

**Univerzita Karlova v Praze
Fakulta sociálních věd**

Institut ekonomických studií

BAKALÁŘSKÁ PRÁCE

2005

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Sustainability of the U.S. Current Account Deficit

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Akademický rok: 2004/2005**

Prohlášení

Prohlašuji, že jsem bakalářskou práci vypracoval samostatně a použil pouze uvedené prameny a literaturu.

Washington, D.C.
11. července 2005

Viktor Hanzlík

Poděkování

Děkuji panu docentovi Pavlu Mertlíkovi, konzultantovi této práce za odkazy na relevantní literaturu a přínosné komentáře.

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Abstract

This thesis introduces a simple analytic framework in which the U.S. current account deficit can be discussed, demonstrates how the US external imbalances have built up during the past decade and sets them into historical context as well as into the context of the contemporary world economy. The paper discusses the financing of the deficit and its ramifications and lays out arguments for and against the claim that the deficit is sustainable. Finally, possible ways of reducing the US external imbalances are outlined. The thesis concludes that the U.S. current account deficit is not sustainable in the long run.

Abstrakt

Tato bakalářská práce představuje jednoduchý analytický rámec, ve kterém je možno diskutovat deficit běžného účtu platební bilance USA a ukazuje jak externí nerovnováha americké ekonomiky rostla v průběhu minulého desetiletí. Deficit je zasazen do historických souvislostí i do souvislostí současné světové ekonomiky. Práce se zabývá financováním deficitu a jeho důsledky, uvádí argumenty pro a proti tvrzení, že deficit je udržitelný a zkoumá možné varianty snížení americké externí ekonomické nerovnováhy. Závěrem práce je, že deficit běžného účtu platební bilance USA není v dlouhém období udržitelný.

“If something can’t go on forever, it will stop.”

Herb Stein

Chairman of the Council of Economic Advisors, 1972-1974

1. Introduction

After the long boom of the 1990s, the world’s largest national economy went through testing times. The U.S. stock markets fell sharply in 2000, bursting the dotcom bubble and ending dreams of a „new economy“. Brief recession followed in 2001 and the recovery, fuelled by a huge fiscal and monetary stimulus, was rather tepid. Large-scale corporate malfeasance severely shook trust in the economy. The fiscal position deteriorated significantly due to President Bush’s generous tax cuts and increased spending.

In 2004 the U.S. GDP growth, at more than 4 percent, again outpaced that of the other two largest economic areas, the European Union and Japan. This is a sign of strength, yet concerns about the health of the U.S. economy are still warranted. The USA is running a current account deficit of more than 5 percent of GDP – which is large by any measure. America is spending more than it produces, borrowing the difference abroad and rapidly building up debt. While the private investors are largely losing appetite for U.S. assets, Asian central banks willingly continue to finance the American external deficit. The question is whether this arrangement can last and what happens if the foreign creditors refuse to accumulate further U.S. debt or steeply increase the USA’s price of borrowing.

The stakes are high, massive exchange rate fluctuations, substantial shifts in wealth between the USA and its creditors, financial crisis, meltdown of the rising Chinese economy, backlash against free trade and global economic slowdown are all among the possible consequences of U.S. external imbalances. It is therefore no surprise that the U.S. current account deficit has recently attracted much attention. It is an increasingly popular topic of economic research and features prominently in several of the latest issues of the IMF’s World Economic Outlook. Mainstream media and the wider public are also taking note of this issue.

The aim of this thesis is to develop a simple framework in which the U.S. current account deficit can be analysed and discussed, show how the U.S. external imbalances have built up during the past decade and put them into historical context as well as into the context of the contemporary world economy. Special attention is devoted to the central issue of financing of the deficit and its ramifications. We lay out the arguments for and against the argument that the deficit is sustainable as well as possible ways to reducing the U.S. external imbalances.

The bottom line is not a surprising one – even though the USA enjoys a special position in the world economy, not even it can run current account deficits of 6 and more percent of GDP for a prolonged period of time. The findings of the thesis can be summarised in the following four points:

- 1) The U.S. current account deficit is large and growing. It reflects lack of U.S. saving. Unless there is a significant adjustment, the deficit and U.S. international debt are set to continue growing.
- 2) As the U.S. debt grows, private investors are less and less willing to finance the deficit at unchanged interest and exchange rates.
- 3) The system under which the deficit is financed by Asian central banks becomes ever costlier, causes severe internal imbalances both in Asia and the USA and is not stable in the long run.
- 4) Adjustment will come through both dollar depreciation and a slowdown of the U.S. economy. The severity of the correction will depend on how the adjustment is triggered.

1.1 Survey of Literature

The standard undergraduate textbook for analysing international macroeconomics is International Economics by Paul Krugman and Maurice Obstfeld. Together with the classical Dornbusch-Fischer textbook, it provides a simple but effective framework for thinking about international macroeconomic issues. Tomáš Cáhlik's macroeconomics textbook used in the intermediate course at FSV offers some insights that are missing in the two aforementioned textbooks, while late Rüdiger Dornbusch's papers and website greatly help to understand economic issues not covered in the textbooks, and to establish a connection between the models and real world.

IMF's World Economic Outlook, published twice a year, provides analysis of current international economic issues, as well as a snapshot of the world economy and a wealth of statistics. International imbalances were one of the major and recurring topics since 2001. Of the popular media, it is The Economist that devotes the most attention to international macroeconomic imbalances. However, most of the articles concerning this subject matter are based either on IMF's World Economic Outlook or published research papers and provide little original analysis.

Turning to research papers, Catherine Mann's article "Perspectives on the U.S. Current Account Deficit" offers several interpretations of the current account deficit and

explains implications of large deficits and of their financing. Mann also discusses the possibilities of external adjustment. Several papers are devoted to the so-called “Bretton Woods 2” theory. This hypothesis, put forward by Dooley, Folkerts-Landau and Garber argues that the world economy currently operates in a system of semi-fixed exchange rates, similar to the Bretton Woods system of the 1960s. Dooley et al. claim that the Asian economies are ready to finance the U.S. current account deficit for at least another decade and the present arrangement therefore is sustainable. The “Bretton Woods 2” theory has incited considerable response. Brad Setser and Nouriel Roubini provide a compelling set of arguments against the sustainability of the “Bretton Woods 2” system. Barry Eichengreen attacks the theory through comparison with the original Bretton Woods fixed exchange rate system. Larry Summers’ contributions to the discussion are a concise statement of the mainstream view that the U.S. current account deficit is not sustainable and the adjustment, if it is to be benign, has to take the form of both U.S. dollar depreciation as well as a reduction in overall U.S. demand.

Caroline Freund’s empirical paper investigates past adjustments of large and prolonged current account deficits in industrialized countries and their effect on growth, exchange rates, fiscal deficits and interest rates. On a more abstract level, Edwin Truman discusses the interconnections of budget and fiscal deficits as well as conditions under which the deficits behave as “twins”. David Howards’s “Implications of the US Current Account Deficit” - published in 1989, highlight parallels and differences between the present situation and the late 1980s when the U.S. economy last displayed large external imbalances. Nouriel Roubini’s “Global Macroeconomic and Financial Policy Website” is a rich resource of articles and data concerning the world economy.

2. Basic concepts

In this section we define the basic concepts – balance of payments and national income accounting for an open economy. We also introduce two simple models of exchange rate determination and establish links between these theories.

2.1 Balance of payments

The *balance of payments* is a statement of a country's economic transactions with the rest of the world over a period of time. The balance of payments records the country's payments to and from foreigners. By convention, transactions leading to a payment to foreigners enter the balance of payments with a negative sign, while transactions inducing payments from foreigners are recorded with positive sign.

The balance of payments consists of the current account, the capital account and the financial account¹. The *current account* records exports and imports of goods and services, income receipts on domestically-owned assets abroad, income payments on foreign-owned assets in the home country, cross-border compensation of employees as well as net unilateral current transfers. Income receipts are included in the current account because they are actually payments for services provided by foreign investment.

The *financial account* keeps track of sales of assets² to foreigners and purchases of foreign assets. Selling assets abroad - resulting in a payment by foreigners – enters the financial account with a plus sign and is referred to as capital inflow. Foreign assets are either *unofficial* – held by private investors, or *official* – in possession of governments and central banks. An important subset of the official assets are the *official reserve assets*, which are held by a monetary authority and readily available for balance of payments financing. Apart from smoothing unpredicted and temporary imbalances in international payments, they can also be used for official interventions with a view to influence macroeconomic situation.

The *capital account* mirrors transfers of wealth among countries other than those recorded in current and financial accounts. Capital account transactions are mostly nonmarket, such as asset (as opposed to current) transfers. Movements on capital account are generally small (for USA, the country of our interest, they are practically negligible).

¹ In the USA, this classification is used since July 1999. Until then, all transactions entered either capital or current account. The old capital account turned into financial account and some items from the old current account were transferred to the new capital account.

² Under assets we understand any of the forms of holding wealth – eg. stocks, bonds, money, factories, real estate, gold...

Balance of payments accounting follows the principles of double-entry bookkeeping. For every credit transaction, there has to be an offsetting debit transaction. Whenever a country imports goods or services or acquires foreign assets, it has to export goods or services or/and sell foreigners assets of equal value. As a consequence, we get the *fundamental balance of payments identity*:

$$\text{current account} + \text{capital account} + \text{financial account} = 0$$

Unlike the balance of payments as a whole, the individual accounts do not have to be balanced. However, any current account deficit has to be matched (financed) by an equally large combined financial and capital account surplus. In reality, due to imperfect data quality, the three accounts do not exactly add up to zero. A special item – *statistical discrepancy* – is introduced to correct for the shortcomings of data collection.

Table 1: Balance of payments of the USA, 2004

<i>(Credits +, debits -)</i>	<i>2004</i>
Current account	<i>Millions of dollars</i>
Exports of goods and services and income receipts	1 530 975
Exports of goods and services	1 151 448
Income receipts	479 527
Imports of goods and services and income payments	-2 118 119
Imports of goods and services	-1 769 031
Income payments	-349 088
Unilateral current transfers, net	-80 930
Balance on current account	-668 074
Capital account	
Capital account transactions, net	-1 648
Financial account	
U.S.-owned assets abroad, net (increase/financial outflow (-))	-855 509
U.S. official reserve assets, net	2 805
U.S. Government assets, other than official reserve assets, net	1 215
U.S. private assets, net	-859 529
Foreign-owned assets in the United States, net	1 440 105
Foreign official assets in the United States, net	394 710
Other foreign assets in the United States, net	1 045 395
Statistical discrepancy (sum of above items with sign reversed)	85 126

Source: Bureau of Economic Analysis

2.2 National income accounting for an open economy

In a closed economy, the product can be consumed, invested or used for government spending. From this, the basic accounting identity follows:

$$Y = C + I + G \quad (1)$$

In a closed economy, total saving always equals investment – the only way a closed economy can save is by building up its capital stock³.

In contrast, open economies can save by exporting more than they import or dissave when their imports exceeds their exports. In addition to building up their capital stock, open economies can save by purchasing foreign assets. Denoting exports of goods and services X and imports M, we get the open-economy accounting identity:

$$Y = C + I + G + X - M \quad (2)$$

The difference between exports and imports is referred to as net exports (NX). From the previous section we know that the current account balance is exports minus imports⁴ plus the net current transfers (TR).

$$CA = X - M + TR \quad (3)$$

Substituting from (3) to (2) and rearranging allows us to interpret the current account deficit:

$$-CA = C + I + G - Y - TR \quad (4)$$

Current account deficit is equal to the excess of total expenditure (consumption, government and investment⁵) over national product plus net current transfers. After some more shuffling with terms⁶ we arrive at:

$$-CA = I - TS \quad (5)$$

Identity (5) says that the *current account deficit is equal to the excess of investment over total national saving.*

³ $Y = C + I + G$
YD (disposable income) = $Y - TX$ (taxes)
YD = $C + S$ (private saving)
 $Y - TX = C + S$
 $I = S + TX - G$
 $TX - G = BS$ (budget surplus, ie. public saving)
 $S + BS = TS$ (total saving)
 $I = TS$

⁴ To be consistent with our definition of the current account, we include income receipts on home-owned foreign assets in exports and income payments on foreign-owned home assets in imports. Technically, this means Y is GNP.

⁵ The sum of consumption expenditure, government expenditure and gross domestic investment is also referred to as *domestic absorption*.

⁶ $Y + TR = C + I + G + CA$
YD = $Y - TX + TR$
YD = $C + S$
 $Y - TX + TR = C + S$
 $I + G + NX - TX + TR = S$
 $S + BS = I + NX + TR$
 $TS - I = CA$

2.3 Net international investment position

The *international investment position* is a summary of a country's net foreign wealth. It records foreign assets owned by domestic residents as well as domestic assets in possession of foreigners. The difference between the two, the net international investment position (NIIP), indicates the size of a country's net international debts or net international assets.

We already know that a country's current account balance has to be offset by the financial and capital accounts. A country running a current account deficit has to borrow from foreigners or sell them assets to the tune of the deficit, thus reducing the NIIP, whereas countries with current account surplus increase their net holdings of foreign assets and improve their NIIP. A country's NIIP can also change through a shift in market prices of previously acquired foreign assets or foreign-owned domestic assets. Finally, NIIP also changes through transfers of assets between countries. There are two methods of assigning current value to direct investment – the current cost method values direct investment at the cost at which it could be replaced today while the market cost measures price for which the investment could be sold in the market.

