currencies in the event of a speculative attack. Clearly, the 1997 Asian currency crisis left bitter memories and, as the saying goes, "once bitten, twice shy." Back then, the Thai baht lost more than half of its value in a matter of months after being tied to the dollar for decades. Central banks watched defenselessly as their foreign exchange reserves evaporated in a vain attempt to protect their currencies

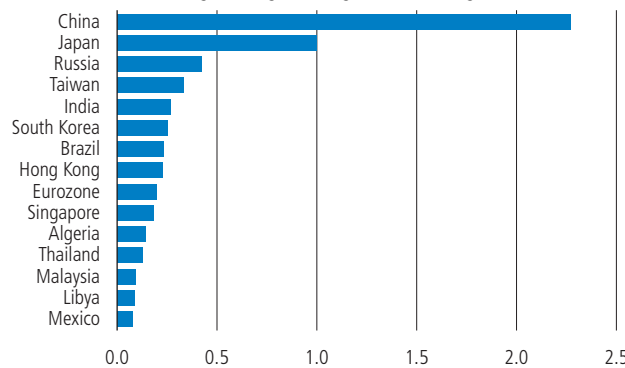
against devaluation. Governments either had to let their currency depreciate at the cost of defaulting on their foreign currency-denominated government debt or approach the IMF for rescue packages that risked exacerbating their recessions.

A couple of broad guidelines have emerged for central banks to avoid a currency crisis:

- They should hold reserves sufficient to cover at least three months of imports. Since global trade contracts are almost exclusively denominated in US dollars, it makes sense for central banks to hold these contingency reserves in dollars.
- They should also hold foreign exchange reserves at least equal to the outstanding value of their country's short-term foreign currency-denominated government debt. This idea surfaced after the 1994 Mexican Tequila crisis and the 1997 Asian crisis, when capital outflows triggered a loss of confidence in the ability of both countries to honor their foreign currency-denominated debt.

**Fig. 2.4: China holds massive foreign exchange reserves**

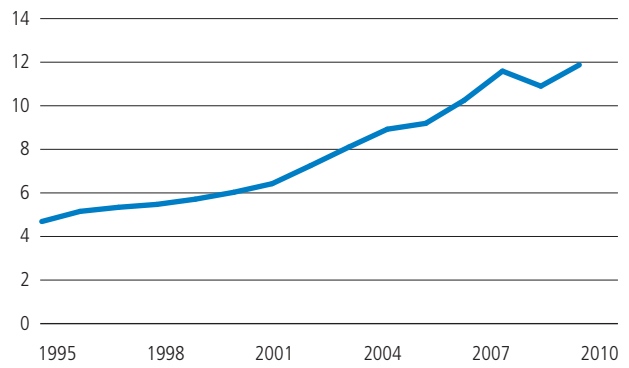
Central banks with the largest foreign exchange reserve holdings, in trillions of USD



Source: Bloomberg, UBS WMR

**Fig. 2.5: Reserves climbing as a share of GDP**

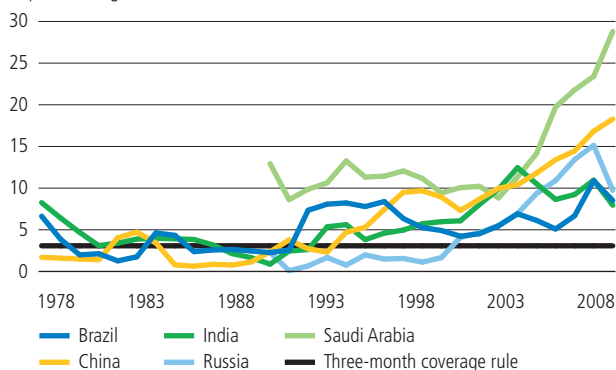
Total foreign exchange reserve holdings as a share of global GDP, in %



Source: IMF COFER database, IMF World Economic Outlook (2009), UBS WMR

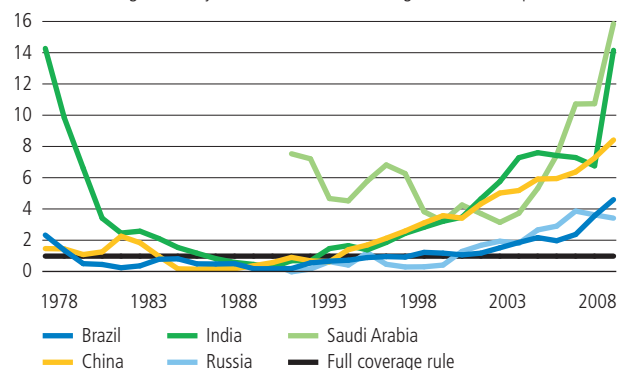
**Fig. 2.6: Ample foreign exchange reserves to protect against a currency crisis**

