U.S. External Debt: How Has the United States Borrowed Without Cost?

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Summary

Despite the huge increase in U.S. external debt, the investment income component of the current account has remained in surplus. The size of this surplus has varied, hitting a low of $4 billion in 1998 and a high of $37 billion in 2003, but over the past 25 years, the surplus has remained between $15 billion and $30 billion. Since 2003, the surplus has fallen, reaching $28 billion in 2004 and $11 billion in 2005. This means that the United States, although a large net debtor, has been borrowing free of any economically meaningful debt service cost. What is behind this apparent paradox? Attempts to resolve this paradox have considered special factors that tend to mitigate the effects of the current account deficit on the value of foreign debt, the role of unmeasured U.S. exports, and bias in data collection.

A 2005 study by economist William Cline argues that two factors have worked to limit the impact of large current account deficits on the nation's economic debt service payments. First is the effect of *valuation* changes that have caused the magnitude of U.S. net indebtedness to grow much more slowly than the size of the current account deficits would indicate. Second is the effect of *asymmetrical capital returns*—the United States earns a higher rate of return on its foreign investments than foreigners earn on their U.S. investments.

A more controversial interpretation of the paradox of the United States having large net external liabilities along with an investment income surplus has been provided by economists Hausmann and Sturzenegger. They maintain that the official current account data have failed to record a large volume of service exports, so large that the United States has in truth remained a large net external creditor. The name they give to these invisible assets is "dark matter," for, like the astronomical phenomenon, they have a visible effect (generating investment income) but stem from a source that cannot be seen (hidden service exports).

Looking at the sizable gap between the rate of return on U.S. foreign direct investment (FDI) and that on FDI in the United States, the anomaly is not the high U.S. yield (7.5%) but the suspiciously low foreign yield (2.5%). Why pour hundreds of billions of investment into the United States for a yield below that available from holding virtually risk free U.S. Treasury bonds? Or, given the high yield on U.S. FDI, it would seem likely that there are superior investment opportunities elsewhere. This apparent violation of rational economic behavior suggests that there could be something wrong with the FDI earnings data reported by foreign firms operating in the United States.

While the rate of past debt accumulation may have been smaller than what the size of U.S. current account deficits would indicate, and while the size of the U.S. net debt position and investment income balance may be subject to significant measurement error, the sheer size of prospective trade deficits will mean that, if not now, the United States will soon be a net debtor and will also soon have a sizable deficit in investment income—incurring a true debt burden. This report will be updated as events warrant.

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Introduction

Over the past 15 years, the U.S. current account has moved from a small surplus to a deficit that in 2005 was nearly $800 billion. The final tally for 2006 has not been completed, but preliminary data suggests the deficit will grow to near $900 billion. The current account deficit has increased also as a share of gross domestic product (GDP), climbing from near zero to a record 6.2% in 2005. Because a current account deficit is a reflection of a concurrent net inflow of borrowed funds from the rest of the world, the accumulation of debt from a long succession of large annual deficits has caused the United States to move from being a small net creditor to the rest of the world to being a large net debtor. The net accumulation of liabilities through 2005 is $2.7 trillion, which is equivalent to about 22% of U.S. GDP.

There is, however, an apparent paradox in U.S. international transactions in this period. Despite the huge increase in U.S. external debt, the investment income component of the current account has remained in surplus. The size of this surplus has varied, hitting a low of $4 billion in 1998 and a high of $37 billion in 2003, but over the past 25 years, the surplus has remained between $15 billion and $30 billion. Since 2003, the surplus has fallen, reaching $28 billion in 2004 and $11 billion in 2005. The significance of this enduring surplus of investment income is that the United States, although a large net debtor, has been borrowing free of any economically meaningful debt service cost.

The investment income balance is a tally of U.S. earnings on its foreign investments net of foreigners' earnings on their investments in the United States. It is reported as a component of the current account balance—the nation's most comprehensive measure of international transactions. A surplus in the investment income balance (the U.S. earns more than it pays) means that the United States, despite being a large net debtor on an *accounting* basis (value of foreign liabilities exceeds value of foreign assets), is on an *economic* basis a net creditor.

