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THE US ECONOMY AND THE SUSTAINABILITY OF BRETTON WOODS II

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Many observers of the American economy over the last decade see it as having returned to its earlier strengths, resuming its position as the world's leading economic power. Some even assert that its dominance is linked to a new international trade and payments regime – called Bretton Woods II – whereby central banks of other nations, particularly in East Asia, continue to finance US consumption. Such an analysis, however, is a misreading. Although America has enjoyed a remarkable economic boom, particularly in the second half of the 1990s, its foundations have been rather wobbly. In particular, America's need for continuing high imports of capital has created an unsustainable situation. The 'Bretton Woods II' hypothesis does not withstand scrutiny. Rather, sooner than later foreigners will reduce lending to America and, once that happens, the weaknesses of the American economy will be exposed.

The US economy is now characterised by the aftermath of the greatest speculative bubble in the stock exchange, an equally unsustainable boom in the property market, high and rapidly rising foreign debt, high indebtedness of private households as well as of the government. These imbalances will have to be corrected at same stage, as Robert Gilpin pointed out:

America's unprecedented good economic fortune will one day run out, and when it does, the United States must confront its low personal savings rate, deteriorating education system, and accumulated foreign debt, and it must adjust to a rapidly changing global economy characterised by intensifying competition, exclusive regional arrangements, and an unsustainable financial system (Gilpin 2000: 7).

Although Gilpin and other observers have pointed to the non-sustainability of America's economic development some years ago,¹ the predicted crisis has not yet materialised. I will therefore stick to the old rule of forecasting and give a scenario, but not name the point of time when this will happen. It is true that this arrangement can go on for as long as Asian central banks are willing to finance American consumption, but it is not plausible to expect the current trend to continue indefinitely.

The boom of the 1990s was as much the result of psychological factors at play as it was the effect of productivity improvements and other economic factors. Consequently, a 'hard landing' continues to be a distinct possibility for America, with severe repercussions for the global economy (Roubini and Setser 2005).

**Table 1: Macroeconomic Development
of the USA, 1991 to 1997**

	1991	1992	1993	1994	1995	1996	1997
Change of GDP (real, in percent)	-0.2	3.3	2.7	4.0	2.5	3.7	4.5
Real private consumption (percentage change from previous year)	0.2	3.3	3.3	3.7	2.7	3.4	3.8
Unemployment rates (per cent of labour force)	6.8	7.5	6.9	6.1	5.6	5.4	4.9
Consumer price indices	4.2	3.0	3.0	2.6	2.8	2.9	2.3

**Table 2: Macroeconomic Development
of the USA, 1998 to 2004**

	1998	1999	2000	2001	2002	2003	2004
Change of GDP (real, in percent)	4.2	4.4	3.7	0.5	2.2	3.1	4.7
Real private consumption (percentage change from previous year)	5.0	5.1	4.7	2.5	3.4	3.1	3.8
Unemployment rates (per cent of labour force)	4.5	4.2	4.0	4.8	5.8	6.0	5.5
Consumer price indices	1.5	2.2	3.4	2.8	1.6	2.3	2.3

Note: The 2004 figures are a forecast of the OECD.

Source: OECD, Economic Outlook, No. 75 (June 2004).

¹ See also Mann (1999), Wolf (2000), Altvater and Mahnkopf (2002).

As Tables 1 and 2 show, growth in the American economy slowed down significantly after 2000. Remarkably, however, the current account deficit continued to rise despite slower economic growth. Two factors are primarily responsible for that. Firstly, the Bush administration turned budget surpluses into significant budget deficits. Secondly, American consumers continued to indulge in a spending spree and thereby functioned as the global economy's 'consumer of last resort'.

These two factors, combined with the extremely low savings rate in America, resulted in the need to import capital on a large scale. The US economy has generated large current account deficits for decades, but since 1998 these deficits have grown rapidly virtually every year, reaching more than \$ 600 billion in 2004. Deficits of such a magnitude have generally been considered unsustainable. Over time, creditors either lose faith in the affected economy, the result being a lack of fresh foreign capital, or demand significantly higher risk premiums, i.e. higher interest rates. Some American authors, however, have suggested that the United States will not be affected by this general set of economic laws. Rather, Michael Dooley, Peter Garber and David Folkerts-Landau (2003) have suggested that America and East Asia have entered a new era of international economic arrangements in which East Asian central banks are willing to finance American consumption and lack of saving because American consumers – in return – buy Asian goods. This is the key aspect of the so-called 'Bretton Woods II', the inference being that the new regime is capable of providing stable conditions for the growth of trade and the settlements of debts, comparable in its strengths to the old original Bretton Woods agreement that lasted from 1945 until the 1970s.

Needless to say that such an analysis – implying the sustainability of the current borrowing binge – suits the interests of the American government, as well as consumers, quite well. The United States would – if Dooley *et al.* were correct – find itself in the unique position of being the provider of the world's reserve currency, the dollar, and simultaneously the world's largest debtor. The US government would not have to drastically reduce borrowing, nor would consumers have to restrict consumption and increase saving.

The analysis presented in this article indicates, on the contrary, that the American economy is over-rated, too deep in debt and geared up for a period of sustained slower growth. Furthermore, the prolongation of the

current trend, i.e. a continuing capital import of around five percent of GDP, will end in an even harsher adjustment. The risks for the global economy resulting from these imbalances are severe: American households and the government will sooner or later save more and spend less, and this will have negative effects for economies that have substantial exports to the US.

At the same time, the motivations of Asian countries might be less benign than assumed by the inventors of the 'Bretton Woods II' hypothesis. By accumulating American treasury bonds, China is acquiring a powerful weapon. In the event of a major clash between China and the US – probably about Taiwan – Beijing can destabilise American financial markets and cause serious economic trouble for the United States.

The article critically explores the key questions of the 'Bretton Woods II' debate. The focus is on American indebtedness and the import of capital, but there is also an analysis of other weaknesses of the American economy, mainly to illustrate why the current path is not sustainable. The article is organised as follows: First, following some reflections on the significance of national economies, it looks briefly at the history of the international financial order and at Bretton Woods I in particular. Second, it describes the characteristics of the so-called 'Bretton Woods II'. This section also asks whether the new regime signifies a departure from the (nameless) regime of floating exchange rates that has prevailed since 1971. Third, the article discusses factors that limit the outflow of capital from Asia to the US. The following sections then look at some of the weaknesses of the American economy, which is far less robust than generally recognised and vulnerable to stock market and real estate bubbles. In conclusion, the article suggests two scenarios for American economic development: either slower growth and decline relative to East Asia in particular or a crash landing, resulting in a period of economic depression.