Import coverage ratio, in months



Source: Institute of International Finance, UBS WMR

Short-term foreign currency-denominated debt coverage ratio, in multiples



These lessons have been widely learned. In terms of import coverage, many emerging market countries have enough foreign exchange reserves to withstand a balance-of-payments crisis (see Fig. 2.6). China's reserves would cover more than a year's worth of imports, for example. The situation is the same in the case of foreign currency-denominated debt coverage and the risk of an external debt crisis. Reserves cover short-term foreign currency-denominated debt obligations by a wide margin. Therefore, emerging markets and oil-producing countries have built their reserves through mercantilist practices that encourage exports, and now have more reserves set aside to protect their currencies than is generally considered necessary.

**US dollar losing its dominance**

The share of US dollars in global foreign exchange reserves has remained stable despite the fundamental factors that are eroding the dollar's strength (see box below for a more detailed discussion). These include:

- the entrenched and enormous US fiscal and trade deficits,
- the potential for higher inflation in the US than in other developed countries,
- the steady ascent of emerging market economies, and
- the broad and growing concerns about the US dollar's long-term weakening trend.

**A closer look at central bank reserves**

The amount of international foreign exchange reserves held by central banks has skyrocketed over the past decade. At the same time, even as the value of the US dollar has dropped, the share of dollars in central bank portfolios has been remarkably stable. Unfortunately, limited data prevents us from knowing the precise composition of these reserves in all countries. However, we can observe the aggregate amount and composition of the reserves of countries who report to the International Monetary Fund's COFER (Currency Composition of Official Foreign Exchange Reserves) database.

The sum of official reserves has risen from less than USD 2 trillion in 2000 to roughly USD 7 trillion today (see Fig. 2.7). The portion of "unallocated" reserves is growing even faster than the "allocated" reserves, which are those for which a country has released the currency composition.

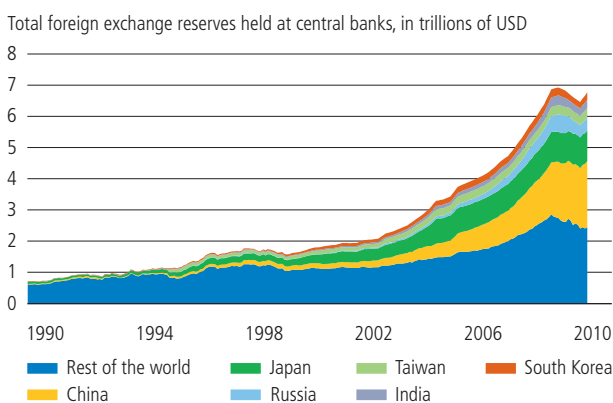
The bulk of these "unallocated" reserves is held by China, which does not report the composition of its reserves. Its total reserves, as directly reported by the People's Bank of China (PBoC), China's central bank, now exceed USD 2 tril-

lion. While there is no way to confirm this figure, we assume the share of US dollars in these reserves at least equal the global average for dollar holdings. This conclusion is supported by the known PBoC holdings of US Treasury and agency debt and its active management of the yuan/dollar exchange rate, whereby it purchases US dollars to keep the value of its currency low.

The share of dollars in "allocated" global reserves has remained quite stable over the past decade, slipping merely from 71% to 63%. This is largely due to the dollar's depreciation against the euro, the pound and the yen, which are valued on a current-market basis. With the dollar dropping by more than 20% against the euro, central banks have actually increased their dollar purchases lately to keep its share of their reserves from dropping too quickly (see Fig. 2.8).