An economically significant debt would generate net capital income payments to the rest of the world, that is, a debt burden in the form of real resources being transferred to the rest of the world. Because the United States is generating *net* capital income receipts suggests that it is an economic net creditor to the rest of the world and is bearing no debt service cost on its large external debt. This would also suggest that the large trade deficits generating that debt could be much less onerous than typically portrayed.

Resolving the Paradox

Why is there this paradox? Does it suggest there is no reason for concern about U.S. international imbalances because its accumulated debt is economically costless? Several explanations have recently been put forward.

Attenuating Factors

A 2005 study by economist William Cline provides an explanation for the external debt paradox as well as an assessment of the need for concern about U.S. external imbalances by policy makers.[1] It argues that two factors have worked to limit the impact of large current account deficits on the nation's economic debt service payments. First is the effect of *valuation* changes that have caused the magnitude of United States net indebtedness to grow much more slowly than the size of the current account deficits would indicate. Second is the effect of asymmetrical *capital returns*—the United States earns a higher rate of return on its foreign investments than foreigners earn on their U.S. investments.

Valuation Effects

Over time, valuation effects have worked to increase the price of U.S. assets relative to the price of U.S. liabilities for two reasons. First, U.S. foreign assets have a higher incidence of equities (58%), such as foreign direct investment and portfolio investment, than do U.S. liabilities (37%). In contrast, U.S. liabilities have a higher incidence of debt obligations(51%), such as bonds and bank loans, than do U.S. assets (31%).[2] The differential valuation effect occurs because equities appreciate with inflation and stock market booms, but debt obligations most often do not. Second, to a far greater degree than other countries, U.S. external liabilities are denominated in dollars, whereas U.S. external assets are heavily denominated in foreign currencies. Therefore, when the dollar depreciates against major currencies, the dollar value of U.S. foreign assets rises relative to the value of U.S. foreign liabilities.

How significant have valuation changes been for the U.S. net asset position? Based on Bureau of Economic Analysis (BEA) data, Cline reports that from 1991 through 2004, the cumulative current deficits amounted to $3.6 trillion. The actual increase in the U.S. net asset position over this period was only $2.4 trillion. Therefore valuation effects erased $1.2 trillion or 53% of the U.S. current account deficits. This effect was found to be particularly strong in the 2002-2004 period when the dollar depreciated substantially, erasing seven-eights of the cumulative current account deficit's impact on the U.S. net asset position for this period.

Asymmetric Capital Returns

The United States has, on average, consistently earned higher returns on its foreign investments than foreign investors earned on their U.S. investments. This overall rate of return advantage has fluctuated narrowly but steadily between 1 to 2 percentage points. There is likely a structural bias in world capital markets that contributes to this outcome. Prudent investment portfolio management calls for holding a diversified collection of assets that strike a reasonable balance between risk and reward. That balance would entail holding some assets offering higher return but also higher risk and other assets offering a lower return, but also lower risk.

In light of this, an argument can be made that the large and highly liquid U.S. asset market, with its transparency and legal safeguards, offers a bountiful array of low-yield and low-risk assets.

[1] William Cline, *The United States as a Debtor Nation* (Washington: Institute for International Economics, 2005).

[2] Foreign direct investment (FDI) is distinguished from portfolio investment by being a purchase of equity that leads to the acquisition of 10% or more of the capital of an enterprise.

U.S. Treasury securities are a particularly attractive element of this array of low-risk assets. For this reason, great numbers of foreign investors come to the U.S. asset market to fill out the low-risk tier of their investment portfolios. Currently, foreigners hold more than $2 trillion in U.S. Treasury securities or about 53% of all U.S. Treasury securities held by the public. Conversely, U.S. investors are more likely to buy foreign assets that offer high return and high risk. How significant this bias is in causing the asymmetric returns is not known.

The United States' rate of return advantage on its foreign assets is not common to all types of foreign investments, however. It is almost exclusively an outcome associated with foreign direct investment (FDI) in the United States. The rate of return on U.S. FDI averages 7.1% and the rate of return on FDI in the United States averages only 2.5%. In contrast, rates of return on bank and non-bank claims and corporate bonds have been similar for both assets and liabilities. The rates of return on portfolio equities have shifted over the past 15 years, favoring U.S. equities in the early part of the period and in recent years favoring foreign equities. The advantage in this case is much smaller than the $128 billion net earnings on U.S. FDI in 2004, adding only $20 billion to U.S. investment income.