The Significance of National Economies

The assumption underlying the analysis in this article is that national economic boundaries still matter and that the performance of national economies continues to shape both the actual national accounts as well as

the perception of the respective economy. Globalisation and the reduction of barriers to trade and finance have not led to a borderless global economy. Rather, financial markets in particular continue to often evaluate on a per country basis. Almost all of the financial crises of the last 15 years had their origin in the perceptions of national economies. Cross-border lending, which is the core of the 'Bretton Woods II' syndrome, continues to be characterised by exchange rate risk and interest rate differentials, and the use of derivatives can only reduce, but not eliminate, the risks that are associated with cross-currency transactions. From time to time international investors have shown a change of perceptions, which usually leads to severe financial crises. One may think that the US – still being the world's largest economy and the provider of the most sought-after currency, the dollar – is immune to those challenges. Such a reading of financial markets, however, would be both ignoring many crises of the past as well as overlooking the reduced contribution of America to global GDP. The Great Depression affected both the United Kingdom and the United States, which were the leading economies and the suppliers of the most important currencies at the time.

Furthermore, the dollar now has a serious contender. For instance, in the fourth quarter of 2004, according to data from the Bank for International Settlements, the euro topped the dollar in international financial markets – without a doubt an important turf. Of a total of \$ 18,600 billion of outstanding international bonds, outstanding international money market instruments and outstanding cross-border bank claims on non-banks, 42.7 percent were denominated in euro, 38.9 percent in dollar (Bergsten 2005: 7). The emergence of this new bipolar monetary regime is introducing new restrictions for US policy. In contrast to previous phases of substantial dollar falls – 1971-73, 1978-79, 1985-87, 1994-95 – today there is an option to abandon the dollar, both as a store of value and as unit of accounting. In particular, the dollar could lose its status as the main invoicing currency for raw materials, including oil. If oil producers would start to invoice in euro – a prospect that has been raised – the United States economy would have to cope with oil prices whose fluctuations are exacerbated by exchange rate movements – a disturbing prospect for a country that consumes 25 percent of global oil supplies.

Of course, one may argue that national boundaries do not matter any more. In such an assessment, a group of borrowers – mainly Americans – would meet a group of lenders, primarily from other countries. The

interests of those two groups would converge and there would not be a need for concern. For Americans, the area from which they could borrow would simply have increased. However, there is one caveat: for the rest of the world, currency risk continues to exist. As long as those that save use a different currency than those who borrow, currency risk remains. Even if the lender covers that risk, it does not disappear. Therefore, the evaluation of further investment in American treasuries will have to take that risk into calculation, and the fact that private investors have ceased their exposure to US portfolio investment demonstrates that these calculations are made.

A Brief History of the International Financial Order

Since the early 19th century, the global financial order has been characterised by surprisingly dramatic changes. Intensive multilateral cooperation – a feature of both the Gold Standard and Bretton Woods I – was replaced by policies putting national economic goals first.

The development of the international financial order in the last two centuries can be grouped into four phases. The first was the period of the Gold Standard. The main feature was that the participating countries fixed the exchange rate of their national currency *vis-à-vis* gold. Indirectly, this resulted in fixed exchange rates between the countries under the Gold Standard. There were no restrictions on capital flows, but monetary policy gave priority to the stabilisation of the exchange rate. National concerns, such as unemployment, were of secondary importance.

The UK had fixed the exchange rate of sterling and gold in 1821. In the second half of the 19th century, other important economies – such as France, Germany and the United States – joined the Gold Standard. Until 1914, this monetary regime was the main pillar of international financial cooperation, which flourished despite political tensions between the participating countries (James 1996: 16). After 1918, serious attempts were made to return to the Gold Standard, the symbol of the solidity of cooperation (Polanyi 1971: 44). By 1930, this goal was achieved: The Gold Standard was a near universal regime, which included most

industrialised economies as well as many – in today's terminology – developing countries.²

By 1933, all countries had left the Gold Standard, apart from France, Belgium and Switzerland. This was the beginning of the second period, which was characterised by a decline of international capital flows, strict limitations on international financial transactions and the absence of cooperation – not only in monetary affairs. Nationalism and economic policies favouring autarky flourished. Volumes of international trade also sharply declined.

Bretton Woods I was the third phase. The international agreement, founded in 1944 in a small village in New Hampshire, tried to draw lessons from this phase of non-cooperation. The regime of Bretton Woods was characterised by fixed exchange rates between the participating countries and the dollar, restrictions on capital flows and the creation of a multilateral organisation to oversee financial development, the International Monetary Fund. Exchange rates were only permitted to fluctuate in a very small band of \pm one percent. The US dollar was the key currency, and the Federal Reserve guaranteed a fixed exchange rate of dollar and gold. The responsibility for the management of the countries' exchange rate *vis-à-vis* the dollar remained with the individual central banks, e.g. the German Bundesbank. Although the Federal Reserve was not responsible for stable exchange rates, central banks held regular consultations.

The regime proved to be remarkably stable. Between 1949 and 1969, there were no major exchange rate fluctuations (Eichengreen 2000). The monetary stability contributed to high economic growth rates: From 1950 to 1970, the global economy grew at an annual average of three percent in real terms *per capita*, a rate that was higher than in any other decade between 1830 and 1990 (Herr 2001: 180). It is important to note that the fragmentation of the global economy, which had been in full blossom well before the beginning of World War II, had paved the way for the creation of multilateral institutions and international co-operation in general.

2 The (incomplete) list of participating countries was: Argentina, Belgium, Brazil, Chile, Columbia, France, Germany, India, Indonesia, Japan, Korea, Mexico, Peru, the Philippines, Switzerland, Taiwan, Thailand, the UK and the United States (Maddison 1989: 46).

Bretton Woods I was severely weakened in 1971 because the Nixon administration closed the convertibility of dollar into gold on 13 August. Throughout the Northern spring of 1971, the dollar had been affected by severe selling and, due to the weakening of capital controls, central banks were less and less able to cope with those flows. Although attempts were made to revive the system by widening the exchange rate bands from one to 2.25 percent, Bretton Woods I finally collapsed in 1973 (Eichengreen 2000: 178). Thereafter, the fourth phase began, running right through to the present day. Its features are unrestricted capital flows, but at the same time wildly fluctuating exchange rates. Despite the severe disadvantages of the current regime – in particular the costs it imposes on companies that do a lot of international trade and have to pay large sums to hedge their exports earnings – this regime is still operational today.

The different regimes can be seen to have favoured different interest groups. Bretton Woods reflected a political preference for stable exchange rates, benefiting those involved in the production of goods for international trade. Ever since, the political preference has shifted to unrestricted capital flows, favouring the interests of players in financial markets who have dominated over the interests of workers and the owners of fixed capital. The end of Bretton Woods resulted in the privatisation of exchange rate risk, which previously was covered by central banks.