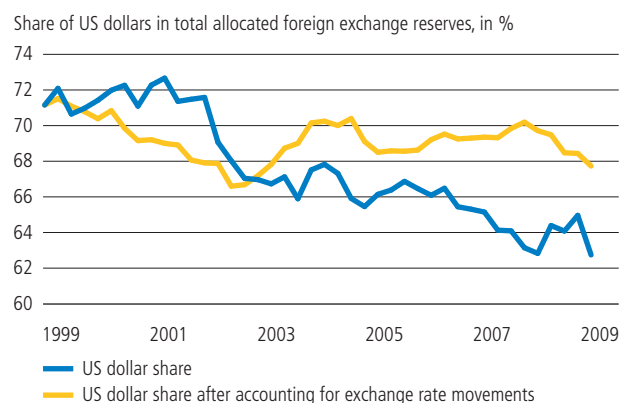
Looking at this data, we conclude that foreign exchange reserves held by global central banks are increasing quickly, and the dollar's share of the total has remained remarkably stable to date.

**Fig. 2.7: Central bank reserves hover near USD 7 trillion**



Source: Bloomberg, IMF, UBS WMR

**Fig. 2.8: Stable US dollar share of central bank reserves**



Source: IMF COFER database, UBS WMR

With reserve holdings far exceeding precautionary needs, and with US officials demanding an end to undervalued currencies, many central banks may decide to either limit their reserve accumulations through steady currency appreciation or to deploy their foreign currency reserves for other purposes, such as imports or domestic spending needs. How this shift eventually pans out is a multi-trillion dollar question.

Over the past 20 years, the US has been able to deploy vast amounts of dollar-denominated assets around the globe thanks to the dollar's status as the world's reserve currency. But over the next several years, the US will continue to rely on foreign investment flows to finance its huge trade and fiscal deficits. This means that any shifts in foreign exchange reserve holdings must occur gradually and deliberately in order to not create the risk of a dollar collapse.

We expect the US dollar's dominance of foreign exchange reserves to fade as these shifts materialize. Since there is no single currency waiting in the wings to take the dollar's place, we think a multicurrency reserve framework with the US dollar playing a central role seems the most likely development (see box on page 21 for a more detailed discussion).

We expect little change in the dollar's role as a means of transaction and unit of account for international trade. A single, broadly accepted currency is efficient, and replacing it would entail enormous costs. Given that the US is still the world's largest currency area and that any change in the composition of foreign exchange reserves globally would be very difficult to orchestrate, we would expect the dollar's dominant role in international trade to continue for the foreseeable future.

**The contenders**

*Euro*

The euro is often suggested as an alternative to the US dollar as the dominant reserve currency. We expect the euro to gain against the dollar in international portfolios

and in spot prices, but not to take the dollar's place as the world's reference currency. For one thing, capital markets are much smaller in Europe, so there are simply fewer vehicles in which a foreign investor can "park" money (see Fig. 2.9). Perhaps more importantly, America's enormous government debt translates into a deep and liquid bond market where wealth can be stored. Ironically, the very fact that the US has issued so much debt strengthens the dollar as a reserve currency, although this certainly has its limits. Finally, Europe has its own set of challenges. As a whole, the Eurozone may not have the same level of external debt as the US, but some member states have considerable relative debt levels. This underscores a fundamental challenge for the region: its heterogeneity renders policymaking a convoluted endeavor, to say the least. The European monetary union is mature, but the economic union is not.

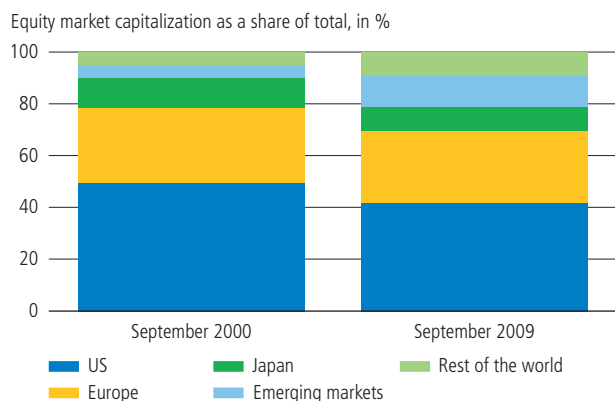
*Other G10 currencies*

We see no other G10 currency challenging the dollar's dominance at present, although, as a group, their share in international reserves may gradually grow. As shown in Fig. 2.9, no other country can compete with the depth of the US capital and sovereign debt markets. Additionally, the other G10 economies are still substantially smaller than the US economy. The world's third-largest economy, Japan, has even more profound structural challenges than does the US, with a debt-to-GDP ratio of approximately 180%, for example.

Finally, some voices have suggested adopting a new, international currency to replace the dollar, specifically the International Monetary Fund's Special Drawing Rights. SDRs are comprised of the US dollar, the euro, the yen and the pound; they are used as a unit of account by the IMF (see Fig. 2.10).