Table: Net international investment position of the USA, 2003 – end of year

NIIP with direct investment positions at market value	-2 650 990
U.S.-owned assets abroad:	<i>Millions of dollars</i>
With direct investment at market value	7 863 968
U.S. official reserve assets	183 577
U.S. Government assets, other than official reserve assets	84 772
U.S. private assets	7 595 619
Direct investment abroad (at market value):	2 730 289
Foreign securities	2 474 374
Bonds	502 130
Corporate stocks	1 972 244
U.S. claims on unaffiliated foreigners reported by U.S. nonbanking concerns	614 672
U.S. claims reported by U.S. banks, not included elsewhere	1 776 284
Foreign-owned assets in the United States:	
With direct investment at market value	10 514 958
Foreign official assets in the United States	1 474 161
Other foreign assets:	9 040 797
Direct investment in the United States (at market value):	2 435 539
U.S. Treasury securities	542 542
U.S. securities other than U.S. Treasury securities	3 391 050
Corporate and other bonds	1 852 971
Corporate stocks	1 538 079
U.S. currency	317 908
U.S. liabilities to foreigners reported by U.S. nonbanking concerns	466 543
U.S. liabilities reported by U.S. banks, not included elsewhere	1 887 215

Source: Bureau of Economic Analysis

2.4 Real exchange rate and determinants of net export

The real exchange rate is the price of a representative basket of foreign goods in terms of a representative basket of domestic goods. Price level of foreign goods is measured in domestic currency and thus is equal to the price level of foreign goods in foreign currency times the nominal exchange rate.

$$\varepsilon = E * P_f / P \quad (6)$$

Real exchange rate is the rate at which domestic goods and services can be exchanged for those of another country. The weaker the real exchange rate, the cheaper the foreign goods and services are relative to domestic goods and services. Consequently, when the real exchange rate appreciates⁷, demand shifts from domestic to foreign products – imports rise and exports plummet. Apart from the real exchange rate, demand for imports is also a function of domestic income – the higher the income, the greater the demand for foreign goods. Analogously, demand for a country's exports depends on income abroad.

$$NX = X(Y_f; \varepsilon) - M(Y; \varepsilon) \quad (7)$$

2.5 The J-Curve and pass-through

In reality, the relationship between the real exchange rate and net exports is more complicated. While it is true that a rise in real exchange rate causes a shift in demand from foreign to domestic goods and services, this transition does not happen immediately. Firms are at first bound by contracts made before the real exchange rate change. At the same time, domestic suppliers need time to start producing goods and services that would not have been competitive under the original real exchange rate. As there are transaction costs connected to changing suppliers, firms also start to adjust with a time lag, wanting to make sure that the shift in exchange rate is not just temporary.

Given the delayed response of demand to real exchange rate changes, a real depreciation initially causes the country's net exports to fall⁸. As time passes, demand shifts to domestic goods and net exports gradually rise. The graph of net exports against time after real exchange rate depreciation thus has the shape of letter J. This has earned the dynamics of adjustment to a real depreciation the name *J-Curve*. It is natural to ask whether the shift in relative demand towards domestic goods is large enough to offset the initial fall in net

⁷ A real appreciation means relative increase in price of domestic goods. Given our definition, a real appreciation of domestic currency is a *decrease* in ε

⁸ Real exchange rate can depreciate because nominal exchange rate depreciates, foreign price level rises or home price level falls. In the first two cases, imports become more expensive, in the third case exports become cheaper. When there is no change in the amount of goods and services exported and imported, the total value of exports and imports changes in proportion to prices. In all three cases the value of net exports falls.

exports. The answer depends on elasticities of export and import with respect to real exchange rate. If the sum of these elasticities exceeds one, then the net exports ultimately rise. This rule is known as the *Marshall-Lerner condition*⁹. Empirical evidence¹⁰ suggests that over time horizons longer than one year, the Marshall-Lerner condition is comfortably satisfied for the vast majority of countries and so it is warranted to assume that a real depreciation increases net exports in the long run.

Another issue concerning the adjustment of net exports to depreciation is the pricing behaviour of importers and exporters. Exporters often prefer to leave prices unchanged in terms of the currency of the importing country or raise their prices less than proportionately in order to prevent loss of market share. Profits of such firms decrease; the amount of the product they sell, however, changes less than it would be the case had the prices moved exactly in line with the nominal exchange rate. The percentage change by which import prices rise after a one percent domestic currency depreciation is referred to as *pass-through*. It is easy to see that lower pass-through means lower sensitivity of net exports to changes in the real exchange rate. Low pass-through can be quite significant in practice. For instance, the dollar prices of U.S. imports of manufactured goods from the European Union rose by only 9% between early 2002 and early 2004 even though the dollar fell about 30% against the Euro over the same period¹¹. In the long run, exchange rate changes lead to proportional changes in import prices.

2.6 Exchange rate determination

Before introducing exchange rate models, a word of caution is necessary. Explaining, let alone predicting exchange rates movements is very difficult, particularly in the short term. Indeed, Meese and Rogoff (1983) showed that over the period of 12 months exchange rate determination models based on fundamental macroeconomic variables are no better at predicting exchange rates than random walk. Nearly twenty years on, in spite of applying more sophisticated models, Rogoff (1999) notes that: „Researchers have continued to find it very frustrating to firmly demonstrate any systematic relationship between exchange rates and macroeconomic fundamentals.“ The situation improves in the long term – models based on purchasing power parity and a connection between long-run growth of money supply and

⁹ This version of the Marshall-Lerner condition applies to cases when the initial net exports are zero, for non-zero initial net exports, this condition becomes more complicated.

¹⁰ See Krugman, Obstfeld: International Economics, Chapter 16

¹¹ see Greenspan (2005). Greenspan argues that should the dollar decline further, the exporters no longer will choose to absorb a further reduction in profit margins and will raise prices instead.

inflation are not widely contested, enabling us to explain long-run movements of exchange rates¹².

There are two standard approaches to exchange rate determination at the undergraduate level – the uncovered interest parity approach and the approach based on movements on the balance of payments. The interest parity approach is more widely used and often regarded as more modern; however, some of the assumptions of the interest parity model make it less appealing for our analysis. The balance of payments approach is simpler and less elegant but exactly these features make it more flexible. As both models offer a slightly different perspective, it is beneficial to explain both of them and then use a model that combines the strengths of both approaches.

The uncovered interest parity approach starts with a standard model of the money market. The money supply is controlled by the central bank. Money is demanded for transaction purposes; aggregate money demand is demand for real balances. Money demand rises with income as households and firms need more liquidity to finance their purchases and decreases with interest rate as the opportunity cost of holding money instead of interest-bearing assets rises when interest rates go up. When money supply exceeds money demand, agents are trying to allocate the currency they do not wish to hold at this interest rate into bonds (which represent all interest-bearing assets to keep the model simple). As demand for bonds exceeds supply, bond prices soar, lowering the interest rates. This in turn sinks the opportunity cost of holding money and increases the amount of real balances demanded. The interest rates keep falling until money supply and demand balance. Given fixed price level and output, a monetary expansion by the central bank decreases interest rates.

Equilibrium on the exchange rate market is a function of long-run exchange rate expectations, investors' perceptions of relative risk of countries and interest rates obtained from the money market model. All other factors being equal, agents prefer to hold assets with the highest expected rate of return. For an investor, the rate of return in his domestic country

¹² An interesting long-run model, linking the real exchange rate with the level of international debt was introduced recently by Blanchard, Giavazzi and Sa (2005). In this model the long-run equilibrium real exchange rate and the level of international debt are simultaneously determined. The larger the net international debt a country has, the larger the interest payments to its international creditors are. The interest payments must be financed by a current account surplus, which negatively depends on the strength of domestic currency.

We thus arrive to first relationship between the size of a country's international debt and its exchange rate. The second relationship between these two variables is a direct consequence of home bias. All other things equal, foreigners invest a greater share of their wealth into foreign assets than home investors. Whenever wealth shifts abroad, demand for foreign assets increases relative to demand for domestic assets. This leads to a decrease in relative price of domestic assets – i.e. to a real depreciation of domestic currency. Provided stability conditions are met, the long-run equilibrium exchange rate and international debt are determined by the intersection of curves mapping the two relationships.

is simply the interest rate. When investing abroad, investors also have to consider the expected currency shifts. The rate of return on a foreign investment in domestic currency is approximately equal to the foreign interest rate plus the expected rate of appreciation of the foreign currency against the domestic currency over the period for which the investment is considered. If, for instance German government debt yields 5 percent a year and the euro is expected to appreciate by 2 percent against the U.S. dollar over the same period, the interest on this investment would be 7 percent for an American investor who would change his dollars into euros, invest into German government debt and convert the euros back into dollars at the end of the year. If investors perceive assets of one of the countries as riskier than that of the other, they have to be compensated for investing into these assets by a *risk premium*. Assets of the riskier country have to offer higher yield in order to be considered equally attractive by investors.

The formal condition for the assets of two countries to be equally attractive to investors is

$$R_D = R_F + (E_{D/F}^e - E_{D/F}) / E_{D/F} + \rho \quad (8)$$

where R_D is domestic interest rate, R_F is foreign interest rate, ρ is the risk premium $E_{D/F}$ is the spot nominal exchange rate (price of a unit of foreign currency in units of domestic currency) and $E_{D/F}^e$ is the exchange rate expected at the end of the time period for which the investment is considered. The foreign exchange market equilibrium requires deposits in all currencies to offer the same expected rate of return. Equation (8) thus states the equilibrium condition. Whenever this condition is not met, all holders of the less attractive deposits attempt to buy foreign currency in order to invest into the deposits of the other country, while there is nobody willing to sell foreign currency under these conditions. This drives the foreign currency up. As the long-run expectations remain unchanged, the yields on foreign assets fall because the rate at which foreign currency is expected to appreciate decreases. The exchange rate adjustment continues until the equilibrium described by condition (8) is reached. To sum up, the interest rates are determined domestically by money supply and demand. The foreign exchange equilibrium then depends on these interest rates as well as expected long-run exchange rates and investors' perceptions about risk.

2.7 Suitability of the interest parity model

While it is a useful tool for explaining how the exchange rates are influenced by the relative yields countries offer to investors, the uncovered interest parity model fails to capture certain phenomena caused by the present imbalances on the U.S. current account. This is largely due to two properties of the model: first, it focuses solely on asset transactions and entirely omits the current account and the effects its imbalances cause, and second, by assuming that all investors have the same exchange rate expectations and identical risk assessment, the model predicts that assets are never actually traded across borders by private investors. As a consequence, foreign demand for domestic assets has no effect on domestic asset market and interest rates. Furthermore, within this model a sterilized intervention by a central bank is ineffectual¹³. Last but not least, in presence of capital controls the equilibrating mechanism of the model is broken as investors are not allowed to engage in foreign exchange trading and therefore cannot balance the attractiveness of domestic and foreign assets.

Consider this in the context of the common wisdom about today's world economy: Asian official demand for Treasury bonds reduces U.S. interest rates, cross-border trading of assets by private investors is commonplace, Asian central banks carry out sterilized foreign exchange interventions and China has capital controls in place, even though these are far from watertight. With the exception of capital controls, these shortcomings could be overcome by adjusting the model, it would, however, become unwieldy.

2.8 Balance of payments approach to exchange rate determination

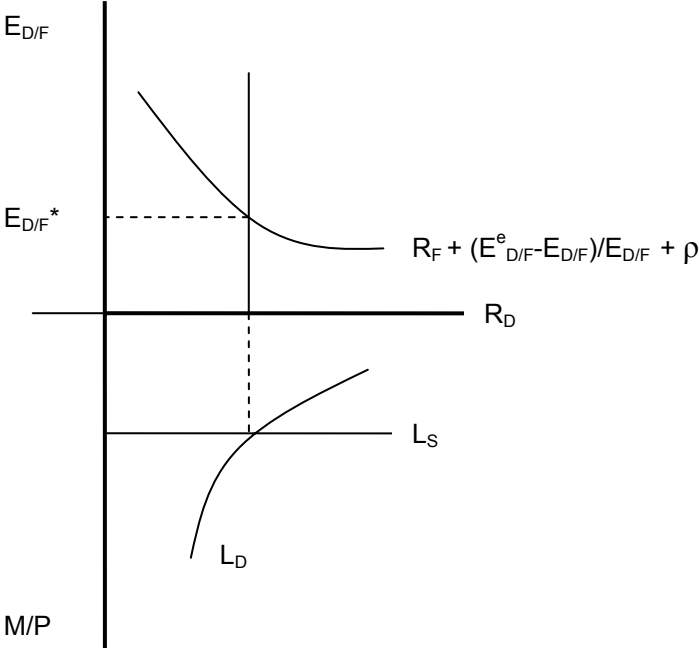
The balance of payments approach uses the classical supply and demand schedule to determine the relative price of currencies and the amount of foreign exchange traded. Demand for foreign currency is derived from demand for both foreign goods and foreign interest-bearing assets. Given constant price level, the real exchange rate changes exactly in proportion to the nominal exchange rate and so a nominal appreciation translates into greater amount of imports, and thus foreign currency, demanded¹⁴. Demand for assets can be explained by using the interest parity approach – investors are always trying to allocate their

¹³ A foreign exchange intervention involves a central bank buying foreign assets for domestic currency. This increases the money supply and lowers interest rates. When the central bank doesn't want to increase the money supply, it can sell domestic-denominated debt and mop-up the extra liquidity. In the model, both money supply and money demand remain unchanged and so do the interest rates. This leaves the exchange rates unchanged because in absence of an interest rate change investors continue to equilibrate exchange rates at the same level.