The significance of the rate of return advantage of U.S. FDI for investment income is substantial. Cline estimates that if the rates of return on all foreign assets and liabilities were the same, the U.S. investment income balance in 2004 would not have been a surplus of $36 billion, but a deficit of $102 billion. Cline cannot give a conclusive reason or reasons why U.S. FDI earns a higher return than FDI in the United States.

Implications

Clearly the burden of the massive external borrowing by the United States has been relatively painless to this point, but, as Cline argues, future prospects are unlikely to be as benign. The sheer size of prospective U.S. current account deficits will soon overtake the several mitigating forces and cause the real debt burden to grow substantially. The high incidence of *fixed income obligations* in U.S. foreign liabilities is a characteristic that could greatly accelerate the growth of that burden. Fixed income obligations, which include bank and non-bank claims as well as government and corporate bonds, tend to be sensitive to the level of interest rates.

In the past, the extremely low interest rates have made this structural characteristic relatively benign. But global interest rates have now begun to rise and because the United States will have to sell new debt instruments as well as turn over a large share of existing debt, the total interest payments to foreigners holding these liabilities will increase. Cline estimates that an increase in interest rates of only 1 or 2 percentage points would increase U.S. net interest payments to foreigners by $30 billion to $70 billion.

Added net interest payments of this size would soon swing the investment income balance from surplus to deficit and cause U.S. debt service costs to become very real. The United States was able to avoid this effect in 2005 because interest rate increases were in short-term yields that generated equally large increases in interest receipts and payments. If, however, long-term yields also begin to rise, the effect will be more one-sided because there will be substantial increases in payments on U.S. Treasury securities held abroad with no compensating increase in similar foreign payments.

The Presence of "Dark Matter"?

A more controversial interpretation of the paradox of the United States having large net external liabilities paired with an investment income surplus has been provided by economists Hausmann and Sturzenegger.[3] They maintain that the official current account data have failed to record a large volume of service exports, so large that the United States has in truth remained a large net external creditor. These service exports are not measured in export data because they are hidden within various U.S. capital outflows, and they are not measured there either. Nevertheless, once abroad, these services produce earnings that show up as foreign investment income.

The name they give to these invisible assets is "dark matter," for, like the astronomical phenomenon, they have a visible effect (generating investment income) but stem from a source that cannot be seen (hidden service exports). The imputed effect of "dark matter" on the U.S. net asset position is huge, transforming a deficit of $2.5 trillion into a surplus of $600 billion. This would suggest that the accumulated dark matter has an economic value of $3.1 trillion.

The Sources of Dark Matter

Hausmann and Sturzenegger name three classes of invisible U.S. exports: global liquidity services, insurance services, and knowledge services, attached, respectively, to three types of capital outflows—U.S. currency, U.S. sovereign debt, and U.S. FDI.

Liquidity Services

Dollars holds a special global status, with the currency being widely held as an asset to meet the liquidity needs of the world economy. It is a matter of controversy as to what is the scale of foreign holdings of dollars. The estimates of the share of the $700 billion Federal Reserve notes in circulation that are held abroad range from as low as 30% to as much as 70%.[4] BEA's own tally of currency held abroad was $333 billion in 2004, or about 48% of the total in circulation. Much of this demand comes from foreign governments whose own currencies are unstable or have acute problems with inflation. Also, some of the international demand for dollar currency may be tied to black market and criminal transactions.

Such holdings are effectively an interest free and irredeemable loan to the United States, and although recorded as a liability in the U.S. international investment position, they are not performing as a U.S. liability.[5] If the proceeds from this interest free loan are invested in assets earning a positive rate of return, there will occur an inflow of investment income with no visible asset generating it—dark matter. Because there is uncertainty about how much dollar currency is actually held abroad, there is a range of estimates of potential dark matter from liquidity services. It is unlikely that the amount is less than $200 billion or exceeds $500 billion. If invested in assets

[3] Ricardo Hausmann and Federico Sturzenegger, "U.S. and Global Imbalances: Can Dark Matter Prevent the Big Bang?" (Unpublished Working Paper, Kennedy School of Government, Harvard University, 2005).

[4] See Richard D. Porter and Ruth A. Judson, *The Location of the U.S. Currency: How Much is Abroad?*, Board of Governors of the Federal Reserve System, mimeo, Apr. 15, 1996.