This brief look at the history of the international financial order provides some insights into the characteristics of the various regimes. In particular, it shows that high levels of cooperation between central banks were characteristic of both the Gold Standard and Bretton Woods I. The provision of stable exchange rates was not a side-effect, but the prime motive.

Contrasting 'Bretton Woods II' with the Bretton Woods Regime

What can be made of the suggestion by Michael Dooley *et al.* (2003) that a new regime has emerged between America and East Asia, which can be dubbed 'Bretton Woods II'? This regime is characterised by large capital flows from East Asia to the US, which simultaneously runs large trade

deficits *vis-à-vis* these Asian economies. Asian countries continue to happily finance American consumption because – Dooley *et al.* argue – it suits these countries' needs. China in particular has to integrate hundreds of millions of workers into the workforce and seeks a constant expansion of exports to achieve this. Therefore, Asian countries have an interest in continuing their strategy of undervaluation of their currencies, resulting in current account surpluses and the export of capital, which is absorbed by their main market, the USA. The central banks of Asian countries give the expansion of trade priority over the returns on their holdings of foreign reserves (Dooley *et al.* 2003: 6). Dooley *et al.* consider the USA to be the main beneficiary:

... overall, the US has been happy to invest now, consume now, and let investors worry about the deteriorating international investment position (Dooley *et al.* 2003: 6f).

Dooley *et al.* suggest that Asian economies will continue to produce and save, whereas the American economy will continue to borrow and consume.

There are important differences between this system and the previous Bretton Woods regime. First, the old regime was characterised by a high degree of co-operation between central banks, unlike today. East Asian central banks have not been cooperating intensively before the 1997 Asian crisis, but they have started that process. One forum is the Executive Meeting of East-Asia Pacific Central Banks (EMEAP), which comprises the larger Southeast and East Asian central banks as well as Australia's and New Zealand's, but which excludes the Federal Reserve.³ In the 21st century, Asian central bankers work with each other, but put limited emphasis on cooperation with the Fed.

Second, one could call into question whether 'Bretton Woods II' is a regime, but rather a pattern. Unlike the post-war regime, which had a list of agreed principles and detailed procedures in the event of an exchange rate adjustment, today's system does not have any rules, let alone written ones. The countries involved, being reluctant to use the verb

3 According to well-informed circles in Canberra, the Federal Reserve knocked at the door and wanted to participate in EMEAP, but that request was turned down by the Asian central bankers.

'participating', have not had a political decision to develop that arrangement. At best, there has been implicit agreement.

Third, as discussed in the previous section, Bretton Woods I was created after the traumatic experience of non-cooperation and the severe economic crisis of the 1930s. The United States imposed this regime on the non-communist world, and whilst the US economy greatly benefited from this monetary regime, other countries did prosper as well. Although the post-war economic order that the U.S. created was designed primarily to further the interests of American capital, Bretton Woods I was widely accepted as functionally necessary and ideologically legitimate by the major allies of the USA. And it should not be ignored that American financial capital was negatively affected by restrictions that limited its opportunities for profitable investment. In particular, restrictions on capital flows, a hallmark of that era, limited the internationalisation of financial markets.

The willingness of other countries to subscribe to this regime was so great because of the Great Depression and World War II. There is no equivalent today. The Asian crisis in the late 1990s was tough for the region, but it did not affect the USA. There is very little willingness in Washington for any multilateral regime, let alone for one that aims at the stabilisation of exchange rates. After all, if there were a successful calming of exchange rate markets, this would reduce profit opportunities for the American financial sector, and this interest group regularly manages to get its message heard in the White House.

Fourth, the old regime was one between military allies, which cooperated in NATO and other security treaties. None of the countries that participated in the old regime was a competitor to the US. The same cannot be said today. True, Japan is a close ally of America and continues to support America in a number of areas, e.g. in the Iraq war. There is also a relatively high level of economic cooperation. Apart from high levels of investment, America and Japan are planning to build the next generation of commercial aircraft, the Boeing 787, together, a first both for America and Japan. American soldiers continue to be stationed in Japan.

Almost none of this applies to China. More and more, America sees China as a rival, and there cannot be any doubt that Beijing wants to return to its former leading position in the region, if not at the global

stage. Therefore, China has only limited interest in providing continuing costly support to America.

Fifth, in the post-war period the US dollar did not have a serious competitor. No other currency was as widely used as the dollar for store of value, transactions and as reserve currency. Again, this is different today. The euro has emerged as the first serious challenge to the hegemony of the dollar. The dollar has been losing some ground against the euro as a reserve and transactions currency, and on both levels further changes are discussed.⁴ As mentioned, the euro today accounts for a greater percentage of global financial assets than the dollar.⁵ Financial markets have embraced the euro, and in the medium term East Asia may well develop its own monetary co-operation scheme, which would further weaken the dollar's hegemony. For instance, East Asian countries have agreed in May 2005 to create an Asian Monetary Fund as well as develop a regional bond market. The latter in particular will weaken the position of the dollar, because the regional bonds will be denominated in regional currencies, not in dollar (*Frankfurter Allgemeine Zeitung*, 9 May 2005, 15; for a further discussion of a theory of monetary regionalism see Dieter and Higgott 2003).⁶

Sixth, in the old regime there was a limit to American profligacy. The gold anchor, i.e. the promise that the Federal Reserve would exchange dollars for gold, limited, at least in theory, America's deficit spending. Although France was the only country ever to exercise that right, the design of Bretton Woods I accommodated the need for a limit on the spending of the hegemonial economy as well.⁷ There is no similar

4 Oil exporters, e.g. Venezuela, have raised the possibility of selling oil against euro. Some central banks, for instance the South Korean, have stated that they intend to reduce their dollar reserves in favour of greater holding of euros.

5 The yen, by comparison, has lost further ground. In the fourth quarter of 2004, only 700 billion dollar, or 3.8 percent of all global financial assets, were denominated in yen (Bergsten 2005).

6 Over time, a successful shift to bonds denominated in a basket of Asian currencies as well as emitted in Asian financial centres will weaken New York as a financial hub.

7 Charles de Gaulle's government had dollars exchanged for gold in the mid 1960s, partly because de Gaulle had criticised the 'extraordinary privileges' America enjoyed because of the hegemonial position of the dollar. The right to exchange dollars for gold at a set rate was limited to central banks, i.e. commercial banks did not have that option.

monetary anchor in 'Bretton Woods II'. Therefore, all Asian central banks get is dollars, which can quickly lose value against other currencies.

This brief comparison shows that one can hardly compare these two regimes. Bretton Woods I was a regime for the stabilisation of exchange rates and the facilitation of trade. 'Bretton Woods II' is a regime for financing shopping and warfare. Nevertheless, as a pattern it has existed for some time.