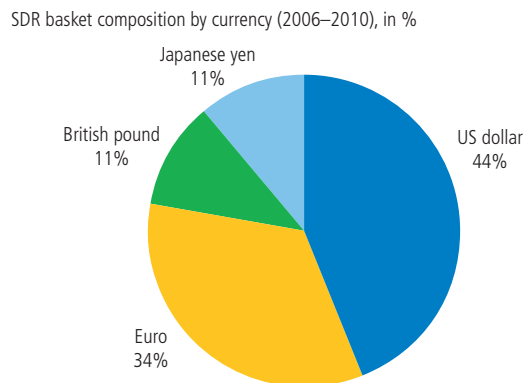
As a replacement for the US dollar, we think SDRs are unsuitable for several reasons. First, in order to have a true international fiat currency, an international central bank would have to stand behind it, with common interest

**Fig. 2.9: US still has the largest financial markets**



Source: MSCI, UBS WMR

**Fig. 2.10: US dollar holds the dominant share in SDRs**



Source: IMF, UBS WMR

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## Trends and fads: the US dollar after the Great Depression

Although popular perception is that the US dollar only replaced the British pound as the world's principal reserve currency after World War II, this tectonic shift actually occurred much earlier. Some economic historians argue that the pound and the dollar already shared the role of international reserve currency during much of the interwar period (Eichengreen and Flandreau, 2008).

While history may not repeat itself exactly, as Mark Twain noted, it often rhymes. Thus, the events of the first half of the twentieth century and their impact on the composition of currency reserves at central banks may serve as a rough guide for the future of the US dollar as an international reserve currency.

**The dollar's rise.** As World War I was about to erupt, the US economy surpassed Britain's in terms of per-capita GDP. While Britain retained its global geopolitical leadership, the US gained influence following its role in ending the war. Equally important, New York had emerged as a leading international financial center and began to compete directly with London. Greater political and economic weight in international affairs, combined with deep financial markets to ensure the liquidity of US dollar transactions, were decisive in laying the foundations for a new international reserve currency.

In 1924, central banks recorded a larger share of US dollar foreign exchange reserves than any other currency for the first time. However, the pound did not simply disappear from central bank balance sheets. On the contrary, central banks accumulated both dollars and pounds, despite mounting doubts that the Bank of England would be able to convert its currency into gold.

**Depression-era skepticism.** The onset of the Great Depression in 1929 and the implosion of the gold standard led to wholesale liquidation of foreign exchange reserves,

primarily those denominated in US dollars. Consequently, the pound regained its prominence as an international reserve currency. But central banks grew less willing to hold foreign exchange reserves and instead opted for gold. The share of gold in total reserves increased from 74% in 1929 to 92% in 1932 at the expense of foreign exchange holdings. During the remainder of the interwar years, the pound and the dollar shared the role of international reserve currency, but gold retained its dominance.

**Post-war ascendancy.** In 1944, the dollar's fate was sealed under the Bretton Woods agreement, which put it at the center of the new international monetary system. With most of Europe in ruins, America's political, economic and military influence propelled it to an uncontested leadership position, to say nothing of Wall Street's ascendancy as a financial center. The US dollar's dominance as the world's reserve currency was established for the remainder of the twentieth century after World War II.

The study of this turbulent period offers two important lessons. First, the positive network effect – that is, the benefits the society enjoys when something is widely used and accepted – of a well established international reserve currency can be rapidly undone by a succession of catastrophic non-financial events. Second, a single international reserve currency is neither required nor unassailable, despite the dollar's dominance since World War II. In the interwar period, after all, both the pound and the dollar shared this status.

Circumstances conspired to make the dollar the dominant reserve currency after World War II, but there is no rule that central banks favor one currency above all others. While the latest global financial shocks may not knock the US dollar off its pedestal, some central banks and political leaders now appear readier than ever to consider bold moves in response to what they see as warning signs about the US dollar's long-term outlook.

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rates and fixed exchange rates akin to the European Monetary Union or Bretton Woods. At this juncture, this seems a highly unlikely development. Second, SDRs can only be held by central banks. Third, SDRs are not a currency as such, but simply a unit of account made up of a fixed share of other currencies. While individual central banks could choose to hold reserves in SDRs, they would not constitute a new currency, but merely a diversification strategy.