¹⁴ The price level in countries of our interest is relatively stable. Therefore the relationship between nominal exchange rate and imports holds over relatively long periods of time even when the price stability is relaxed.

funds to countries offering the greatest risk-adjusted returns. Again, when a foreign currency is weak, its expected appreciation, and returns for foreigners in this country, are higher, which leads to greater demand for foreign assets.

Figure 1: Uncovered interest parity model



The lower part of the graph shows the money market, L_S is the money supply, set by the central bank. Demand for money, L_D depends negatively on the domestic interest rate R_D , which is on the horizontal axis. Increases in income shift money demand to the right and increase interest rates, monetary expansion shifts money supply down in the graph, thereby decreasing interest rates.

Upper part of the graph shows the foreign exchange market. Interest earned on foreign investments depends positively on the strength of domestic currency. Whenever foreign investment yields more than domestic (ie. whenever we are to the right of R_D on the curve), all investors try to get out of their domestic positions and push the domestic currency down until the yields from foreign and domestic investments equalize.

Generally, all operations that enter a country’s balance of payments with a positive sign (an export or sale of assets to foreigners) give rise to demand for the domestic currency and equally large supply of foreign currency and all operations that enter the balance of payments with negative sign (imports and purchases of foreign assets) induce demand for foreign currency and supply of domestic currency.

Unlike in the interest parity model, it is easy to relax the assumption of equal expectations and risk assessments among all investors. This adds a further element of realism to the model as changes in relative attractiveness of assets across countries no longer cause *all* investors to demand the currency of one country and assets are actually traded between domestic and foreign investors with different assessment of the individual assets' rentability. The balance of payments model gives equal weight to exchange rates shifts induced by trade and asset flows, enables foreign changes in demand for domestic assets to influence domestic assets market equilibrium, doesn't break down in presence of capital controls and allows a sterilized intervention to shift equilibrium exchange rate. Figure 2 offers a graphical explanation of the model¹⁵.

2.9 Interpreting the current account deficit

The accounting identity (4) seems to suggest that the current account deficit is a sign of a country living beyond its means. This is not necessarily the case. A country can also run a current account deficit as a consequence of being an attractive destination for foreign investment¹⁶. The fundamental balance of payments identity¹⁷ says that net capital inflow (surplus on the financial account) has to be offset by an equally large current account deficit. This means that when foreign demand for domestic assets exceeds domestic demand for foreign assets, the only way foreigners can bridge the shortfall is by exporting goods. If the combined foreign demand for domestic goods and assets exceeds domestic demand for foreign goods and services, an adjustment in exchange rate occurs. Domestic currency appreciates, making domestic assets less attractive for foreign investors and reducing the amount demanded by foreign investors, while decreasing the prices of foreign goods. Foreign investors de facto make their country's exports cheaper in order to export enough to cover their demand for foreign assets. Ceteris paribus, an increase in foreign demand for domestic assets leads to an appreciation of the domestic currency and widening of the current account deficit¹⁸.

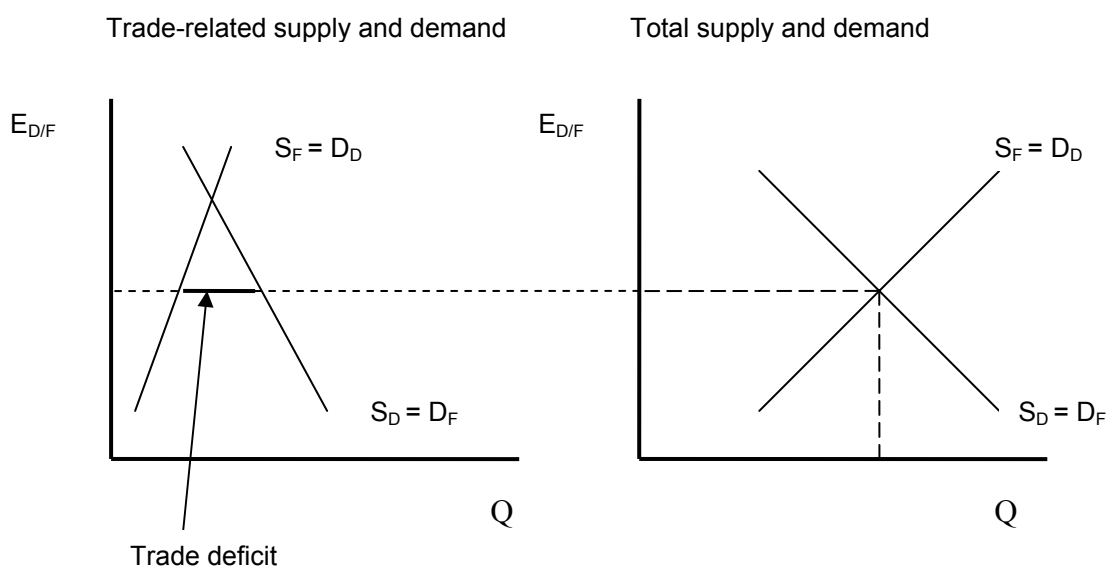
¹⁵ Note that due imperfect pass-through, the trade-related forex supply would be very inelastic in the short run and more elastic over longer periods of time.

¹⁶ Catherine Mann (2000) suggests that because the current account deficit is a manifestation of general equilibrium interaction between many variables, it should be analysed both from the domestic perspective based on savings and investments as well as from the perspective of international capital markets. Together, these perspectives give a mutually reinforcing and consistent view of the deficit.

¹⁷ omitting transfers for convenience

¹⁸ In figure 2, this would mean the D_D schedule moving to the right in the right panel

Figure 2: Balance of payments model of exchange rates



The left graph shows domestic and foreign demand for imports. Strong domestic currency (ie. low $E_{D/F}$) means foreign goods and services are cheaper and the amount of imports demanded is greater. Demand for imports gives rise to demand for foreign currency equal to the value of imports demanded. At the same time strong domestic currency makes domestic goods more expensive for foreigners, reducing amount of domestic currency demanded.

The right graph shows the total demand for domestic currency by foreigners as well as total demand for foreign currency by domestic agents. In addition to trade-related demand, this includes demand for currencies derived from cross-border assets demand and other operations involving cross-border payments. The cheaper a country's currency is, the better investment possibilities the country offers to foreigners relative to other countries.

Equilibrium amount of currency traded and equilibrium exchange rates are determined by the intersection of total supply and demand curves. In the left panel, the difference between trade-related demand for domestic currency and trade-related demand for foreign currency shows the size of the trade deficit.

This interpretation is often used to promote the idea that a current account deficit is in fact a sign of economic strength, not weakness and therefore requires no action by U.S. or international institutions. Current account deficits in themselves are not harmful – quite the contrary, they open an additional channel for countries to distribute their consumption in time, potentially increasing welfare. Running a current account deficit in a country that offers excellent investment opportunities makes perfect sense – it enables the country to invest without cutting back on consumption. After all, a country that can borrow abroad for 5% p.a. to carry out an investment project that yields 10% per year is ahead of the game. The deficits only become a reason for concern when they become too large or are used mainly to finance

consumption. In such cases, the borrowers might refuse to continue funding the deficit because of fear that the country will not be able to honour its liabilities or demand higher interest to compensate them for the risk of default or future depreciation. We will explore whether the U.S. current account is a result of overspending or reflects the USA's position of an attractive investment destination in the following section.

3. Facts and figures

In this section, we assess the magnitude of the U.S. current account deficit and compare it to the external deficits the United States has run in the past as well as with the deficits of other countries. We show how the current account deficit has built up in the course of the past decade and we explore the main drivers behind the deficit. We describe how the U.S. current account deficit is financed and also examine interdependence of fiscal and current account deficits. In this section, we rely heavily on graphs, as they can best convey the dramatic changes in economic variables that occurred in the past decade.

3.1 Magnitude of the deficit

In 2004, the United States exported goods and services worth 1,152 billion of dollars. With imports of 1,769 billion, the trade deficit of the USA in 2004 amounted to 617 billion. Income receipts on U.S. owned assets abroad together with cross-border compensations of U.S. employees reached \$379 billion, payments to foreign employees and foreign owners of U.S. assets were \$349 billion of dollars. Net unilateral current transfers to foreigners stood at \$81 billion. Current account thus displayed a deficit of 668 billions USD, or 5.7 % of GDP.

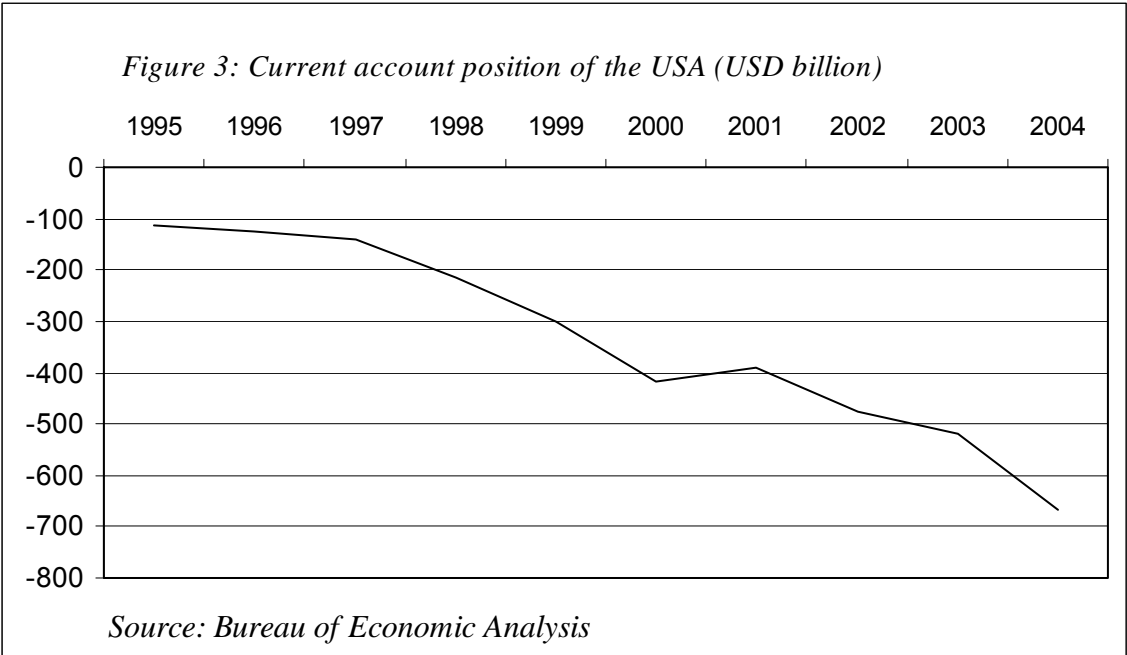
This makes it the highest external deficit in American history¹⁹. In the period from the end of WW II until the beginning of the 1980's, the U.S. current account fluctuated around zero, the average being 0.2% of GNP from 1948 till 1980. The last time when U.S. current account deficit was a cause for concern – in the Reagan era – it peaked at just 3.4% of GDP. Howard (1988) in his paper on the Reagan era deficit observed that “135 billion is a lot of money and 2.75 % is a substantial portion of GNP.” Even accounting for the inflation, the current account deficit of 2004 is obviously much larger. The net international investments position also plumbs new depths – in 2004, it surpassed the hitherto all-time low of circa 23% of GDP, which was reached as far ago as 1894 (Obstfeld, Rogoff, 2004).

Freund (2000) surveyed 25 episodes of current-account adjustment and found that the deficits usually begin to reverse after they have grown for four years and reached 5% of GDP. With the exception of a small improvement in 2001, the U.S. deficit has been growing since 1995 and is now well beyond the 5% mark. In the past 25 years, several industrialized countries²⁰ have run current account deficits much larger than 5.7 % of GDP. In the early 1980s Greece and Iceland had deficits of more than 8%, New Zealand and Ireland 13%, and

¹⁹ Even in the 19th century, after the Civil war, the U.S. current deficits stayed below 3% of GDP.

²⁰ Some emerging countries routinely run deficits of tens of percent of GDP, however, they are not a suitable reference group.

Portugal a whopping 16 % of GDP. All these countries also had a less favourable ratio of international debt to GDP than the USA has today. However, these economies had a further common characteristic – they were small and the impact of their deficits on the global economy, which was much less intertwined in the 1980s than it is today, was very limited. Considering the role of the USA in the global economy and the fact that financing the U.S. current account deficit accounted for two thirds of international net foreign lending (Summers, 2005), it is clear that in spite of representing a smaller share of GDP, the U.S. current account deficit is both much larger in absolute terms and much more important than the deficits of small countries in early 1980s.



Presently, Australia is the only large industrialized country whose current account deficit as a share of the GDP is larger than that of the USA. In 2004, Australian deficit amounted to 6.4 % of GDP. Other important countries with significant current account imbalances in 2004 include Germany (surplus of 3.6%), Japan (3.3% surplus), China (4.2% surplus) and Spain (5% deficit). Furthermore, the United States has a relatively small share of exports in GDP – approximately 10%. The larger the exports to GDP ratio, the higher the debt a country can sustain – greater openness makes it easier to reverse the imbalances²¹.