The Sustainability of 'Bretton Woods II'

The 'Bretton Woods II' arrangements have existed roughly since the end of the Asian crisis, i.e. for about seven years. Despite this, there are good reasons for thinking them unsustainable. The benefits of 'Bretton Woods II' appear to be distributed very unevenly: in particular, what are the gains for East Asian countries? At a not too distant point in the future, it will be more attractive for East Asian policy makers to allow higher levels of consumption or higher investment in their own economies rather than enabling the American consumers to continue their consumption binge.

One problem is the gigantic appetite of the US economy for foreign capital. If current trends were to continue and American consumers go on overspending, East Asian central banks would have to hold extremely high amounts of foreign reserves. By 2010, they would have to hold about \$ 7,000 billion of foreign reserves, up from \$ 2,400 billion in 2004 (Roubini and Setser 2005: 53). For China alone this would result in an increase of reserves by \$ 1,150 billion to \$ 1,750 billion, up from \$ 600 billion in 2004. It is quite implausible to expect the Chinese central bank to accumulate such a pile of foreign reserves. Essentially, this would constitute a swap of high-yielding domestic debt instruments for lower yielding foreign ones. The higher the reserves, the higher the costs for the Chinese economy.

It also would become increasingly difficult for the Chinese central bank to mop-up the excess liquidity that accompanies the accumulation of foreign reserves. When the central bank buys foreign currency from Chinese exporters, it increases domestic money supply, which could

result in the built-up of inflationary pressures – at least in monetarist analysis. The central bank sterilises the inflows by issuing domestic debt instruments. The larger the inflows, the more difficult it gets for the central bank to successfully do that. Failure could result in inflation and asset price bubbles, which is a development that the Chinese authorities have been trying to control for some time.

These are just some of the difficulties with 'Bretton Woods II'. For Asian central banks, building up reserves in dollars is particularly costly. First, yields on American treasury bonds are very low, and the central banks have to cover the interest differential between domestic debt and US treasuries. For the Japanese central bank, this is not an issue, but for China and other countries in the region, with their significantly higher levels of interest, it is. Second, holding large amounts of dollars is potentially very costly because it is quite likely that the dollar will lose value against Asian currencies as well as against the Euro over time, mainly because reducing the American current account deficit will require a devaluation of the dollar. A devaluation of the dollar against the Chinese yuan in the magnitude of, say, 20 percent would result in a loss of \$ 120 billion for China, which represents almost ten percent of Chinese GDP.

Increasingly, all Asian central banks that hold large dollar reserves are confronted with a dilemma. They would benefit if all of them would continue to hold dollars, but each of them has an incentive to sell their dollars first. The bank which sells before a potential devaluation of the dollar would be the winner. Such a constellation can be problematic because it could result in an avalanche of dollar selling.

But it is not only Asian central banks that suffer from the current regime. Manufacturing in the US has to shoulder a lot of the pain. At least partly because of the overvaluation of the dollar (or the undervaluation of Asian currencies), American companies cannot compete – neither at home nor abroad. The trouble is that a ruined manufacturing base cannot be easily rebuilt, and over time America will need a more competitive manufacturing base if the country's foreign debt shall be repaid.

Of course, one could argue that services could fill that gap. But there are two problems associated with that. First, although some of the American service sector appears to be competitive, it only generates a small surplus in the balance of payments. In 2002, a surplus in trade in services of \$ 65

billion still resulted in a current account deficit, which includes trade in goods, of \$ 480 billion. Second, the service sector itself is under growing threat of outsourcing. The software industry in particular is losing well-paid jobs to developing countries, to India in particular. Services alone will not be sufficient to cover the interest payments on an American foreign debt of \$ 7,000 billion in 2010.

The sustainability of the 'Bretton Woods II' regime can be called into question for other reasons as well. Although it is true that America has enjoyed high capital inflows – the janus-side of deficits in the current account – for a long time, their composition has changed in recent years. Both foreign direct investment and private portfolio investment are declining, with Asian central banks filling the gap. In 2001, FDI inflows were \$ 144 billion, but that figure fell to \$ 30 billion in 2002 (*Handelsblatt*, 5.9.2003: 10). Private portfolio investment shrank too. Private investors are apparently unwilling to finance US deficits at current interest rates.

The Legacy of the Big Speculative Bubble

The borrowing binge of the US economy would be less worrying if the problems of the US economy were limited to foreign debt. This, however, is not the case. The enormous foreign debt of America has to be evaluated in the context of the speculative excesses of the 1990s. It is the combination of dependence on foreign funds and two speculative bubbles – in stocks and real estate – that provides a powerful cocktail for America and the global economy.

The reasons behind the emergence of 'irrational exuberance' – the term Alan Greenspan used in 1996 to describe developments in the stock exchange – deserve consideration. The speculative bubble in US markets and the price increases in the real estate sector have had a strong influence on American consumers, who felt richer and borrowed to consume, but also on foreign lenders, who were assuming that the American economy had returned to previous strengths and were willing to lend. Although in the last couple of years private investors have shied away from investments in the USA, they did so in the late 1990s.

American shares continue to be expensive, considering both past and forecasted profits. In 1982, when the longest boom of the share market began, the average price-earnings ratio of American stocks stood at seven, and it rose to 36 in July 1999 (Wolf 2000: 46). Robert Shiller has calculated the price-earnings ratios for the companies listed in the Standard & Poor's 500 index from 1880 to 2000. The highest level ever was recorded in January 2000, when the *average* price-earnings ratio reached 44.3. The second-highest level was recorded in September 1929, when the price-earnings ratio reached 32.6. In the three years following the crash of October 1929 the stock markets in America lost 80.6 percent of the value. The level of September 1929 was reached again in 1958 (Shiller 2000: 7-9).

What were the factors that drove the development of this 'biggest bubble in history', as *The Economist* called it? (10.1.2004: 11). Understanding the factors that took the stock markets to those unprecedented levels is useful in order to identify the vulnerabilities of the American economy. Robert Shiller names twelve reasons for the overheating of asset prices in the speculative bubble in the USA (Shiller 2000: 19-42). His analysis emphasises that a combination of several factors generated the economic and psychological environment for speculative developments. These factors need to be considered in some detail because the stock market excesses are vital for the understanding of the vulnerabilities with which the US economy is confronted.⁸ The key factors are:

- The development of the internet. From roughly 1997, the internet became available as a means of communication to a larger part of the population. The idea of the emergence of a 'New Economy' was accepted by many citizens.⁹
- America's citizens regained self-confidence after the first Gulf War had been won and the long-time rival USSR had ceased to exist. Banks exploited that mood and used slogans like Merrill

⁸ For a more thorough analysis of the factors that fuelled the bubble see Dieter (2005), pp. 248-262.

⁹ However, the data on the perceived increases in productivity due to the internet has been weak from the beginning (Scherrer 2001: 24).

Lynch's 'We're bullish on America'.¹⁰ The debate on the weaknesses of the American economy disappeared.