### *Emerging market currencies*

If there is broad agreement among economists on any single forecast, it is that emerging markets, especially in Asia, will continue to account for an ever-larger share of the world's economic output. Thus, the question legitimately arises, should some emerging market currencies be part of the overall currency portfolio of central banks? The answer is simple, but hedged: Yes, but not yet.

Emerging market economies have made significant strides in the right direction but their currencies do not yet meet all the criteria for inclusion in central bank reserves, in our view (see Fig. 2.11). Beyond the limitations of some still fragile emerging market financial institutions, the currencies themselves are not sufficiently stable. During the financial crisis, the US dollar appreciated versus emerging market currencies, despite America's evident economic weaknesses. Only when the currencies are deeply traded, there are many safe instruments in which to invest, and the political and economic environment is considered stable and transparent will such currencies make headway. But even though emerging market currencies are not yet ready for the international reserve scene, we hasten to add that we expect them to continue to appreciate versus the US dollar in the years ahead.

Given China's very evident economic might, the yuan is the one emerging market currency that can aspire to international status. Nonetheless, it will take a long time before China's currency becomes a credible alternative to the dollar. Despite some indications that the yuan will be used for bilateral trade between China and some other nations, the Chinese government would need to lift capital controls and allow the yuan to float freely before it became a bona fide reserve currency. But this would be a costly decision, since it would diminish China's international competitiveness and reduce the value of its vast US dollar-denominated foreign exchange reserves. Additionally, the yuan-denominated government bond market is dwarfed by the size the US dollar government bond market.

### *Other dollar alternatives*

Central banks could, in theory, exchange their US dollars for assets other than fiat money. The People's Bank of China has bought substantial, if unknown, quantities of gold in recent years. Gold is the commodity that most closely resembles paper money. It offers high liquidity in times of financial stress and protects against inflation. The risk of holding gold is that its price could fall, and, unlike other reserve assets, it offers no income stream or yield.

Central banks are also toying with the idea of diversifying into other assets. For example, China has acquired arable land in Africa over the past couple of years. Expectations of increased resource scarcity suggest that real assets, such as land, water, and energy commodities, offer a good store of value. However, these investments do not actually substitute for a reserve currency. With the exception of gold, they are illiquid. And since their supply is limited and fixed, such investments are unable to provide sufficient depth as a primary store of value.

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## Strength in commodity currencies

The currencies of developed countries that export natural resources, such as Australia, Canada, New Zealand and Norway, tend to move with commodity prices. In our view, so-called commodity currencies are likely to prove a strong store of value and appreciate against a weakening US dollar.

■ Our view reflects our broadly favorable outlook for emerging market growth and the associated robust demand for natural resources. We expect commodity prices to increase in the long term, keeping in mind, however, that commodity prices are highly cyclical, inducing sharp swings in commodity currencies. Commodity-exporting countries tend to overheat when commodity prices are rising, prompting their central banks to hike interest rates. These rate increases make the currencies attractive for foreign investors, and the resulting carry trade can cause them to appreciate rap-

idly, often above their fair values. This pattern was repeated before the financial crisis and is reappearing today.

- Commodities are priced in US dollars. Therefore, as the value of the US dollar drops, the nominal prices of commodities tend to rise. This is also reflected in the value of commodity currencies relative to the US dollar.
- Many countries with a surplus of commodities have very positive household and government balance sheets, as they are able to save money due to the wind-falls associated with their exports.

While commodity currencies will inevitably fluctuate with economic cycles and the demand for commodities themselves, as a group, we see them as an attractive way to diversify away from the US dollar.

**Adjusting for currency shifts in an investment portfolio**

With no single alternative currency to the US dollar, we think the greenback is unlikely to be replaced as a unit of account and means of transaction in international trade. However, given America's profound economic problems and the general demand for a more diversified currency portfolio among official and private investors, we expect the share of dollars held in international portfolios to decline. In sum, we think the US dollar is likely to slowly lose its absolute dominance. The transition towards this lower demand for dollars abroad will involve adjustment costs that will weigh on the dollar. We think that although emerging market currencies will appreciate, they will not form a major part of central bank reserves for at least a decade to come.

There is no single, comprehensive approach for reflecting our currency views in investment portfolios or future investment decisions. One of the most important ways to reduce exchange rate risk is to match the currency exposure of the portfolio's assets with the future liabilities, assuming these can be easily estimated. But for many private investors, there remains a large portion of wealth that exceeds planned expenditures, and for many investors this surplus is denominated largely in US dollars. This capital can be better managed, such that it improves currency diversification and controls for expected structural changes in exchange rates.