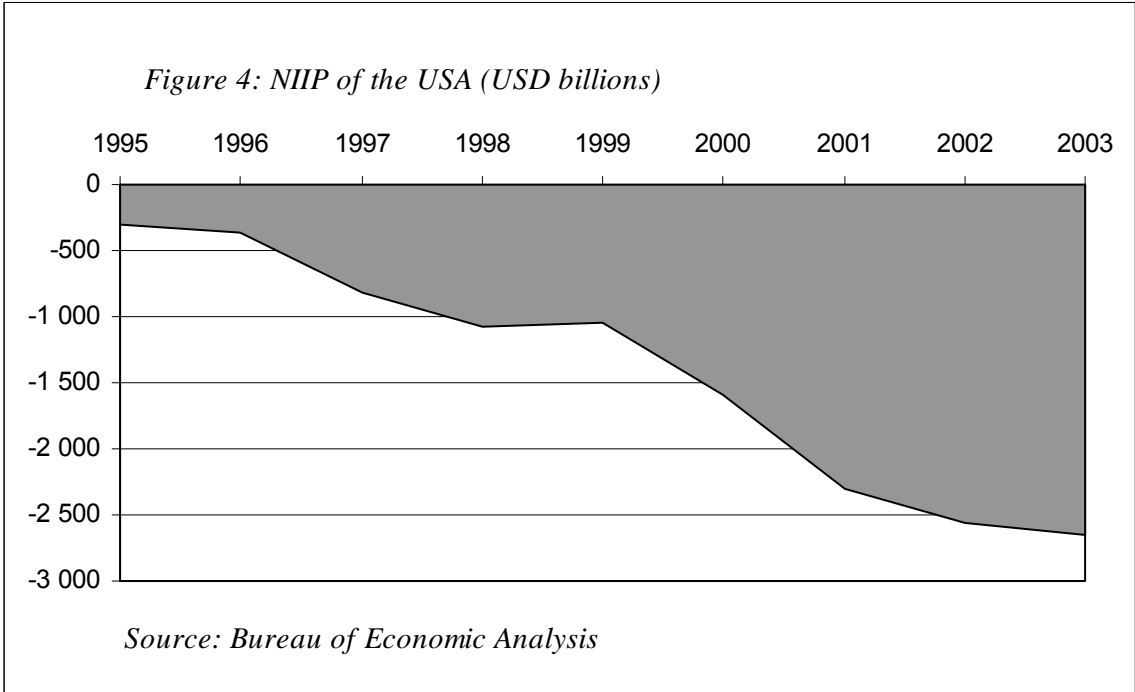
As Morgan Stanley’s chief economist Steven Roach (2005) puts it: “the disparity between the world’s current account deficits and surpluses has never been greater, “and the

²¹ See section 4.8 for more detail

United States accounts for a lion’s share of the disparity. Indisputably, the U.S. current account deficit is large by any measure – it is large as a share of GDP, large in absolute terms, large in relation to U.S. exports, large historically and large in international comparison.

3.2 Deep into the red: deterioration of the U.S. current account in the 1990s

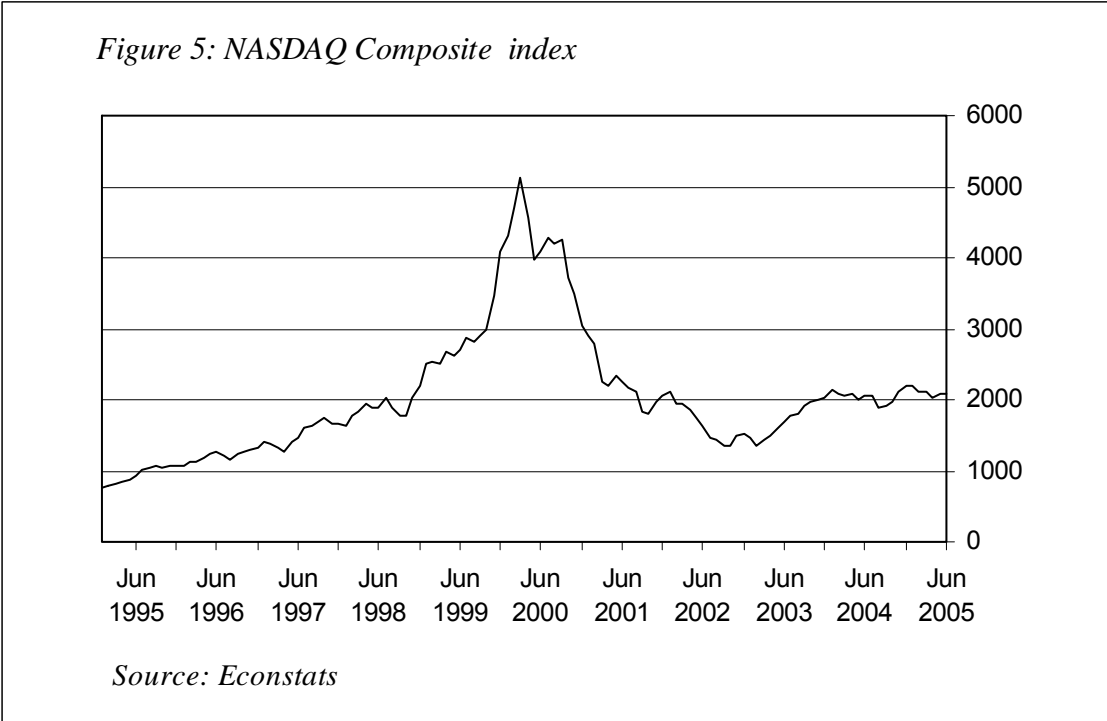
The United States of America last posted a current account surplus in 1991. From 1993 to 1997, the deficit remained in a narrow band of 1.3% – 1.7% of GDP and then started rising sharply. With the exception of a modest drop to 3.8% of GDP in 2001 (down from 4.2% in 2000), the deficit continued to surge throughout the first half of this decade, naturally worsening the U.S. net international investment position (see Figures 3 and 4).



There were two driving forces behind the deficit in the second half of the 1990s - the Americans were willing to spend and the rest of the world was eager to invest in America. The deficit was thus a result of both high foreign demand for U.S. assets and high U.S. demands for foreign goods²². During the 1990s U.S. real consumption and investment grew at a faster pace than the real income. This trend was particularly pronounced in the second half of the decade. While the nominal GDP increased 25 percent between 1995 and 1999, consumption expenditure and investment grew by 26 and 39 percent respectively over the same time period.

²² In terms of figure 2, this corresponds to right shift of the S_D schedule in both panels and an even stronger right shift of the S_F schedule in the right panel. This results in dollar appreciation and a higher deficit.

Arguably the most important force in the U.S. economy of the second half of the 1990s was the rise of the “new economy”. Booming IT and telecommunications industry promised unprecedented productivity growth and a fundamental change in the functioning of the economy. NASDAQ Composite, the technology-heavy stock index more than doubled between 1998 and 2000 (see figure 5). Dotcom start-ups attracted large amounts of capital and prices of their shares were out of line with any fundamentals²³. Critics pointing at an inflating stock market bubble were few and far between and the economic cycle was pronounced dead. The expansion was not limited to IT and telecoms; other sectors of the U.S. economy went through good times too. The more traditional Dow Jones Industrial Average index quadrupled from 1990 to 2000, unemployment was under 5% and inflation was contained.



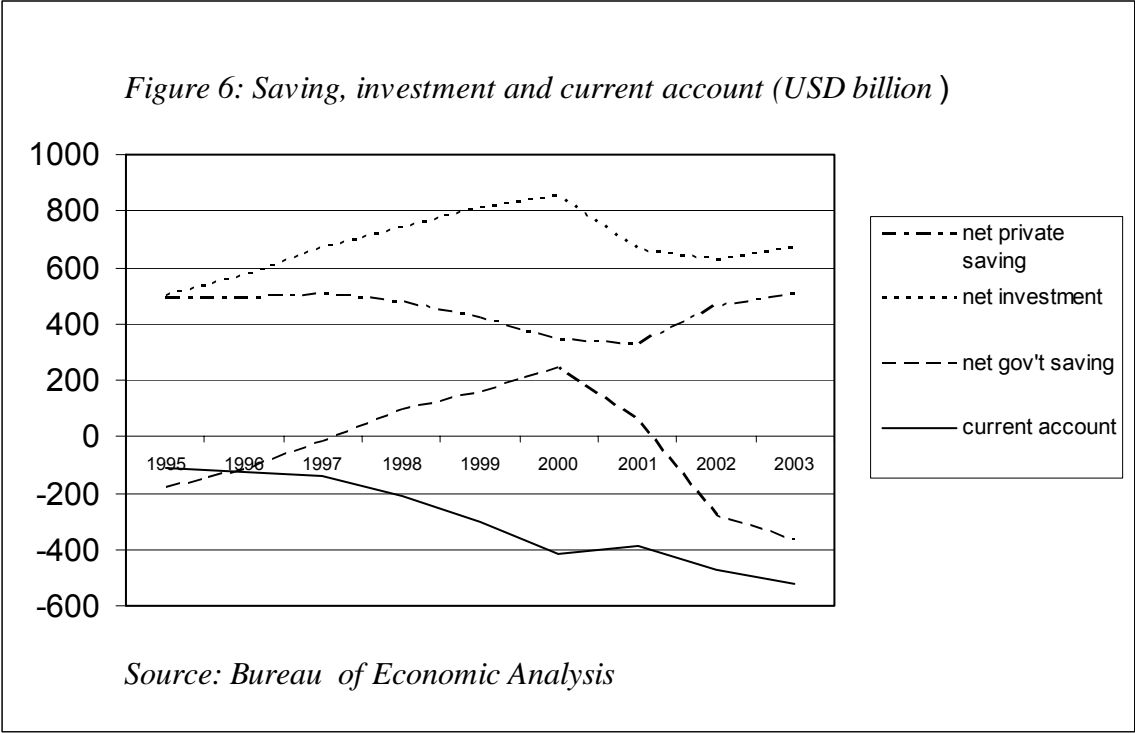
Americans, confident of future productivity gains and spurred by the boom, started consuming and investing massively²⁴. At the same time, foreigners wanted to participate in the U.S. boom and invested heavily in U.S. stocks and factories²⁵. The strong demand for U.S. assets and the resulting capital inflow has of course had an effect on the exchange rates. The euro (until 1999 the German mark) and the British pound depreciated against the dollar since

²³ Perhaps the best illustration of the dotcom era excesses is the 2000 takeover of Time Warner by AOL. In 2003, AOL Time Warner embarrassingly dropped AOL from its name.

²⁴ As the May 2001 World Economic Outlook points out, in the United States the stock market is large relative to the GDP and the share of households owning shares is high. Changes in wealth and income caused by stock market movements are more pronounced in the USA than in other countries and U.S. consumption thus reacts very strongly to stock market trends.

²⁵ Figure 9 shows the surge in FDI in the United States, the financing of the deficit is discussed in more detail in section 3.4

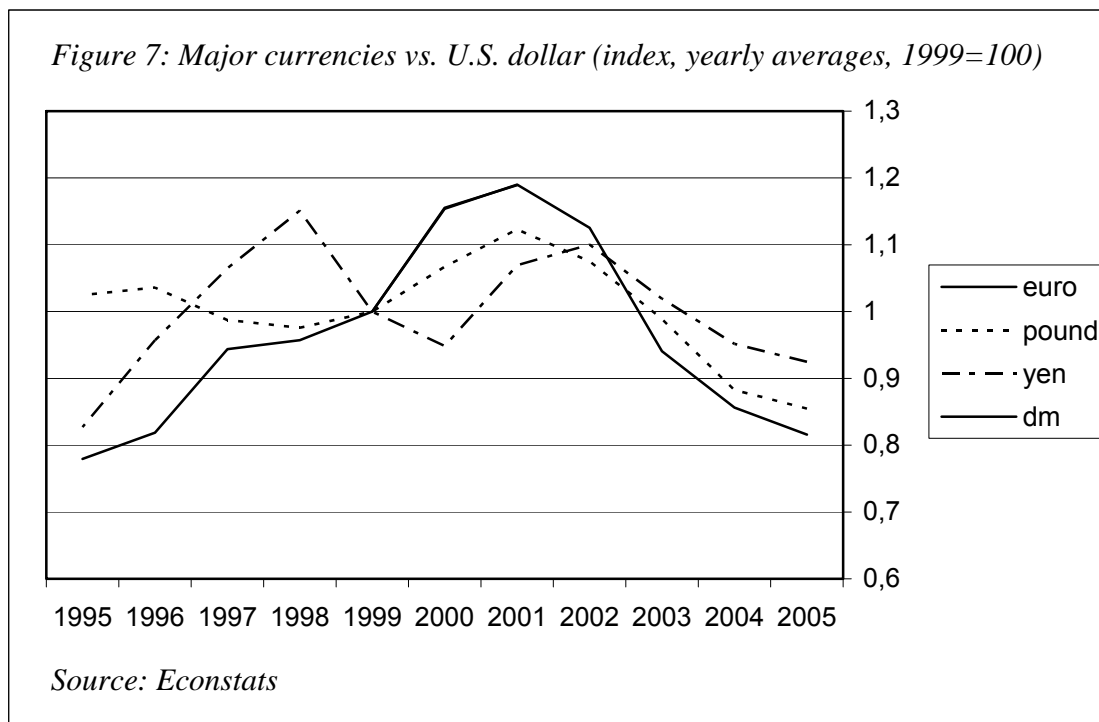
1997 (see figure 7); the Japanese yen followed a different path²⁶. Running a current account deficit enabled the USA to invest and consume at the same time. Until 2000, the fall in private saving was offset by a rise in government saving (figure 6), leaving total net U.S. saving nearly constant. The current account deficit was driven by increased investment and foreign demand for U.S. assets – in the late 1990s the deficit largely reflected the position of USA as the world’s most attractive investment destination.