[5] A Federal Reserve note held abroad is not a liability of the U.S. government. The holder of a dollar has no other claim on the U.S. government then that piece of paper itself. Distinct from a U.S. Treasury bond, Federal Reserve notes carry no claim for interest payment, no claim for repayment of principal, and no claim for any non-pecuniary services.

with a 5% return, the range for the income flow from this form of dark matter would be from about $10 billion to about $25 billion annually.

Insurance Services

This source of dark matter is in concept similar to liquidity services, but applied to low-risk U.S. Treasury bonds. As noted in the Cline study examined above, the world economy has an apparent strong demand for a low-risk asset to fill out its investment portfolio and the holding of U.S. Treasury bonds is the preferred way of meeting this demand. The United States, on the other hand, can use these proceeds to fill out the high-risk, high-yield tier of its investment portfolio with much higher yielding bonds from emerging economies, Hausmann and Sturzenegger argue. Moreover, this yield difference will not be compressed by competitive forces and will persist because the world is exchanging a safe asset for a risky asset and the difference is, in effect, an insurance premium the world pays the United States for lowering its risk.

Knowledge Services

Hausmann and Sturzenegger argue that current accounting practices are greatly understating the stock of U.S. FDI assets because they fail to account for embodied knowledge services. These unmeasured assets do, however, generate an inflow of revenue that is measured as investment income. This would lead to a higher apparent rate of return on the FDI assets that are measured. This occurs because U.S. FDI has embodied in it extremely valuable but unmeasured assets exported in the form of know-how, brand recognition, expertise, and research and development. Hausmann and Sturzenegger maintain that knowledge services is the most important source of dark matter.

Implications of Dark Matter

Taking dark matter into consideration, the global imbalances that countless observers have found so troubling would be eliminated. The United States would be a net creditor, not a net debtor. Japan is a large creditor, whereas the euro area and the rest of the world are net debtors. Overall the world economy is generally balanced with the exception of Japan, having no large net positions. Dark matter would also suggest the United States is far more of a saver than indicated by official statistics. Moreover, so long as dark matter continues to be largely based on knowledge exported abroad it should lead to a steady net creditor position for the United States and fairly stable international economy.

Evaluation

The dark matter hypothesis has met with criticism.[6] In the case of liquidity services (or external seigniorage), the argument is valid in concept but the magnitude of the associated earnings inflow is probably moderate in size, probably no more than $25 billion and perhaps as little as $10 billion.

[6] These criticisms follow those found in William Buiter, "Dark Matter or Cold Fusion?," Goldman Sachs Global Economic Paper No. 136, Jan. 2006.

In the case of insurance services, the argument seems highly improbable if the high risk of default on the sovereign debt of emerging economies is taken into consideration. Default is hardly unlikely. Just since 1998, there have been debt defaults by Argentina, Uruguay, Russia, Pakistan, Venezuela, Ukraine, Ecuador, and Peru. Further, the yields on U.S. Treasury bonds are not unusually low, often being higher than the yield on the sovereign debt of other advanced economies. This suggests that the markets are not conferring any preferred market status on U.S. Treasury bonds. In the end, the observed spread in interest rates between U.S. Treasury bonds and emerging market sovereign debt is often not large, seeming only minimally sufficient to cover default risk and leaving little left over for the alleged insurance services premium.

In the case of knowledge services, dark matter may exist, but it is also reasonable to conjecture that it is likewise embodied in FDI in the United States, causing these investments to be similarly undervalued in the U.S. net international investment position (NIIP) calculations. In fact, a ratio of the NIIP data on market value and book value of FDI, which should be an indicator of expected profitability of an investment, shows no significant difference in expected profitability between FDI in the United States and U.S. FDI. In general, it is likely that there are important valuation problems on both the asset and liability side of FDI making it unclear whether there is systematic overstatement or understatement on either the foreign or the United States side.

A Bias in Data Collection?

Looking at the sizable gap between the rate of return on U.S. FDI and that on FDI in the United States, the argument can be made that the anomaly is not the high U.S. yield (7.5%) but the suspiciously low foreign yield (2.5%). Why pour hundreds of billions of investment into the United States for a yield below that available from holding virtually risk free U.S. Treasury bonds? Or, given the high yield on U.S. FDI, it would seem likely that there are superior investment opportunities elsewhere.