- In the 1990s, values in America were tilted further toward materialism. Although the pursuit of money as the primary goal in life always mattered more in the US than in many other societies, the 1990s saw a strengthening of that trend.¹¹
- The baby boom was another important factor for the development of the bubble in the share market. After World War II, America experienced a big increase of births. Birth rates remained very high from 1946 to 1966. In the second part of the 1990s, the 'Baby Boomers' belonged to an age group that is intensively saving for retirement. Consequently, their demand for shares was high.
- The increase of the level of news on the share markets helped to generate an interest in a limited set of economic affairs. Although this has been a world-wide phenomenon, in America it was probably more pronounced than elsewhere. 'CNN Financial News' or 'Bloomberg Television' reported continually on the changes in the share market, and in the 1990s prices most of the time simply knew one direction: up.
- In this context, the ever-optimistic views of so-called financial market 'analysts' also fuelled demand. Robert Shiller has pointed out that in 1999, 'analysts' recommend selling shares only for 60 out of 6,000 companies.
- The change of pension systems in the US has also contributed to the boom in the share market. Since the early 1980s there has been a shift from 'defined benefit' to 'defined contribution'. The government did speed up that process by granting tax concessions to 'defined contribution' schemes. America's weak trade unions, which favoured the defined benefit system, were unable to halt that change. The consequence is that the permanent demand for shares automatically drives up prices as

10 Robert Shiller has pointed out that similar slogans were used in the 1920s, when the salesmen of shares suggested to 'be a bull on America' (Shiller 2000: 21f).

11 A comparison of two polls underlines this assessment. 38 percent of Americans interviewed in a poll in 1975 stated that 'a lot of money' is important for 'a good life'. In 1994, that figure had risen to 63 percent (Shiller 2000: 22).

long as new contributions to the pension system are higher than payments out of the system. 35 million Americans are participating in defined contribution pension systems, and 65 percent of new contributions are deposited in the share market (*The Wall Street Journal*, 17.7.2002: 1).

- Another factor that contributed to the rise of stock market valuations has been the rapid rise of investment funds. Between 1982 and 1998 the number of investment fund investing in stock and registered in the US rose from 340 to 3,513. More dramatic has been the increase of accounts with investment funds: from 6.2 million to 119.8 million in the same period. Many Americans saved money in investment funds because of the assumption that they were both safe and convenient. Between 1996, the year when Alan Greenspan made his famous remark on 'irrational exuberance', and 2000 investment funds registered an injection of \$ 1,100 billion of new funds. Robert Samuelson called this 'the democratisation of greed' (*International Herald Tribune*, 20 June 2003: 10).
- The decline of inflation was another factor. In 1980, the inflation rate had still been at high levels of about 15 percent per year. The subsequent tight monetary policy implemented by Federal Reserve Chairman, Paul Volcker, brought inflation rates down.¹² Throughout the 1990s, the inflation rates were below or around three percent.
- The rise of gambling probably also played a role. After a gambling scandal in Louisiana in 1870, gambling was banned in most American states, with the exception of Nevada and Atlantic City. In the 1970s and 1980s, the number of lotteries increased in many states. The main changes occurred in the 1990s. Until 1999 almost 100 casinos were created on ships and another 260 in Indian communities. In 1998, around 125 million Americans participated in gambling activities. This, in turn, may have contributed to a different attitude with regard to investment

¹² The social cost of this being a severe financial crisis in Latin America, because Argentina, Brazil and Mexico had high foreign debt at flexible interest rates.

decisions. Risk taking may have become more common as a consequence of frequent gambling (Shiller 2000: 41).¹³

- The compensation of workers has also changed. Under the Fordism of the post-war era, continuous rises of real wages had contributed to rising demand. The new, current regime is characterised by increasing share ownership of American employees. This has resulted in decreasing importance of wages growth for domestic demand, which is increasingly driven by the wealth effect caused by rising share prices. Workers do not get higher real wages, but rising share prices compensate for that. This, in turn, has two effects: lower wage rises can contribute to higher share prices and a subsequent wealth effect, and high profits do not necessarily result in weaker domestic demand (Evans 2001: 32). American citizens also *feel* increasingly rich. This is not surprising when the current value of shares owned by American private households is taken into consideration: Between 1989 and 1999, the value of shares held by private households rose from \$ 3,820 billion to \$ 13,331 billion (in 1999 prices, Evans 2001: 38).
- Finally, an old observation of Charles Kindleberger should not be forgotten: that, when companies or private persons observe that some players have made money by speculating on the stock exchange, this creates a movement which attracts more and more players. Even those parts of society that normally abstain from speculation at the stock exchange are participating in the mania (Kindleberger 1978: 17). The bubble creates new demand for shares.

The sharp rise of share prices in America in the 1990s could only develop because US economic policy permitted it. Neither monetary policy nor other instruments of economic policy were used to stop the bubble growing. Although true believers in the efficiency of financial markets will continue to assume that stock market valuations have been, and are, a correct expression of the value of shares, both a historical perspective as well as a comparison with shares markets in other OECD

13 This is a parallel to the 1920s, when gambling was another business of the criminal gangs that had flourished because the illegal trading of alcohol during the prohibition.

countries would lead to the conclusion that there is only one direction for the American stock exchanges to go. As soon as alternative investments will become attractive, e.g. when real interest rates become positive again, chances are that the still existing bubble will burst, or will – like in Japan – continue to deflate over a longer period of time.

Some observers have argued that the bubble in US stock markets does not exist any longer and that the stock markets have returned to a sustainable long-term trend. This assessment, however, is based on a methodological error. From 1871 to 2003 the average price/earnings ratio in the S&P 500, the most reliable US share market index, was 13.7.¹⁴ This is roughly the figure that is expected for the year 2005. But the comparison of *historic* profits with *expected* profits is misleading. The only plausible comparison is using historic earnings, and here the S & P 500 shows an average price/earnings ratio of 19 in the fourth quarter of 2004, i.e. 40 percent above the long-term mean.¹⁵ Furthermore, the long-term average is significantly lower if the recent boom years for the stock exchange are excluded. Between 1871 and 1981, average price/earnings ratios were much lower, in the early 1980s frequently reaching single digit averages.

Similarly, the ratio of prices of shares and dividends invites the conclusion that the US share markets are still significantly above the long-term trend. Between 1976 and 1996, the price of a share on average was representing 30 times the dividend of the previous year. In 1997, the price/dividend ratio reached over 50 for the first time, only to hit over 90 in the year 2000. In the fourth quarter of 2004 the average in the S&P 500 is still close to 60, i.e. almost double the figure of previous trends.

The trouble with bubbles is that they seem to feed each other for quite some time, and even if one sector, e.g. new technologies, is no longer enjoying unrealistic price levels other markets might. In Japan, the stock market bubble of the 1980s ended in 1990, but the property market continued to climb for another two years after the correction in the share market had begun. A similar development can be observed in the US a decade later.