In early 2000, stock markets started to slide, and in the third quarter of the same year, U.S. GDP plunged for the first time after ten years of uninterrupted growth. By the end of 2000, the dotcom shares were in a free fall. Both private saving and investment decreased, the fall in investment being larger. However, this only led to a slight improvement on the current account as the fiscal position went from a large surplus to a large deficit. Total U.S. net saving collapsed and even in 2004, the nominal net U.S. saving was less than half its 2000 level.

²⁶The sharp appreciation of the yen in 1998 – 2000 was driven both by fundamental macroeconomic factors and an unwinding of yen carry-trade positions (IMF WEO 1998). Carry-trades involve borrowing in one currency at low interest rates, converting the currency and acquiring foreign assets with higher rate of return and reconverting when the loan is due back (indeed, carry-trades are an excellent example of the equilibrating mechanism of the interest parity model). Traders were making use of Japan’s zero interest rates and expected yen depreciation against the dollar. In 1998 traders became wary that the depreciation may not continue and started demanding yen to close their debt positions. In terms of the interest parity model, an expected yen appreciation led to an actual appreciation. After the correction, yen started depreciating again. Since early 2002, yen appreciates in line with the euro and the pound (the yearly averages graph obscures the fact that the dollar peaked against the yen at approximately the same time as against the euro and the pound.)

Since 2001 the deficit no longer reflects the attractiveness of the U.S. economy but a lack of saving.



3.3 Twins?

In this section we first look how the U.S. fiscal position deteriorated between 2000 and 2002 and then resolve the question how and to what extent this affected the external balance.

As George W. Bush took office in January 2001, the U.S. government finances seemed to be in good shape. The Congressional Budget Office (CBO) predicted the cumulative ten-year surplus to reach \$ 5.6 trillion. Then, the 2001 recession, stock market crash, September 11th attacks, wars in Afghanistan and Iraq as well as President's tax cuts and increased discretionary spending changed the picture profoundly. The CBO's current prediction puts the cumulated deficit for 2006 – 2010 at \$ 1.2 trillion.

During President Bush's first term, defence spending has risen by 0.9 % of GDP and domestic nondefence discretionary spending went up 0.4 % of GDP. At the same time the tax revenues fell sharply. In addition to the tax cuts, the 2001 recession, and stock market crash also contributed to the decline as income and capital gains tax revenues plunged. Bush's stated goal is to halve the fiscal deficit as a share of GDP during his second term in office. His projections are, however, based on assumptions that are widely believed to be very optimistic. Another major issue on the President's agenda is reform of the social security. Regardless of the long-run benefits, the envisaged transition from pay-as-you-go to funded pension system

would bring about substantial short-run transition costs. Furthermore, Bush’s intention is to make the tax cuts, which formally expire at the end of the decade, permanent. If President Bush gets his way, the U.S. fiscal position will come under further strain in the coming years.

Table 3: Fiscal position of the USA

<i>Percentage of GDP</i>	2000	2001	2002	2003	2004
Total revenues	20,9	19,8	17,8	16,4	16,3
Total outlays	18,4	18,5	19,4	19,9	19,8
Surplus/deficit	2,4	1,3	-1,5	-3,5	-3,6
Discretionary spending	6,3	6,5	7,1	7,6	7,7
Corporate income taxes	2,1	1,5	1,4	1,2	1,6
Individual income taxes	10,3	9,9	8,3	7,3	7,0

Source: Congressional Budget Office

The fiscal and budget deficits are often referred to as “twin deficits”, implying there is a relationship between them. While the deficits indeed are linked by the saving – investment identity (5), they do not necessarily change in the same direction and there are various channels through which they can affect each other. In the end, both deficits are manifestations of a general equilibrium that involves many more variables.

The classical explanation of the connection between the two deficits is as follows: the fiscal deficit reduces domestic saving and thereby increases interest rates; increased government spending also stimulates the economy, lifting demand for foreign goods and adding further upward pressure on interest rates. The higher interest rates lure foreign investors who want to cash in on the differential and bid up the country’s currency. Foreign goods become cheaper and the current account deficit widens. The deficits would move in the same direction but not exactly to the same extent. The changed interest rates and income would also lead to shifts in private saving and investment, disrupting the perfect link between the “twins”. This mechanism linked the deficits during the 1980s²⁷.

In the 2nd half of the 1990s the connection between the two deficits was broken. This time, the rise in government saving was more than compensated by a decline in private saving

²⁷ Howard (1988) explains the Reagan era deficits as follows: antiinflationary monetary policy of the beginning of the 1980s led to an increase in interest rates and value of U.S. currency while at the same time recession reduced U.S. demand for foreign goods. Since 1982, strong expansionary fiscal policy spurred recovery and demand for imports. This resulted in a sharp deterioration of the U.S. current account balance. Howard’s interpretation is that foreigners were financing the U.S. government budget deficit.

and a rise in investment. The dollar appreciated and the deficit widened as the U.S. need for external financing increased in spite of a fiscal improvement.

When the economy started slowing down in 2000, the Federal Reserve delivered a mighty monetary stimulus, reducing the Federal funds rate by nearly 5 percentage points during 2001. While investment fell sharply, consumers spent the tax refund checks they received from the government and also made use of lower interest rates to keep consumption growing²⁸. Growth abroad slowed down as well, the result was a decrease in both imports and exports. Resilient private consumption and government spending helped avoid both a deeper U.S. recession and a more significant fall in American imports.

At the beginning of 2002 the dollar started depreciating against the euro and the yen. The effect of the depreciation on the deficit was offset by return to growth and further large drop in government saving in the United States and slow growth in Europe and Japan. Fixed yuan exchange rate neutralised the effect of the loss of attractiveness of U.S. assets on U.S. bilateral trade with China. USA has twin deficits again, however, the reasons for and underlying mechanisms of these deficits differ from those of the Reagan era twins.

3.4 Bankrolling America: composition of capital inflows

As the fundamental balance of payments identity implies, a current account deficit has to be offset by an equally large combined capital and financial account surplus²⁹. The capital inflow can take the form of foreign direct investment, purchases of domestic equity by foreigners, borrowing from foreigners or a combination of all the above. A country can run a current account deficit only as long as foreigners are willing to accumulate claims on that country. It is therefore important to analyse the composition of the capital inflows that finance the current account deficit as well as the motivations of the lenders.

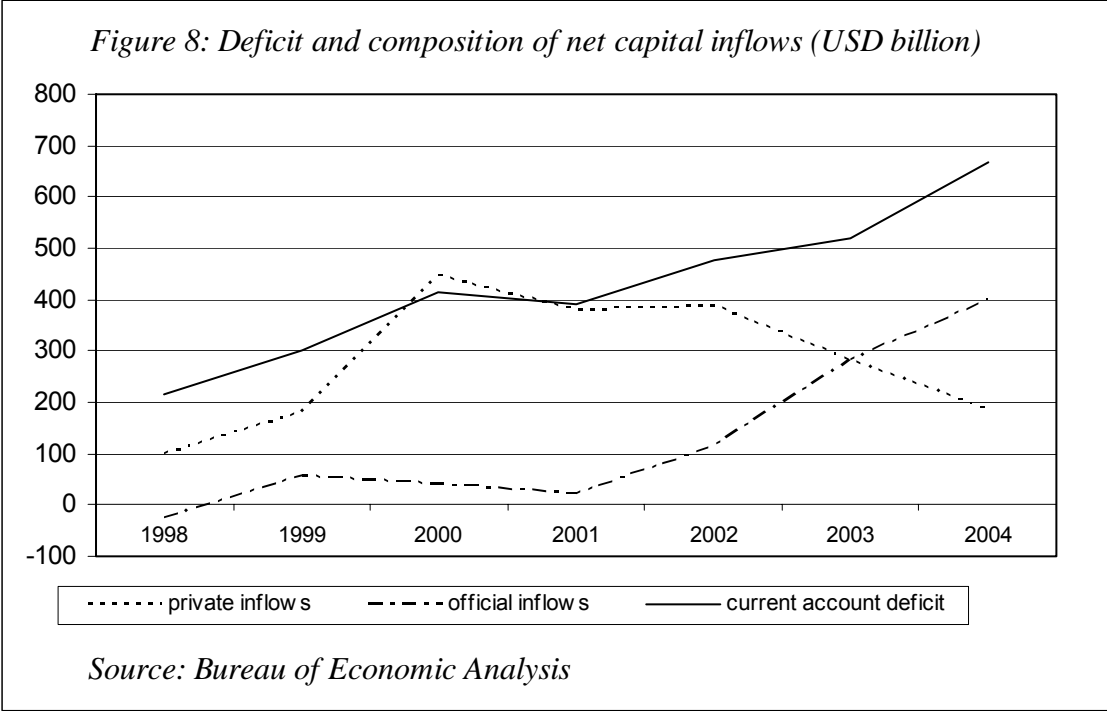
With a certain degree of simplification we can divide America's creditors in two broad categories with different incentives. Private investors are seeking profit and are primarily concerned about an asset's risk/return characteristics relative to other assets. The riskiness of an asset is not an absolute quality but depends on the share of the asset in the portfolio – even though one asset class could *per se* be superior to others, investors would still be unwilling to invest all their wealth into this asset class for fear of devastating consequences should the value of this asset class collapse. Instead, investors diversify their portfolios to insure

²⁸ In the United States, consumption is very sensitive to interest rates. This is due to widespread use of consumer credits, credit cards and the ease of refinancing mortgages.

²⁹ Movements on U.S. capital account are negligible; we will therefore focus our attention on the capital account only.

themselves against the consequences of a loss of value of individual assets. In practical terms, a share of assets issued by one company, one country or denominated in one currency in investors’ portfolios is limited due to diversification considerations.

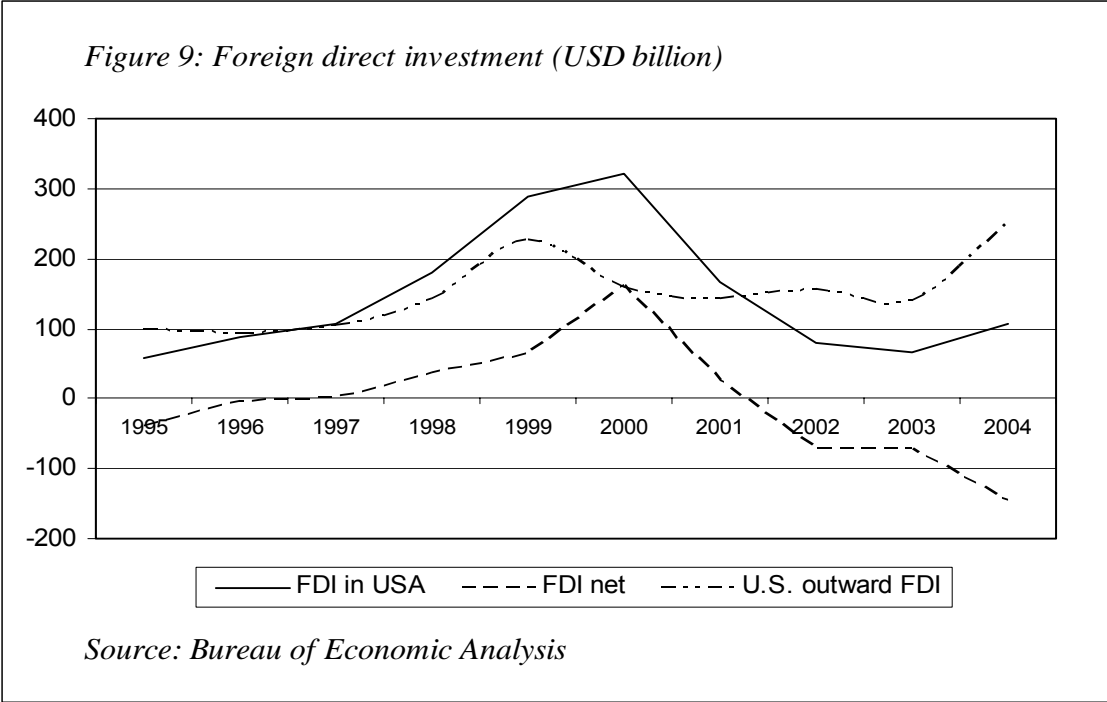
The motivations of official investors are more complicated – they may demand foreign assets to build reserves to be used in case of a balance of payments crisis or they purchase foreign assets with a view to influence macroeconomic variables, most commonly the exchange rates. The official investors may, of course, be also driven by the profit motive and even in the case they are accumulating foreign assets for other purposes, they cannot fully ignore their risk/return characteristics. Different incentives mean that the two groups of investors will react differently to changes in macroeconomic variables and their willingness to hold or to further accumulate U.S. assets needs to be examined separately. Clearly, the identity of the lenders matters.



During the “new economy” boom of the late 1990s, the U.S. current account deficit was financed almost entirely by private investors who considered the USA to be the best place for their investment. Due to a small decrease in the current account deficit, the amount of private funds flowing to the USA decreased slightly in 2001, yet private investors still financed practically the whole deficit (see Figure 8; sum of inflows doesn’t exactly equal the deficit because of the statistical discrepancy). In 2002, net private capital inflows remained roughly on the same level as the year before but fell steeply in 2003 and continued falling throughout 2004 – even though foreign private investors were still adding to their dollar

holdings, they were doing so at a sharply decreasing speed. When private investors first showed reluctance to finance the entire deficit in 2002, official investors stepped in. Since 2003, net official inflows have been larger than net private inflows.