This apparent violation of rational economic behavior suggests there could be something wrong with the reported FDI earnings data from foreign firms operating in the United States. Another indicator of FDI data problems is that there is no yield gap between U.S. portfolio assets and liabilities. FDI is distinguished from portfolio investment by being a transaction that leads to the acquisition of 10% or more of the capital of an enterprise. Why would owning less than 10% of an enterprise be an investment in which foreign investors are competitive with U.S. investors, but owning more than 10% be one in which they are not?

These observations prompt the hypothesis that because U.S. corporate taxes are often higher than those of other countries, foreign multi-national companies in the United States systematically shift profits from their U.S. affiliates to the parent company or to another affiliate in a lower tax jurisdiction with the purpose of reducing their U.S. tax liabilities. Funds are not actually crossing any border, rather they are being disguised by the use of certain business practices or accounting devices. These practices, of course, distort the investment income data by undervaluing foreign income in the United States.

The significance of this practice is suggested by the stark asymmetry of the *retained earnings* component of the investment income balance. Foreign affiliates in the United States report virtually no retained earnings, whereas U.S. firms report substantial retained earnings in their foreign affiliates. The cumulative profits reported on U.S. FDI from 1999 through 2004 was $984 billion of which $620 billion, or 65%, was reported as retained earnings. In comparison, during this same period, the cumulative profits reported on FDI in the United States were $233 billion of

which only $41 billion, or 18%, was reported as retained earnings. There is no obvious reason for this different performance.[7]

The strength of tax incentives on where profits are reported by multi-national corporations is evident in the case of Ireland, a very low tax country. Foreign firms report profit rates of about 20% on FDI in Ireland. This is 10 times higher than the yield reported on FDI in the United States and seemingly far greater than a credible difference in true profit opportunities. Another piece of evidence is afforded by the response of U.S. multinational companies to the one-time tax incentives provided by the American Jobs Creation Act of 2004. In 2005, the year the tax incentives were in effect, there was a sharp redistribution of retained earnings from abroad to U.S. parents, as retained earnings from foreign operations abruptly fell to near zero from $177 billion in 2004 and retained earnings reported by U.S. parents increased to $244 billion from $50 billion in 2004.

The cloaking of the U.S. earnings of foreign multi-national companies can be accomplished by the use of what economists call "transfer pricing." This occurs through the manipulation of the price the company charges for a product or service it supplies to its foreign affiliate. Tax codes usually require that parents and affiliates conduct transactions using "arms-length" pricing but deviation from this standard can be very hard to detect, particularly if, as is common, the good or service exchanged does not have a market determined price for reference. Paying higher prices for goods or services provided by the parent or another affiliate will increase the recorded operating costs of the U.S. affiliate and, in turn, decrease its recorded profits, and thereby decrease its U.S. tax liability. The transfer price transaction can be with other foreign affiliates operating in a different jurisdictions as well as with the parent. There is at present no conclusive evidence of the extent of profit shifting by multi-national corporations through transfer pricing, but as already suggested it is likely to be very difficult to detect.[8]

Conclusion

It is probably true that the valuation of U.S. external assets and liabilities is subject to measurement error. However, the magnitude of error, even if several hundred billion dollars, is unlikely to be large enough to greatly alter the basic shape of U.S. international transactions: large current account deficits and a deteriorating external net asset position. The tremendous size of prospective current account deficits will mean that if the United States is not now a net external debtor it soon will be.

Even ignoring the likely bias associated with the reporting of retained earnings to compute the investment income balance, the likely pace of debt accumulation by the United States in conjunction with a likely future of higher world interest rates, suggests that the current investment income surplus will soon turn to deficit. This would put the United States in the position of having to then incur net economic debt service costs on its large borrowings from abroad. Preliminary data indicates that the investment income balance may post a small deficit for 2006.

[7] See Daniel Gros, *Foreign Investment in the U.S.:Being Taken to the Cleaners*?, Center for European Policy Studies, Working Document, 2006.

[8] See Congressional Budget Office, "Why Does U.S. Investment Abroad Earn Higher Returns Than Foreign Investment in the United States," Economic Issue Brief, Nov. 2005.

This cost could grow large quickly, however. Therefore, the U.S. trade deficit and its consequences will continue to be legitimate matters of concern for economic policy makers.

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