14 *Frankfurter Allgemeine Zeitung*, 21.8.2004: 19.

15 Data from http://martincapital.com/chart-pgs/CH_per.HTM.

Housing in America: Another Bubble in the Making

The real estate market is of great and rising importance for US economic development. In 2003, American households held real estate valued at \$ 14,300 billion, roughly 130 percent of GDP (*OECD*, Economic Outlook, No. 75 (June 2004), Statistical Annex). Real estate is the biggest asset of American households, and consequently any change in the value of real estate affects spending and consumption behaviour. If prices of real estate rise, people tend to spend more because they consider themselves richer. This wealth effect is estimated to be around six percent: i.e. an increase of the value of a property of \$ 1000 will result in \$ 60 of additional spending, primarily for added consumption (Baker 2002). A boom in property prices therefore leads to increased domestic demand, and evidence for that hypothesis can readily be found in those countries that have experienced booms, if not bubbles, in recent years, Australia, the UK and the US being among the most prominent examples.¹⁶

Since 1995, prices for real estate in the US rose by 60 percent on average in nominal terms and by 37 percent after inflation is deducted. That boom was fuelled by Alan Greenspan's extremely loose monetary policy, which brought 30-year interest rates for purchases of real estate down from 10 percent in 2001 to 5.5 percent in 2004.

At the same time, households borrow more and more against the value of the property. Between 1986 and 2004, the average mortgage on private property rose from 28 percent to 45 percent of the *current market value*, i.e. the rising valuations of real estate is already taken into account.¹⁷ Any reduction in the value of real estate will automatically raise this ratio and cause difficulties, at least for some borrowers. The Bank for International Settlements in Basle has observed the trend to borrow for consumption against real estate and has warned that the debt will stay, no matter what happens to the value of property. For the American economy

16 The Governor of the Australian Reserve Bank, Ian MacFarlane, in 2005 pointed to the fact that this has led to enormous borrowing abroad. Between 2002 and 2004, half of the current account deficit - at 7 percent the highest in the OECD - has been caused by households borrowing (indirectly) from overseas to finance building or buying a home (*Sydney Morning Herald*, 19/20 February 2005: 11).

17 Data from Mortgage Bankers Association (www.mortgagebankers.org).

as a whole, the same logic that drove up demand due to ever-increasing real estate prices may well lead to a downward spiral of decreasing demand due to falling real estate prices.¹⁸

Stephen Roach, chief economist of the investment bank Morgan Stanley, has expressed strong doubts on the sustainability of the real estate bubble. In the third quarter of 2004, real estate prices rose at an annualised rate of 18.5 percent, which pushed house appreciation to a 25-year-high. Meanwhile, the personal savings rate dropped to 0.2 percent of disposable income in October 2004. Roach argues that these two developments fed each other: that consumers reduced their income-based saving to almost zero because asset-based saving provided an offset (Roach 2004: 15). The growing risk is that, by exploiting the psychological effects of the so-called wealth effect, income-based saving has been hollowed-out and can only be rebuilt by a dramatic rise in personal saving, which will severely restrict domestic demand. Considering that American households in 2004 held property valued at \$ 14,000 billion, twice the capitalisation of the US stock exchanges, the potential consequences are severe (Roach 2004: 15).

One may argue that these assessments of the real estate market in the USA and the potential negative effects for demand are overly cautious and unlikely to ever materialise. Viewed in isolation, this may well be the case. However, the US economy is not characterised by one area with a single severe imbalance, but by several. Like in a bad cocktail, too many dangerous substances can cause quite a hangover. American monetary policy has turned a blind eye to asset price inflation in the last decade, a strategy Stephen Roach calls 'bubble-denial syndrome' (Roach 2004: 15). Alan Greenspan's monetary policy has left America with a limited choice of policy options, and none of them painless.

The Indebted Superpower: on the Need for Capital Inflows

It has already been mentioned that capital inflows have been rising spectacularly after 1998. Since then, the US benefited from financial

18 See BIS, 74th Annual Report (2004), 161.

crisis in Asia and Latin America: capital was searching for investment opportunities, and America seemed to be attractive (Altvater and Mahnkopf 2002: 227). The United States encouraged these inflows with a specific tax policy. Since 1984, foreigners do not have to pay taxes on interest earned in the US. The unequal treatment of American nationals, who pay tax on interest earned, and foreigners is an unfair tax regime for the countries where the capital originates (Williamson *et al.* 2003: 10). It encourages tax evasion in developing economies and is an obstacle to the development of financial markets in these countries. This is not (potentially useful) tax competition either, because Americans are having to pay these taxes.¹⁹

But what caused these inflows of capital? Surprisingly, we do not have very well developed tools for analysing the causalities in the balance of payments. The conventional assumption is that countries that generate a deficit in the current account, for instance by importing more than exporting, are subsequently importing capital in the form of private loans from foreigners, private foreign direct investment or by loans from foreign states. Unless there is a change in the foreign reserves of the central bank of a country, the deficit in the current account equals the surplus in the capital account, i.e. an inflow of capital from abroad. Conversely, a surplus in the current account equals a deficit in the capital account, i.e. an outflow of capital (Stützel 1958:124).

The interesting question is: which side of the balance of payments drives it? Does a balance in the current account result in the need for importing or exporting capital? Or does the import of capital result in the need for subsequently importing goods? Surprisingly, economic theory does not provide a clear answer. It all depends. However, the dominant interpretation of the balance of payments considers the current account to be the driving factor and the capital account the result of a surplus or deficit in the current account. The origin of this interpretation of the balance of payments goes back to the old gold-based currencies when a balance in the current account resulted in an increase or decrease of gold holdings (Stützel 1958:129). But in today's world this interpretation, although still widely used, has to be contested. Surpluses or deficits in the current account can be driven by the import of capital.

19 Other OECD countries are applying a similar regime. However, no OECD country has recorded capital inflows of the same magnitude.

Why do these thoughts matter in the context of interpreting the American current account? First, it is important to understand that capital inflows – both foreign direct investment and portfolio inflows – can be the source of current account deficits. Second, whatever the cause, persistent inflows increase the vulnerability of an economy, because those holding claims will one day ask for a return on their capital, reduce their engagement and thereby force the capital-importing economy to adjust. The experience of many countries throughout the 20th century has shown that it is difficult to say what precise level of capital inflows is unsustainable but, as a rule of thumb, inflows of around five percent of GDP cannot be sustained for longer periods of time without a financial crisis (Hesse 1990: 45f). Tables 3 and 4 show that the US economy is now at that level.