In addition to the creditors, the structure of international net flows has changed as well. In the late 1990s, the U.S. deficit was to a large extent financed by a net inflow of direct and equity investment. In 2000, when net direct and net equity inflows both peaked, they covered more than three quarters of the current account deficit³⁰. In 2002 and 2003 this trend reversed sharply and in 2004 the combined net U.S. *outflow* of FDI and equity amounted to 200 billion USD. In plain language, until 2001 the foreigners were financing a large part of the deficit by investing in U.S. companies and only a small part through lending. In 2004, not only was, on a net basis, the whole deficit financed by debt instruments, America further borrowed 200 billion USD to invest abroad. Foreigners appear to be currently investing in the USA not because of expected high yields but because of the safety of U.S. assets.



What we see is that the net amount of money private investors are willing to place in the USA decreases from year to year as the current account deficit widens. Because the net international investment position cannot continue deteriorating forever, sooner or later adjustment will set in. The correction will involve either a fall in U.S. dollar or a U.S.

³⁰ Data on structure of inflows come from Bureau of Economic Analysis and Treasury International Capital.

slowdown, but most probably both³¹ and will thus be damaging to foreign investors in the USA. The private investors will not be willing to reverse the slowing accumulation of U.S. assets unless the rewards of investing in USA rise. The changes that would entice private investors to lend more of their money to America even as its debt grows at are the very changes that would induce a narrowing of the deficit. An increase in the interest rates would lure in more investors but also stifle U.S. consumption and investment and reduce the deficit. A fall in the dollar would make dollar assets more attractive to foreigners and at the same time it would narrow the current account deficit through changes in international prices of goods and services. If there is no adjustment, private investors cannot be relied on to provide the financing of ever-increasing deficits or even deficits that stay at around the 2004 level.

Part three allows us to make two conclusions. First, unlike in the late 1990s, the deficit reflects lack of U.S. domestic saving. Second, official investors are financing ever larger parts of the deficit while the amount of money provided by the private sector to finance the deficit decreases year by year.

³¹ See section 4.7 for more detail.

4. Sustainability of the current account deficit

This part first tackles the question of what it means for a current account deficit to be sustainable and then focuses on the two distinct groups of foreign investors. Based on our projection of future trajectory of the deficit, we assess the willingness of private investors to continue accumulating U.S. assets. Afterwards, we turn our attention to the „Bretton Woods 2“ theory, which offers a schematic view of the contemporary world economy. In the framework of “Bretton Woods 2” we examine the sustainability of official capital inflows. Finally, we sketch out the ways to reducing the deficit, along with the implications of different roads to adjustment.

4.1 On the meaning of „sustainability“

Before attempting to answer the question of whether the U.S. current account position is sustainable, we need to agree on what „sustainable“ really means. Obviously, time horizon plays an important role. A country with low initial level of foreign debt can run large deficits for a long time before the borrowers start to be worried about its ability to service and repay the debt. When assessing the sustainability of the deficit over an infinite horizon, we can use an approach that stresses the intertemporal budget constraint – for a deficit to be sustainable the country has to be able to repay all of its international debts, including interests. If the present current account position, together with expected future surpluses, is too small to cover the country’s debts, a correction is necessary.

The assumption that the country has to be able to repay the principal, as well as interests may be too strong. Foreigners may be willing to continue holding domestic interest-bearing assets indefinitely as long as they are receiving income payments on these assets. On the other hand it is clear that a country has to be able to service its debt. When the debt/GDP ratio rises steadily, so does the share of GDP that is used to service the debt³². Sooner or later the debt service would swallow up a significant part of the country’s income, forcing it to cut back on investment and consumption, reducing the deficit. Consequently, unless the present current account position together with expected future path of the current account leads to a stabilization of the debt/GDP ratio, it is unsustainable³³.

³² This assumes that the interest rates paid by the country on its foreign debt don’t decrease. Usually, this condition is comfortably met - the interest rates would rise along with the debt/GDP ratio as the foreigners would demand compensation for the increasing risk of not being paid back in full.

³³ Depending on the difference between the rate of GDP growth and the interest rate paid on the country’s debt, a stable debt to GDP can be compatible with both a current account surplus or a current account deficit.

For practical purposes we are clearly not interested in infinite time horizons. Mann (2000) offers the following definition of sustainability: „a current account is sustainable at a point in time if neither it, nor the associated foreign capital inflows, nor the negative net international investment position are large enough to introduce significant changes in economic variables such as consumption or investment or interest rates or exchange rates.“ This definition is not entirely incontestable. Concerns of foreign investors about U.S. twin deficits have already contributed to the slump of the U.S. dollar against the euro since 2001³⁴. Taken to the extreme, it is possible to argue that the deficit already has caused significant shifts in exchange rates, *ergo* it is unsustainable according to this definition³⁵. The notion that a current deficit can be unsustainable even when the deficit itself does not have to change is somewhat counterintuitive. We could update this definition to: „current account deficit is sustainable at a point in time if neither the deficit, nor the associated capital flows, nor the negative net international investment position are large enough to force the deficit to contract.”

Ultimately, the question we are trying to answer is how long the USA will be able to borrow at the present pace? This thesis naturally does not aim to estimate the exact year when the U.S. current account deficit will have to start shrinking. Rather, the answer should be whether adjustment is unavoidable in the short run³⁶ (1-2 years), medium run (until 2010) or whether the U.S. external imbalances can remain at their present level well into the next decade.

³⁴ As anecdotal evidence, consider President Bush's reelection on November 2nd, 2004. The stockmarket rose on the news of another four years for Bush, reflecting the belief that he will continue his business friendly policies. At the same time the U.S. dollar plunged against the euro, presumably because investors expected Bush to do little about the twin deficits. In terms of the interest parity model (which would be suitable in this case), the rise in attractiveness of U.S. assets (as reflected by the stockmarket gain) was more than outweighed by increase in U.S. risk premium demanded by the investors.

³⁵ Generally, Mann's definition is suitable as changes in any of the variables are part of a general equilibrium adjustment that would include shrinking of the deficit. However, this time the fall in U.S. currency against the euro and yen has so far failed to make a dent in the deficit. Greenspan (2004) attributes this to a strongly reduced pass-through caused both by the willingness of foreign firms to accept a decline in profits and widespread use of currency hedging. Greenspan conjectures that the willingness and ability of firms from countries whose currencies have appreciated sharply against the dollar over the past three years to leave prices unchanged are stretched and any further dollar depreciation would lead to a price and import adjustment.

³⁶ These short/medium/long run definition is, of course, arbitrary

4.2 City on the hill: how different is America?

The position of the United States of America in the world economy is unique. It accounts for nearly a third of world output³⁷, making it more than twice as big as the world's second largest economy – Japan's. America has the largest corporations, most developed capital markets, stable and business-friendly institutional system and the U.S. dollar is the world's reserve currency. The special position of the USA is not confined to the economic sphere – it is the world's only superpower. Its military dominance and political influence are enormous.

The United States reaps benefits from the U.S. dollar's position as the world's reserve currency. The dollar's role ensures there will always be demand for U.S. assets and enables the USA to borrow in its own currency. This removes the exchange rate risk and reduces the probability of a financial crisis. If a foreign country borrows in dollars in international markets and investors' loss of confidence causes a capital flight from the country, its debt burden rises along with the fall in its currency. Not so in the case of the United States. Indeed, given that a large part of assets Americans own abroad is denominated in foreign currencies, dollar depreciation actually improves U.S. net international investment position as the dollar value of foreign-denominated assets rises. Another feature of the U.S. economy that would help prevent or mitigate a financial crisis in case of a capital flight is its stability and judicial system. When a currency of an emerging country, say Argentina, falls during a crisis, foreign investors are reluctant to buy the now undervalued assets of that country because they fear their property rights would not be respected later on the grounds that they exploited the crisis (Dornbusch, 2001). This fear breaks the link between the value of assets and the exchange rate and leads to a stronger depreciation than would otherwise be warranted. Due to a tradition of upholding ownership rights, this would not be much of a concern in the case of USA and foreign investors could happily engage in "bottom fishing", limiting the dollar's fall in case of a crisis.

The depth of its capital markets also contributes to the ability of the USA to finance its current account deficit – there is a great variety of stocks, bonds and derivatives to choose from, making it possible to build a diversified portfolio from U.S. assets alone. This increases the share of U.S. assets foreign investors are willing to hold. Alan Greenspan (2004) also sees a decrease in home bias, meaning that investors are ready to invest greater shares of their

³⁷ Measured at market exchange rates. In purchasing power parity, which is also often used for cross-border output comparisons, this share is lower.

wealth abroad, perhaps as a result of decreased transaction costs and better information³⁸. "Superpower" position means that U.S. interests and the interests of American corporations are extremely well protected.

The special characteristics of the U.S. economy certainly do enable America to borrow more and more cheaply than it otherwise could. However, they still cannot help the United States to defy economic principles. After all, what use is a business-friendly institutional system to foreign investors if returns on dollar assets in terms of their currency are negative? Not even the USA can continue accumulating debt forever – the interest payments would swallow an ever larger share of GDP, reducing investment and consumption and leading to a correction which would entail a recession, a fall in the U.S. dollar or both, harming foreign holders of U.S. assets. When a country accumulates debt, it is not possible to precisely predict at what level of NIIP the adjustment sets in and, by extension, for how long the current account deficit can be sustainable. The unique U.S. position increases this level; however it does not remove all constraints to international borrowing.

4.3 Evolution of the deficit in absence of major discontinuities

When addressing the question of sustainability, it is natural to look at how the current account deficit and the U.S. international investment position will evolve under different scenarios in absence of major discontinuities. By discontinuity we mean an event or a development which induces adjustment of the deficit. An introduction of U.S. protectionist measures against China or a change of sentiment among foreign investors are examples of such discontinuities. In other words, we examine how large the deficit and U.S. negative net international investment position will be at a point in time in the future, assuming the fundamental macroeconomic trends do not change.

Before turning to numbers, two asymmetries need to be mentioned. One of them is the Houthakker – Magee effect, first described in 1969. Empirical studies consistently show that the elasticity of U.S. imports of goods and services with respect to U.S. income is higher than the elasticity of U.S. exports of goods and services with respect to income abroad³⁹. This asymmetry has appeared in empirical studies ever since⁴⁰. The implication of the Houthakker – Magee effect is that when both the U.S. economy and foreign economies grow at the same

³⁸ However, a decrease in home bias helps to finance the deficit only when it is one-sided, ie. if foreign investors are willing to invest greater share of their wealth in America while the preferences of U.S. investors do not change.

³⁹ For instance Hooper, Johnson and Marquez (2000) estimate that the elasticity of U.S. imports with respect to U.S. income is 1.8 while the export elasticity with respect to foreign income is just 0.8.

⁴⁰ See Mann (2002) for a roundup of recent research.

pace, all other things equal, the U.S. current account balance deteriorates. Alternatively, if the U.S. and foreign economies grow at the same speed, the U.S. dollar has to depreciate steadily in order to keep the current account balanced. A possible explanation of the Houthakker – Magee puzzle is demographics. The USA has a younger population, with a higher share of immigrants. According to this notion, the immigrants tend to import more from their former homelands and the relatively young U.S. population is inclined to import more than the older societies of Europe and Japan, which consume a higher fraction of domestic services.

The other asymmetry concerns interest payments on international debt position. Even though the USA has been a net debtor since the mid-1980s, income receipts on U.S. owned assets abroad exceeded income payments to foreigners holding U.S. assets. A look at the NIIP and balance of payments reveals that the bulk of the asymmetry is concentrated in the area of foreign direct investment. At the end of 2003 U.S. direct investment abroad, evaluated at market value, stood at \$2,700 billion, while the stock of foreign investment in the USA was \$2,400 billion. Yet the 2004 U.S. direct investment receipts were \$233 billion compared to only 105 billion of income paid on foreign direct investment in the USA. This means the rate of return on U.S. direct investment abroad was roughly twice the rate of return on FDI in the United States⁴¹. In contrast, asymmetries are small in payments from portfolio investment. However, if the USA continues accumulating debt at current speed, there is no doubt that the income payments to foreigners will soon exceed income receipts from abroad⁴².

With these asymmetries in mind, we can now turn to our forecast of the magnitude of the deficit and the NIIP if there is no adjustment. The calculations carried out here are rudimentary⁴³; however the projection should give a good sense of where the deficit is headed unless there is a significant correction. We use IMF projections of U.S. growth and inflation for 2005 and 2006 and extrapolate them into the future. We also assume there are no shifts in exchange rates and valuation changes. We compute the implicit rate of return on foreign investment in terms of cash flow – by dividing income payments that show up in the balance

⁴¹ One likely explanation is the age of investment – American foreign investments are on average older and thus generate a stronger stream of dividends than foreigners' relatively recent investments in the USA. The U.S. advantage might thus dwindle with time as foreign investments in the USA mature and the amount of cash they generate rises. Another cause could be better management of U.S. investment projects.

⁴² Following back-of-the-envelope calculation shows that not even if the FDI income asymmetry persists will the U.S. balance of income payments remain positive given recent patterns of U.S. debt accumulation. Let's assume all assets earn the same rate of return except U.S. outward FDI, which earns twice as much. With 2004 net foreign purchases of U.S. assets of 585 billion and U.S. outward FDI of 252 billion. In 2005, U.S. net income payments would increase by interest on 333 billion dollars of debt.