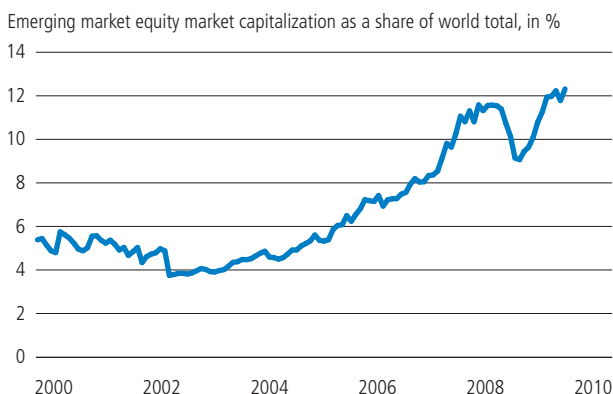
Although establishing currency benchmarks is not as straightforward as it is with other asset classes, there are many reasonable approaches that exist for international investors to consider as potential guideposts for establishing their portfolio's currency allocation (see Fig. 2.12). The examples illustrate the different options that investors can consider when thinking about their currency exposure, especially in light of the trends that we think will unfold.

■ **Central bank reserve allocations.** Investors could model their portfolio according to the allocated foreign exchange reserve holdings of central banks. The disadvantage of this approach is that it has a very high exposure to the US dollar, more limited exposure to the euro, and no exposure to emerging markets. Such an allocation ignores our outlook for further structural US dollar weakness, a stronger euro versus the dollar, and appreciation of many emerging market currencies. Moreover, we expect the composition of these reserves to shift away from the US dollar over time, creating a second-mover disadvantage for investors following central bank portfolio shifts.

■ **SDRs.** A very simple approach would be to use SDRs to determine an optimal portfolio. The SDR is based on four key international currencies – the dollar, euro, yen and pound – and the weights are based on the value of the exports of goods and services and the amount of reserves denominated in the respective currencies held by other IMF members. The SDR-based approach to managing currency risk is appealing since its value is reported on a daily basis and investment banks can easily build hedging instruments based on that currency unit.

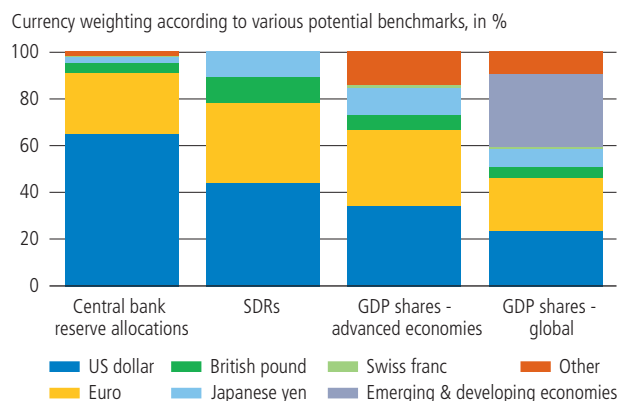
■ **Global GDP shares.** A more compelling approach, in our view, would be a portfolio comprised of a broader selection of currencies, including those of the largest emerging markets. The portfolio allocation could be constructed to change over time, according to relative economic growth rates. Emerging market countries are undergoing a period of convergence with developed countries, and commodity producers are particularly advantaged owing to their endowments of scarce resources. At the moment, convertibility constraints, higher volatility, and limited liquidity make many emerging market currencies impractical as a store of

**Fig. 2.11: EM equity capitalization has grown**



Source: MSCI, UBS WMR

**Fig. 2.12: Large USD variation among benchmark options**



Source: IMF COFER database, IMF World Economic Outlook database, UBS WMR

value. Moreover, they are unlikely to assume an increased share of central bank reserve holdings, since most emerging market currencies are not yet in a position to challenge the US dollar. However, these currencies could eventually claim an increasingly larger share of a global-GDP-weighted portfolio.