America's ever increasing appetite for capital is threatening not only the well-being of its economy, but also of the global economy. These fears are not only expressed by European academic observers, but also by a former finance minister and current president of Harvard University. Larry Summers points out the rising risks:

Globalization has been a boon to the U.S. economy, but America's spending addiction now threatens to undermine that virtuous global economic circle. The country that is now more economically central than it has been in decades is borrowing more than any other country in the world. ... Unless it is brought under control, the U.S. savings crisis will soon be the world's problem (Summers 2004: 47).

The current account clearly demonstrates the change in the American balance of payments in the last decade or so. The last time the United States recorded a surplus in the current account was in 1991. Even that was not a genuine surplus, but rather the result of high transfer payments by Germany, Japan and Saudi-Arabia to finance the cost of the first Gulf War.²⁰ Ever since, the American current account deficit has been growing. It was relatively modest until 1997, but thereafter the import of capital grew exponentially.

²⁰ In 1991, Fred Bergsten stated that America has given the term 'collective leadership' a new meaning: the US leads, and the US collects.

Table 3: Current Account Balance and Household Saving Rate in the US, 1991 to 1997

	1991	1992	1993	1994	1995	1996	1997
Current account balances in billions of \$	3.7	-48.0	-82.0	-117.2	-105.2	-117.2	-127.7
Current account in % of GDP	0.1	-0.8	-1.2	-1.7	-1.4	-1.5	-1.5
Household saving rate (percentage of disposable income)	8.3	8.7	7.1	6.1	5.6	4.8	4.2

Table 4: Current Account Balance and Household Saving Rate in the US, 1998 to 2004

	1998	1999	2000	2001	2002	2003	2004
Current account balances in billions of \$	-204.7	-290.8	-411.5	-393.7	-480.9	-548.6	-575.8
Current account in % of GDP	-2.3	-3.1	-4.2	-3.9	-4.6	-5.0	-5.0
Household saving rate (percentage of disposable income)	4.7	2.6	2.8	2.3	3.7	3.4	3.8

Note: The 2004 figures are a forecast of the OECD.

Source: OECD, Economic Outlook, No. 75 (June 2004).

There is a correlation between the rising current account deficit and the declining savings rate in America. A current account deficit occurs when an economy spends more than it saves. The difference is the balance on capital account, i.e. an inflow of capital. A surplus of spending over saving can happen for a number of reasons: purchases of imports, investment in infrastructure or companies, but also because of a government deficit. The analysis of current account crises in other countries clearly shows that a decisive factor is the use of the capital that flows into an economy. If that capital inflow is used for investment in a factory that produces goods which are sold on world markets, current account deficits are less worrying. If, however, capital inflows are used to finance consumption or non-productive investment, for instance in real estate, a current account deficit is less acceptable.

In the US, both the composition of capital inflows and the type of investors has changed in the past few years. Up to the year 2001, foreign direct investment – the least volatile type of capital inflows – dominated. Richard Cooper has argued that FDI has been the cause of imbalances (Cooper 2001: 218). However, due to relatively low real returns in the US, inflows for FDI shrank. Whereas in 2001 America recorded FDI inflows of \$ 144 billion, one year later that figure dropped to a mere \$ 30 billion. In 2002, Germany attracted more FDI than the US. Even the Netherlands – with \$ 29 billion – attracted almost as much FDI as America (*Handelsblatt*, 5.9.2003: 10). Since 2002 this trend has increased. Between July 2003 and June 2004 the balance of FDI was around \$ 150 billion: Americans invested much more abroad than foreigners in the US.

The gap that has opened up was filled by Asian central banks. This is quite surprising: since a country that puts such a lot of effort in being independent from other countries in security affairs needs the continuing goodwill of the Chinese and other Asian governments if it wants to avoid a sudden shock. It is odd to realise that the self-declared world's greatest power is also the world's greatest debtor. The countries that hold such large claims on America have quite a powerful tool in their accounts: They could wreck American financial markets at the click of a mouse. Surely they have no obvious incentive to do so. But if they wanted, they could dump their holdings of American treasuries on financial markets, which would probably cause a crash in the markets. In the absence of buyers, interest rates would then skyrocket. It is a new form of mutually assured destruction that has quietly emerged over the last few years (Summers 2004: 48).

Larry Summers has pointed out that American policy makers should be uncomfortable because foreign governments hold high claims on America. And it is not difficult to construct an unpleasant scenario for Washington. Assume there would one day be a severe conflict between China and America over the Taiwan issue. The island's government could be tempted to formally declare independence, which would almost inevitably result in military action from the mainland Chinese. An American government intending to intervene could be blackmailed by Beijing: any help for Taiwan would result in the dumping of Chinese reserves. And China is not Japan: it neither has American troops on its

territory nor does it have that specific, asymmetric relationship that has characterised American-Japanese relations since 1945.

Of course, not everybody will agree with the assessment presented in this article that the US economy is in a difficult situation. Recently, David Levey and Stuart Brown have argued in *Foreign Affairs* that the American economy is in better shape than many observers would think. They suggest that doomsdayers, predicting a decline of American hegemony, are wrong:

Despite the persistence and pervasiveness of this doomsday prophecy, U.S. hegemony is in reality solidly grounded: it rests on an economy that is continually extending its lead in the innovation and application of new technology, ensuring its continued appeal for foreign central banks and private investors. The dollar's role as the global monetary standard is not threatened, and the risk to U.S. financial stability posed by large foreign liabilities has been exaggerated (Levey and Brown 2005).

Some claims of American vulnerabilities may appear to be too pessimistic but, even if a crash does not materialise, America today is limited in its options. It depends on the continuing goodwill of foreign central bankers, a development that has led – according to the *Financial Times* – to a situation in which Asian central bankers determine the monetary conditions in the US (*Financial Times*, 28.2.2005: 7). Furthermore, the claim that the US economy is leading with regard to new technology does not hold water: from aircraft to software, American companies are losing their once dominant positions. Boeing's last new aircraft was launched in 1995, both its smallest (717) and its largest (747) failing to attract any customers. True, Microsoft is a leading provider of software, but it is enjoying a monopoly, and does not have to compete in the market. Where American companies do have to compete, quite often they are unable to withstand the competition. Look at the trade data. America's trade deficit in 2004 reached \$ 666 billion. An economy that is characterised by efficient and competitive companies simply cannot have a trade deficit of this magnitude. An economy whose exports cover only 55 percent of imports – the figures for the US in 2003 – is heading for trouble.

Conclusion

The American economy is on a path that is unsustainable. The combination of high current account deficits, high levels of government and private debt and the legacy of the stock market bubble appear to be a dangerous cocktail, both for America and the rest of the world. The buying of treasury bonds by Asian central banks – inaptly named ‘Bretton Woods II’ by some American economists – has not changed this assessment at all. Rather, this recent pattern will result in an even tougher adjustment, either a prolonged slump or a crash landing.