⁴³ For a more sophisticated model of NIIP evolution, see Roubini, Setser (2004). The goal of this exercise is not to provide precise predictions but to show the general direction of the U.S. current account position unless an adjustment occurs.

of payment by gross asset positions. Finally, we have to estimate the growth rate of imports and exports. Setser and Roubini point out that in late 2004, the dollar trade-weighted index was exactly at its 14 year average and therefore suggest using the 14 year average growth rate of imports and exports. Second possibility is to assume imports and exports will grow at the same rate as U.S. nominal GDP⁴⁴. With these inputs, we are able to extrapolate the current account deficit and the net international investment position. Our optimistic scenario assumes that both imports and exports grow at the same rate as the U.S. nominal GDP and that the U.S. and foreign implicit interest rates do not change⁴⁵. Pessimistic scenario assumes gradual convergence of interest rates paid on foreign owned U.S. assets to the rates received by the Americans on their foreign investment and growth of exports and imports consistent with 14 year average (7.2% annual import growth, 5.5% annual export growth).

Projection assumptions	
Real U.S. growth	3.6%
U.S. Inflation	2.2%
Nominal U.S. growth	5.8%
Initial nominal rate of return on U.S. owned assets abroad ⁴⁶	4.8%
Initial nominal rate of return on foreign owned assets in the USA	3.2%

Even assuming strong foreign growth and no loss of America's interest rate advantage, the outlook is dismal. Under the optimistic scenario, the current account deficit continues to rise, albeit by a very modest 0.1 % a year. More importantly, the net international investment position rapidly deteriorates. It reaches negative 50% of GDP in 2010 and negative 60% three years later. Worse, there is no sign of the NIIP stabilising in the future. In 2006, the USA would for the first time make net interest payments on its debt position and by 2014 debt service would swallow 1% of the GDP. Turning to the question how fast the exports would have to rise in the optimistic scenario for the NIIP to stabilise by 2020, we arrive at staggering 8%. Even assuming this unprecedented, 15-year long export boom, the negative NIIP would peak at 58% of GDP – a considerable figure.

⁴⁴ Note that due to the Houtakker-Magee effect this would require growth abroad to be substantially stronger than in the U.S. Therefore, this is an optimistic version.

⁴⁵ This is an optimistic assumption from the point of view of the U.S. as the rising debt position has no adverse effect on the interest rates the USA has to pay on its debt.

⁴⁶ This is an average rate of return. We do not disaggregate different classes of assets. U.S. owned assets abroad at the end of 2003 were 7.9 USD trillion, income payments on these assets in 2004 (omitting changes during 2004) were 376 billion, implying a nominal rate of return of 4.7%. Foreign owned assets of 10.5 trillion and income payments of 340 billion give us an average nominal rate of return of 3.2%.

In the pessimistic scenario the current account deficit continues its steep rise, hitting 7% in 2006, 10% in 2010 and 13% in 2015. The international investment position deteriorates accordingly – beating the 60% mark in 2010 and getting as large as 90% by 2015. Net interest payments on this mountain of debt depend on the speed of convergence of interest rates, with convergence at 0.3 percentage points per year, the debt service will amount to 3% of U.S. GDP in 2011 and as much as 4.4% of GDP in 2015.

How do our results compare with those of Roubini and Setser? In their baseline scenario (which roughly corresponds to our pessimistic version), the deficit reaches 8.6% in 2008 and net external debt exceeds 50% of GDP. In Roubini's optimistic scenario, the deficit levels out at around 4.5%. However, Roubini and Setser believe that such development only is possible when dollar depreciates further and the U.S. fiscal deficit shrinks. Even in the optimistic scenario the negative debt position continues to rise. According to Roubini and Setser, only in case of substantial dollar depreciation and a large improvement of the fiscal position can the negative NIIP stabilise by 2015 and even then only at a relatively high level of 55% of GDP.

All the above calculations strongly support Lawrence Summers' (2004) remark: „I am aware of no credible argument that without some form of discontinuity, the U.S. current account deficit will not increase from its current level. “

Together with the trends in financing the deficit (see section 3.4), this enables us to draw a conclusion about the behaviour of private investors and its implications on sustainability. For private investors, the current account deficit has been a concern for some time now and can only become more so as the U.S. net international investment position continues to worsen. They will not be willing to increase the speed at which they accumulate claims on the U.S. economy⁴⁷ unless they are rewarded by a rise in interest rates or the dollar falls significantly. At the same time, if no major correction occurs, the U.S. need for foreign financing is set to increase. The amount of foreign capital the USA needs and the amount of capital foreign private investors are ready to provide are moving in opposite directions. The rise in interest rates and fall in dollar needed to close the gap would lead to an adjustment in the deficit through slowdown of the U.S. economy and shifts of world demand to the now cheaper U.S. goods and services. If its financing depended entirely on private investors

⁴⁷ Note that the current account deficit does not only become unsustainable when foreigners are no longer willing to hold the country's assets, it becomes unsustainable when they are no longer willing to add to their holdings of the country's assets at the speed dictated by the deficit.

considering risk and return, the U.S. external deficit would contract – it would not be sustainable.

This still does not disprove the claim that the deficit is sustainable, as the gap between U.S. investment and saving can be financed by central banks with motivations different from those of the private investors. The sustainability of official inflows is assessed in the following sections.

4.4 Bretton Woods redux?

In this section, we introduce the “Bretton Woods 2” theory, whose originators are Deutsche Bank economists Dooley, Folkerts-Landau and Garber (DFG). The authors claim that the arrangement under which the deficit is financed by Asian central banks is both logical and sustainable for at least another ten years.

The description of the world economy that DFG offer in a series of papers is consistent both with the data and the mainstream view. According to the authors, the world is divided into three principal economic and currency zones – East Asia, Europe and the USA, whose motivations and functions in the global economic system differ. Europe is the core of the “capital account region⁴⁸.” Investors from the capital account region are primarily concerned about the risk/return characteristics of assets they hold and are becoming ever more anxious about their U.S. exposure. The currencies of the countries of the capital account region are allowed to float against the U.S. dollar.

East Asia belongs to the “trade account region.” After the crisis of 1997, Asian governments decided that the growth model based on attracting large foreign investment was too risky and resolved to grow through exports. To achieve this, they actively manage their currencies – in particular they intervene against appreciation which would make their goods less competitive in international markets. The countries of the trade account region have chosen the USA as the target of their exports because of the country’s openness and ability to absorb large amounts of foreign goods. DFG claim that official investors from the trade account region are willing to finance the U.S. current account deficit regardless of the risk/return characteristics of the assets they acquire, as long as this supports export-driven growth⁴⁹.

⁴⁸ Dooley, Folkerts-Landau and Garber also include Canada and part of Latin America into the capital account region.

⁴⁹In August 2004, Dooley et al. took their theory further and argued that Asian emerging economies prefer their saving to be intermediated by U.S. capital markets rather than by their own, which are much less

The USA and its currency are at the core of the system. Its terms of trade are improved by cheap Asian currencies and cut-rate financing from Asian official investors enables it to consume and invest at the same time. This arrangement was named “Breton Woods 2” because of the analogies with the international economic system of the 1960s and the early 1970s. In the original Bretton Woods system the USA stood at the centre - currencies of other countries were pegged to the dollar and foreign central banks were entitled to buy gold from the Fed at 35 dollars per ounce. Europe was at the periphery of the system and pursued a strategy of rapid export growth through undervalued exchange rates (Eichengreen, 2004). Both systems thus involve USA as its centre and a periphery that relies on export growth. Centre and periphery are in both cases linked by rigid exchange rates.

DFG acknowledge that investors from capital account countries are unwilling to supply more capital to the U.S. unless the risk/return characteristics of dollar assets improve either through an increase in interest rates or dollar depreciation. Their reluctance to add to their stock of dollars leads to an appreciation of the currencies of the capital account countries, most notably the euro. However, according to Dooley et al. the faltering of private investor’s interest in U.S. assets has little effect on the sustainability of the U.S. current account deficit. Asian central banks are ready to step in to fill the gap left by capital account region investors and crowd out capital account countries’ exports to USA in the process. Sustained Asian demand for U.S. assets also prevents U.S. long term interest rates from rising. To support their argument, DFG pointed out at the end of 2004 that since mid-2002 the long term U.S. interest rates slightly decreased even as the euro has appreciated.

While the authors’ description of the world economy is widely accepted and supported by the data, the conclusions that DFG draw are fairly radical and heavily contested⁵⁰. Dooley et al. argue that the system under which the U.S. current deficit is financed by Asian official inflows is sustainable for another ten to twenty years. This forecast is based on China’s growth requirements - China needs to transfer circa 200 million of workers from agriculture to the industrial sector, which it is only able to do at a rate of 10 – 20 million a year. Other Asian countries have to follow China as their exports would become uncompetitive should they unilaterally stop intervening against their currencies. The authors

effective. The current account deficit plays a role of collateral in a transaction similar to a total return swap of U.S. Treasury bonds for Asian FDI. This interpretation is compellingly disproved in Roubini, Setser (2005).

⁵⁰ Measured by the number of articles, „Breton Woods 2“ is presently the hottest topic in international macroeconomics. In the „sustainability“ camp, DFG are joined by Levey and Brown (2005), who stress the unique characteristics of the U.S. economy and predict another high-tech boom and further productivity increases that will boost the attractiveness of investing in America. The most vocal critics of the „Breton Woods 2“ are Nouriel Roubini and Brad Setser. Other authors who argue that the system cannot last include Larry Summers, Barry Eichengreen, Kenneth Rogoff and Maurice Obstfeld or Steven Roach.

claim that the appetite of Asian official investors for U.S. assets is: “for all practical purposes unlimited, because their growth capacity is far from its limit⁵¹.”

Europe is the only region that loses from the system. A strong euro reduces exports and threatens to throw Europe into recession and possibly deflation. DFG predict that to avoid this outcome, Europe’s official investors will join Asia in purchasing U.S. assets to reduce upward pressure on the euro. All three main economic areas would then be part of the system of quasi-fixed exchange rates.

4.5 Criticisms of the Bretton Woods 2 theory

If Dooley et al. are right, the USA has nothing to worry about and can happily spend more than it produces for another generation. This makes the „Bretton Woods 2“ theory very appealing to U.S. policy makers⁵² as it releases them from the obligation to initiate painful measures to reign in American spending. On the other hand if the Asian central banks will become unwilling or unable to accumulate further American debt, failure to increase domestic U.S. saving will result in a hard landing (see section 4.10). In this section, we will claim that the “Bretton Woods 2” system is unstable and is not likely to endure in the long run⁵³.

There are two main flaws in DFG’s arguments – the first is assuming that Asian central banks ignore the costs of accumulating U.S. assets as long as this contributes to export-led growth; the second is neglecting the internal imbalances that arise both in the USA and in Asia.

In addition to preventing Asian currencies from appreciating against the dollar, massive capital inflows from Asian official investors subsidise U.S. interest rates. The extent to which this happens is matter of some contention; the estimates range between 40 and 200 bps⁵⁴. Along with exchange rates, the interest rates are a channel through which Asian interventions increase U.S. spending and thus external imbalances. Low interest rates delay fiscal consolidation, contribute to inflating of asset bubbles and are a disincentive for Americans to save more. Through strong dollar and the interest rate subsidy, policy choices of Asian countries induce significant shifts in U.S. internal balance. Sectors of American economy that are sensitive to interest rates (such as construction) thrive, while at the same

⁵¹ Dooley, Folkerts-Landau, Garber (2003b)

⁵² The „Bretton Woods 2“ theory can serve as a more sophisticated replacement of Paul O’Neill’s infamous remark that „Regan proved deficits don’t matter.“

⁵⁴ In doing so, we will rely mostly on arguments laid out by Roubini and Setser, and to a lesser extent on criticisms by Summers, Eichengreen and Greenspan.

⁵⁴ See Roubini, Setser (2005). The authors believe the true figure to be closer to 200 bps when general equilibrium effects are taken into account.

time import-competing industries (most notably manufacturing) are crowded out by their Asian competitors. This causes wealth shifts and changes in the employment composition within the USA and gives rise to protectionist sentiments. The prevailing opinion in America is that Asian currencies are undervalued and that this amounts to unfair competition. In April 2005, the U.S. Senate voted in favour of the Schumer-Graham bill, which would impose a tariff of 27.5 % on imports from China unless the yuan rises significantly. The bill sponsors agreed to put the initiative on hold in hope that China will revalue its currency later in 2005 even without the threat of U.S. tariffs. They are, however, prepared to resubmit it if China fails to act on its own⁵⁵. Nevertheless, the support of two thirds of the Senate for the bill is a clear indicator of increasing U.S. willingness to use protectionist measures to force China to let the yuan appreciate. Last but not least, even if America chose to accept the wealth redistribution imposed on it by Asian policies, it is unlikely that it can afford to do so. Sooner or later, the U.S. current deficit will have to stabilise. The United States will need a competitive tradable sector in order to be able to increase its exports.

In Asia and in China in particular, the present arrangement also causes internal strains. In April 2005⁵⁶, Alan Greenspan said that “Fixing the renminbi to the dollar is beginning to work to the detriment of the Chinese economy. “ In order to prevent a sharp rise in money supply as a consequence of accumulating of U.S. assets, the People’s Bank of China sterilizes the intervention by issuing domestic-denominated debt. However, China is having difficulties selling enough domestic-denominated assets to fully sterilize the interventions and so the Chinese money supply rises rapidly. The increase in money supply risks fuelling a credit and asset bubble. This is especially dangerous for China as its banking system is fragile and loaded with nonperforming loans⁵⁷.