For the share of the portfolio that is not bound by asset/liability considerations or short-term cash needs, we recommend that investors set their currency exposure according to a GDP-weighted basket of currencies. With such a basket, investors can create a well-diversified portfolio that should improve long-term stability at a time when macroeconomic trends and financial markets are in a major state of flux. We have found that a well-diversified currency bas-

ket achieves similar returns to a purely home-currency-denominated portfolio over a period stretching three decades. This holds for portfolios constructed according to GDP weights, shares of equity market capitalization and SDRs. However, for all these baskets there were long periods of five or ten years when the home currency either significantly underperformed or outperformed the diversified currency basket.

While it is impossible to establish a decision-making process that will always ensure the highest potential return, diversifying among currencies does help to maintain global purchasing power. Given the structural burdens the dollar must bear relative to many other currencies, we believe that a diversified portfolio is likely to prove advantageous.

## Glossary

### Appreciation

The increase in value (or price) of one currency relative to another currency.

### Bretton Woods system

Fixed exchange regimes established in 1944 to rebuild and govern monetary relations among industrial states. Member states were required to establish a parity of their national currencies in terms of gold and to maintain exchange rates within a band of 1%. The system collapsed in 1973.

### Carry trade

In terms of currencies, a strategy that tries to exploit the yield differential between two currencies. The transaction consists of borrowing funds in a low-yielding currency (the sell side of this transaction) and investing this amount in a high-yielding currency (the purchase side of this transaction). The yield difference between the two currencies represents a gain if the exchange rate does not move to such an extent that it wipes out the interest rate differential.

### Current account

One of two components of the balance of payments (the other being the capital account) that records international trade flows in goods and services and the value of net investment income; in theory, a country with a current account deficit will bring in more goods and services from abroad than it sends abroad; a capital account surplus of equal value 'finances' the current account deficit.

### Depreciation

The decrease in value (or price) of one currency relative to another currency.

### Fiat money

Currency that is not freely convertible into a coin made from precious metals or a hard asset, such as gold and silver.

### Fixed exchange rate

Official exchange rate of a currency fixed by central banks or other state authorities. The rate is kept within the permitted fluctuation margin in trading on the foreign exchange markets, if necessary by the central bank's intervention through purchasing or selling the relevant currency.

### Floating exchange rate

An exchange rate that is allowed to move freely, finding its level as a function of supply and demand on the foreign currency market, and subject to only limited intervention by the central bank.

### Foreign exchange reserve

The foreign currency-denominated assets held by central banks to finance their foreign currency-denominated debt obligations and to influence their country's exchange rate.

### Greenback

Another name for the US dollar. This term was originally coined when the US issued currency to finance the Civil War on paper that had backs printed in green.

### Mercantilism

Efforts to increase a country's income and wealth through a favorable balance of payments position and policies that encourage a weak currency to gain competitiveness.

### Pegged exchange rate

A currency is pegged to another when the exchange rate between the two is fixed by either the state or the central bank and market forces have no influence on the exchange rate.

### Purchasing power parity (PPP)

The effective external value of a currency determined by comparing different countries' relative price levels. For example, a basket of goods costing USD 100 in the United States and CHF 160 in Switzerland would give a purchasing power parity rate of CHF 1.60 per USD. Proponents of PPP theory hold the view that an exchange rate cannot deviate strongly from purchasing power parity over the long term or at least should reflect the differing inflation trends.

### Quasi-pegged exchange rate

An exchange rate mechanism that allows for exchange rate fluctuations within a predefined band, for example, plus or minus 5% relative to a specific USD exchange rate.

### Special drawing rights (SDRs)

An international reserve asset created by the International Monetary Fund in 1969 to supplement its member countries' official reserves. Its value is based on a basket of four key international currencies, and SDRs can be exchanged for freely usable currencies.

### Unhedged

A position or an entire portfolio that is unprotected against negative market fluctuations.

### Common currency abbreviations

USD: US dollar  
 EUR: euro  
 JPY: Japanese yen  
 GBP: British pound  
 CHF: Swiss franc  
 AUD: Australian dollar  
 CAD: Canadian dollar  
 CNY: Chinese yuan  
 RUB: Russian ruble  
 BRL: Brazilian real  
 INR: Indian rupee

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**Editor:** Roy Greenspan  
**Authors:** Michael Bolliger, analyst UBS AG; Thomas Flury, analyst UBS AG;  
 Andreas Höfert, economist UBS AG; Andy Ji, analyst UBS AG;  
 Katherine Klingensmith, analyst UBS Financial Services Inc.; Yves Longchamp, strategist UBS AG;  
 Kurt E. Reiman, strategist UBS AG; Costa Vayenas, analyst UBS AG  
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