In 2004, the American economy has sucked up 85 percent of all capital inflows worldwide. The other countries importing capital were Australia (32 \$ bn), New Zealand (4 \$ bn), the United Kingdom (43 \$ bn) and Eastern Europe as a region (44 \$ bn). The rest of the world has been exporting capital to finance the thirst for foreign funds of those economies. Asia, Latin America, Western Europe and even Africa save and export capital to the richest economies – with the exception of Eastern Europe. The ethics of this trend are disturbing, although they are not the prime concern of this article.

America will not be able to continue this borrowing binge. As an economic advisor to Richard Nixon once said: ‘Things that can’t go on forever, don’t’. Today, the question is timing, not whether this trend will be sustainable. However, the crisis might take a few more years to unravel (Krugman 2003). Fred Bergsten has also expressed the anticipation that the US economy will be suffering a series of major setbacks in the coming years (Bergsten 2005: 4).

For the creators of the ‘Bretton Woods II’ hypothesis, these considerations have evidently been less important than the political motives of Asian central banks. Dooley *et al.* have expected that Asia will continue to finance America for a generation (Dooley *et al.* 2003). Other observers have expressed concern: Roubini and Setser, for example, expect a hard landing for the US in 2005 or 2006 (Roubini and Setser 2005).

The exact scenario is hard to predict. However, the weaknesses of the American economy that have been demonstrated in this article lead to the conclusion that, even without a ‘hard landing’, the US economy is

heading for turbulent times. There could be a drastic adjustment, with a sharp fall of the dollar, rising interest rates, a severe reduction of domestic demand as well as imports and a blow-out of public deficits. Or the adjustment will be gradual, with a slow, persistent fall in the dollar, the current account deficits staying high or even increasing, the asset prices stabilising at current levels and public deficits continuing at around 5 percent of GDP. The second scenario, however, would result in an ever-increasing foreign debt burden for the USA and would only be a postponement of adjustment. It is a matter of time until America's lenders will realise this.

References

- Altvater, Elmar and Mahnkopf, Birgit (2002): *Globalisierung der Unsicherheit*, Muenster: Verlag Westfälisches Dampfboot.
- Baker, Dean and Walentin, Karl (2001): *Money for Nothing. The Increasing Cost of Foreign Reserve Holdings to Developing Nations*, Centre for Economic and Policy Research, mimeo.
- Baker, Dean (2002): *The Run-Up in Home Prices: Is It Real or Is It Another Bubble?*, Working Paper, Centre for Economic and Policy Research, mimeo.
- Bergsten, C. Fred (2005): *The Euro and the World Economy*, paper presented at a conference on The Eurosystem, the Union and Beyond: The Single Currency and Implications for Governance, European Central Bank, Frankfurt, 27 April 2005.
- Cooper, Richard N. (2001): *Is the U.S. Current Account Deficit Sustainable? Will It be sustained?*, in: *Brookings Papers on Economic Activity*, No. 1, pp. 217-226.
- Dieter, Heribert (2005): *Die Zukunft der Globalisierung. Zwischen Krise und Neugestaltung*, Baden-Baden: Nomos-Verlagsgesellschaft.
- Dieter, Heribert and Higgott, Richard (2003): *Exploring alternative theories of economic regionalism: From trade to finance in Asian co-operation?*, in: *Review of International Political Economy*, Vol. 10, No. 3 (August 2003), pp. 430-455.
- Dooley, Michael P., Folkerts-Landau, David; Garber, Peter (2003): *An Essay on the Revived Bretton Woods System*, NBER Working Paper 9971, September 2003.
- Eichengreen, Barry (2000): *Vom Goldstandard zum Euro. Die Geschichte des internationalen Währungssystems*, Berlin: Wagenbach.
- Evans, Trevor (2001): *Die Rolle finanzieller Faktoren im US-amerikanischen Wirtschaftsboom der 90er Jahre*, in: *Prokla*, Vol. 31, No. 1, pp. 31-45.
- Gilpin, Robert (2000): *The Challenge of Global Capitalism. The World Economy in the 21st Century*, Princeton University Press.

- Herr, Hansjörg (2001): *Weltwährungssysteme im Rückblick – Lehren für die Zukunft*, in: Heise, Arne (ed.) (2001): *Neue Weltwährungsarchitektur*, Marburg: Metropolis-Verlag, pp. 161-200.
- Hesse, Helmut (1990): *Außenwirtschaftliches Gleichgewicht: Ursachen und Bewertung von Leistungsbilanzsalden*, in: *Aus Politik und Zeitgeschichte*, B 18, pp. 39-46.
- James, Harold (2001): *The End of Globalisation: Lessons from the Great Depression*, London and Cambridge (Mass.): Harvard University Press.
- James, Harold (1996): *International Monetary Cooperation since Bretton Woods*, New York and Oxford: Oxford University Press.
- Kindleberger, Charles P. (1978): *Manias, Panics, and Crashes*, New York: Basic Books.
- Krugman, Paul (2003): *America on the economic watch list*, in: *International Herald Tribune*, 15.10.2003, p. 8.
- Maddison, Angus (2001): *The World Economy: A Millennial Perspective*, Paris: OECD.
- Maddison, Angus (1989): *The World Economy in the 20th Century*. Paris: OECD.
- Mann, Catherine C. (1999): *Is the U.S. Trade Deficit Sustainable?*. Institute for International Economics, mimeo.
- Polanyi, Karl (1971): *The Great Transformation. Politische und ökonomische Ursprünge von Gesellschaften und Wirtschaftssystemen*, Wien: Europaverlag [1944].
- Roach, Stephen (2004): *America's ominous housing bubble*, in: *The Financial Times*, 10 December 2004, p. 15.
- Roubini, Nouriel and Setser, Brad (2005): *Will the Bretton Woods 2 Regime Unravel Soon? The Risk of a Hard Landing in 2005-2006*. Paper for the Symposium on the "Revived Bretton Woods System", organised by the Federal Reserve Bank of San Francisco, February 4th, 2005.
- Shiller, Robert (2000): *Irrational Exuberance*, Princeton: Princeton University Press.
- Stützel, Wolfgang (1958): *Volkswirtschaftliche Saldenmechanik. Ein Beitrag zur Geldtheorie*. Tübingen: J.C.B. Mohr.
- Summers, Lawrence (2004): *America Overdrawn*, in: *Foreign Policy*, July/August 2004, pp. 46-49.
- Williamson, John, Griffith-Jones, Stephany and Gottschalk, Ricardo (2003): *Should Capital Controls Have a Place in the Future International Monetary System?* Paper prepared for the International Monetary Convention organised by the Reinventing Bretton Woods Committee, 13-14 May 2003, Madrid.
- Wolf, Martin (2000): *After the Crash*, in: *Foreign Policy*, September/October, pp. 46-52.