China is also bound to incur large loss on its dollar reserves in case of a revaluation against the U.S. currency. The potential loss will be rising fast if China keeps accumulating U.S. assets. At the end of 2004, China had dollar-denominated reserves worth approximately 450 billion USD⁵⁸. Accordingly, a 27.5% revaluation⁵⁹ of the yuan would cause the People’s Bank of China a foreign exchange loss of 1 trillion yuan, or 7 percent of Chinese GDP. Given the trajectory of U.S. current account deficit and of private capital flows into America, the financing Asian official investors will have to provide in order to keep the „Bretton Woods 2“

⁵⁵ See „Senators Told China Will Loosen Policy On Currency“; Washington Post; July 1st 2005

⁵⁶ Alan Greenspan’s testimony in front of the Senate Budget Committee, April 21st 2005

⁵⁷ Official estimates put the volume of nonperforming loans at 40% of GDP.

⁵⁸ Roubini, Setser (2005)

⁵⁹ The revaluation called for by the Schumer – Graham bill.

system working is unlikely to decrease. If China keeps adding 150 billion USD⁶⁰ worth of dollar denominated assets year after year and sustains its 9 percent annual GDP growth, the potential loss will climb to 11 percent of GDP in 2007 and continue rising – the longer China waits with revaluation, the greater loss it will have to take when it finally allows its currency to rise.

Levey and Brown (2005) argue that, because reserves do not represent claims against domestically produced goods and services, measuring losses as a share of GDP holds little economic meaning. This is not true. Exchange rate losses on forex reserves do affect central bank's profits. Losses of the central bank are typically absorbed by reducing income transfers from the central bank to the treasury or reflected in the central bank's capital position. If the losses significantly decrease the central bank's net worth, the central bank is usually recapitalized by the government (Dalton, Dziobek, 2005). In the past, People's Bank of China was off-loading capital losses from its balance sheet to commercial banks under state control by forcing them to buy assets at above market cost. This operation only relocates the problem, adds to the fragility of the banking system and creates further need for recapitalization. In most cases, Central bank's capital losses ultimately come at taxpayer's expense. World Bank (2005) concludes that „These losses impose real economic costs, whose incidence (on the treasury or on banks) will depend on the policies and institutional arrangements pursued.“

Finally, not even the motivations of Chinese authorities are as clear-cut as they are presented by Dooley et al. Dornbusch (1998) argues that financial stability is politically more important to Chinese officials than fast growth. Dornbusch points to the willingness of Chinese authorities to deliberately push down growth to fight inflation in the late 1980's and 1996-7.

4.6 The U.S. current account deficit is not sustainable in the long run

It is difficult to exactly estimate how long “Bretton Woods 2” can last, not least because politics plays a major role. Setser and Roubini (2005) predict the end of the system in the 2005 – 2006 horizon, while Alan Greenspan said in April that „[the currency peg] is creating imbalances that suggest that sooner rather than later they [China] are going to have to, for stability purposes, move their currency”. The internal imbalances the current arrangement causes in USA and Asia are already substantial and attract the attention of policymakers. The longer the system stays in place, the greater the internal imbalances will

⁶⁰ Approximate increase in Chinese dollar-denominated reserves in 2004

become. “Bretton Woods 2” is destined to end and the rising pressures on both sides suggest that this will happen well before 2010.

When the “Bretton Woods 2” system ends, the official inflows from Asia will fall sharply. If the USA, through protectionist measures, reduces imports from China, the rationale for keeping the peg will disappear. Rise in the yuan, voluntary or enforced by protectionism, will mean a decrease in Chinese official demand for U.S. assets because the People’s Bank of China will no longer have to intervene as strongly, if at all, against its own currency. Private capital inflows to China that increasingly circumvented the capital controls and whose effect on the yuan was also neutralized by official purchases of foreign assets are likely to subside too, as they are currently fuelled by expectation of yuan appreciation. This will further reduce Chinese official capital outflows. Other East Asian countries will be free to let their currencies rise too, because this will no longer hurt the competitiveness of their exports compared with Chinese.

An adjustment is inevitable – private investors will not replace official demand unless U.S. assets become considerably more attractive. Indeed, when the inflows from Asian official investors come to a halt, private investors from Asia may take their money elsewhere too, as the guarantee of exchange rate stability disappears. The gap between the U.S. demand for foreign financing and the willingness and ability of foreigners to offer the financing will eventually be closed. However, closing the gap will involve a rise in U.S. interest rates, fall in dollar and a decrease in the current account deficit. The deficit is not sustainable in the long run and it would be no surprise if the pressures the current arrangement causes enforced a correction as soon as 2006.

4.7 Adjustment

Now that we have come to the conclusion that the deficit will have to contract sooner rather than later, the most important question left to answer is how this contraction will come about and what it will mean for the world economy. Will the deficit gradually shrink in a benign fashion or will there be a large-scale financial crisis in the USA that will wreak havoc on other countries as well? The outcome will most likely be somewhere between these extremes.

Conditions for reducing the deficit are simple – the U.S. has to spend less on imports and/or foreigners have to spend more on American goods and services. Unlike in the 1980s, this time the USA can expect no significant help from abroad. The adjustment of the Reagan-era deficit was benign in large part because of massive growth abroad – notably in Germany

and Japan. In the last years of the 1980s, Japanese economy grew by 5% a year while Germany posted real GDP increases of approximately 4% in the same time period. Along with an (orderly) decline in the U.S. dollar and a (mild) slowdown of the economy, this resulted in a soft landing. The Economist poll of forecasters from June 2005 predicts growth in the euro zone to reach 1.4% in 2005 with only a marginal improvement to 1.8% in 2006. The poll predicts identical rates of growth for Japan's economy and only slightly faster growth in Canada, the greatest trading partner of the United States. In contrast, the U.S. economy is expected to grow by more than 3% in the coming two years. Japan and the euro zone are both plagued by long-term problems and it is highly unlikely that their demand for U.S. exports will grow fast enough to facilitate the adjustment. China's growth, albeit spectacular, will not make a large dent in the deficit either as China only accounts for 4% of U.S. exports. The growth of U.S. trading partners will not be sufficient to reduce the deficit. The adjustment will have to come from inside.

The U.S. current account can adjust through expenditure reduction, expenditure switching or a combination of both. Expenditure reduction means decreasing the total domestic absorption either through a recession or increased saving, while expenditure switching involves redirection of U.S. and/or foreign demand from foreign to domestic goods. Expenditure switching is usually induced by a depreciation of the currency of the deficit country. In her survey of current account reversals in industrialized countries Caroline Freund (2000) found that the improvement in current account balance usually is associated with both slowing domestic income growth and a sizeable real depreciation. The U.S. deficit reduction too is likely to involve both depreciation and expenditure reduction. This argument is strongly supported by the fact that USA has a relatively closed economy. The lower the share of imports and exports in GDP, the larger are the changes in income and exchange rates that are necessary in order to decrease the deficit by a given share of GDP. When a country's exports amount to 10 percent of its GDP and the share of imports in GDP is 15 percent, as is currently the case in the USA, it requires a 50 percent increase in exports or a 33 percent decrease in imports to reduce the trade gap by 5 percent of GDP. For an open economy with exports and imports at around 60% of GDP, a decrease in imports by 8 percent is sufficient to achieve the same improvement in the current account as measured in percent of GDP. If the elasticities of imports/exports in both countries to changes in income and exchange rate are the same, the shifts in these variables clearly have to be much larger in the less open country to achieve the same improvement in the current account (in % of GDP). If the deficit were to be decreased by changes in only one of the variables, the change would have to be enormous – either we

would see a deep recession or a steep fall in the dollar⁶¹, which would lead to huge shifts of wealth between USA and foreigners and massive changes in value of U.S. nontraded sector relative to foreign countries. American slowdown and decrease in U.S. demand for imports will have adverse effects on the world economy. Again, we make no attempt to quantify these effects, yet they are likely to be significant.

Just as we are not able to pinpoint a precise moment at which the adjustment will occur, we cannot predict the exact magnitude of changes necessary to bring about adjustment. What we can do is lay out two scenarios – soft and hard landing. The closer the conditions under which the adjustment comes about will be to the „soft landing“ scenario, the greater is the likelihood of a smooth and relatively harmless correction and vice versa.

A „hard landing“ would be a consequence of an abrupt end of willingness of foreign investors' (particularly Asian central banks) to accumulate U.S. debt. The correction would be sentiment-driven and key variables would likely overshoot. The dollar would plunge and long-term interest rates would skyrocket as the U.S. government would struggle to place debt abroad in the face of falling domestic currency and a huge demand gap opened by the Asian central banks. The rise in interest rates would depress asset prices, including those of real estate. This decrease in wealth would in turn lead to a slowdown of the economy through a consumption slump and serious strains on the financial system as scores of households and companies would default on their loans. And, of course, the deficit would shrink and the recession would spill abroad through lower U.S. demand and uncertainty in world financial markets. Events that could trigger this development include a failure of U.S. government to reign in spending, introduction or threat of protectionist measures or more stringent enforcement of Chinese capital controls, which would reduce the country's need for intervention and so the capital outflow towards USA.

The „soft landing“ scenario⁶² involves coordinated international action. The U.S. would have to gradually increase saving to reduce its dependence on foreign financing. At the same time the Asian countries would start appreciating their currencies against the U.S. dollar. This appreciation would have to be coordinated as any country that would appreciate on its own would come under strong competitive pressures against those who would keep their exchange rate unchanged. If the appreciation in Asia comes without a concurrent increase in U.S. saving, the interest rates in USA will rise because the more expensive Asian

⁶¹ Obstfeld and Rogoff (2004) consider the question „How much depreciation of the dollar is needed to rebalance the current account?“ misguided and states that even large autonomous exchange rate movements would not go far toward closing the U.S. current account gap.

⁶² This scenario is due to Summers (2005)

currencies will bring about a decrease in financing available to the U.S. On the other hand, unless the increase in U.S. saving is supported by an Asian appreciation, it will either have to be massive and will cause a deep recession or will be too small to significantly dampen the deficit.

The choice between the two scenarios is well summarized by Larry Summers (2005): “Our experience with current account deficits of this kind, on the one hand, and quasi-fixed exchange rates on the other, suggest that it is healthiest to make adjustments before, rather than after, there is great pressure to do so.”

5. Conclusion

In this thesis, we first explored the mechanisms and theory behind current account deficits and then turned our attention to the current account deficit the USA is running presently. The U.S. external imbalances are, along with the related topic of the rise of China to economic superpower, shaping the world economy. The U.S. current deficit is large by any standard. Two thirds of net international savings are needed to finance it. Possible ramifications of the deficit and its adjustment are substantial.

We have seen how the deficit has reached its current heights, first reflecting the desire of foreigners to own a stake in the booming U.S. economy and later stepping in for extraordinarily low American saving. We have also witnessed increasing reluctance of private investors to acquire U.S. assets and the ever stronger role East Asian banks play in financing the deficit. Our simple projections show that without a major discontinuity the negative international investment position will continue rising quickly. This applies even when optimistic assumptions are used. This result leads us to the conclusion that, unless there is a substantial adjustment, the private foreign investors will demand higher interest rates to compensate them for the increased risk holding dollar-denominated assets. Higher interest rates, possibly coupled with a dollar depreciation caused by waning foreign demand for U.S. assets, would lead to an adjustment of the deficit through reduced U.S. spending.

Considerable space was devoted to the „Bretton Woods 2“ theory, pioneered by Dooley, Folkerts-Landau and Garber. According to their theory, the world economy is back to a system of quasi-fixed exchange rates. Asian central banks, led by the People’s Bank of China, will continue buying U.S. assets to finance American purchases of Asian exports, thereby inducing export-led growth. The authors argue that this system can function for at least another decade. However, we show that this system is not stable and will become very costly for the Asian countries soon. We conclude that while the system is functioning now, it is not probable that it will continue long into the future. When “Bretton Woods 2” comes to an end, the capital flows from Asia to USA will drop sharply, enforcing a correction.

The adjustment of the deficit can happen either through expenditure reduction or expenditure switching. Expenditure reduction would require slower growth in the USA. The extent to which the U.S. economy would have to slow down is increased by its small openness. Expenditure switching would be brought about by a fall in the U.S. dollar. However, it would require a very steep depreciation of the dollar to bring the deficit to a more favourable trajectory by expenditure switching alone. The adjustment, when it happens, will probably combine both expenditure reduction and expenditure diversion. In today’s world

economy, it does not seem to be realistic to hope that the adjustment will happen through increased foreign demand as it did at the end of the 1980s. The longer and faster the deficit grows, the greater is the risk of a hard landing and an event-driven adjustment.

The sheer size of the current account deficit, its rapid growth, reliance on official inflows to finance it and the imbalances this arrangement causes strongly suggest that the U.S. current account deficit is not sustainable in the long run.

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Appendix:

PROJEKT BAKALÁŘSKÉ PRÁCE
IES FSV UK

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Title: Sustainability of the US External Deficit

Literature:

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Contents:

- 1) External Imbalances, National Accounting and Exchange Rates
- 2) US Double Deficit – Figures, Historical and Regional Comparison
- 3) Financing the Deficit – Implications for Sustainability
- 4) US Double Deficit as a Threat to the World Economy?
- 5) Reducing the Deficit – Possible Approaches
- 6) Outlook & Conclusion

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