U.S. International Deficits, Debt, and Income Payments: Key Relationships Affecting the Outlook

ALTERNATIVE SCENARIOS ILLUSTRATE THE RISKS

By John Kitchen

John Kitchen is an economist with the Office of Management and Budget, Executive Office of the President. He recently served as Chief Economist of the House Budget Committee, and previously held positions in the Department of the Treasury, the Council of Economic Advisers, the Economic Research Service, and Washington and Jefferson College. He received his Ph.D. and M.A. in economics from the University of Pittsburgh and his B.A. in economics and history from the College of William and Mary in Virginia.

A variety of issues and relationships will be of fundamental importance in determining the future paths of the U.S. current account, international debt position, and net international income flows. This paper describes the key relationships and presents projection results that illustrate the sensitivity of the outcomes to those relationships. Although the base case scenario presented in the paper shows a relatively benign outcome based on Blue Chip projections and the likely continuation of historical relationships, alternative projections help to illustrate the risks—and the potential sources of those risks—for a more adverse outcome for U.S. international deficits, debt and income flows.

Large and increasing trade and current account deficits have led to growing concern in recent years about the "sustainability" of the international deficits, the outlook for the international debt position of the United States, and the implications for the future performance of the U.S. economy.[1] The United States has been running trade and current account deficits almost continuously

[1] See, for example: Cline (2005); Edwards (2005); Eichengreen (2006a); Blanchard; Giavazzi and Sa (2005); Higgins, Klitgaard, and Tille (2005); Mann (2004); Obstfeld and Rogoff (2004, 2005); Roubini and Setser (2004).

over the past two-and-a-half decades,[2] and the current account deficit increased to more than six percent of GDP in 2005. Accumulating international debt pushed the U.S. net international investment position from -6 percent of GDP at the end of 1995 to -21 percent at the end of 2005.

Warren Buffett (2005) highlighted concerns about U.S. international imbalances when he claimed that the United States was on track to becoming a "sharecropper society" and would have to pay "an ever-growing royalty on American output" to the rest of the world.

In contrast to that view, the consensus projection of the private Blue Chip forecasters is for the U.S. trade deficit to decline relative to GDP over the next decade. If typical historical relationships were to persist, that outlook would generate a much more benign result for the cost of servicing the U.S. international debt. Ultimately, the implications of these varying views for the "sustainability" of U.S. international imbalances generally are not readily or clearly understood. This paper is intended to provide a description of the key issues and relationships that are of fundamental importance for understanding alternative views for the outlook for the U.S. current account, international debt position, and net international income flows.[3]

Some Background

The outlook for the U.S. trade and current account deficits, net international debt position, and net international income flows is important for a variety of reasons. The issue of the "sustainability" of the trade and current account deficits generates a number of questions and concerns about the outlook for the U.S. economy.[4] In particular, concerns arise about the "financial risk" associated with large international imbalances, including the potential for large or sudden changes in key financial variables, such as the exchange value of the U.S. dollar, domestic U.S. infla-

RELATION OF GROSS DOMESTIC PRODUCT, GROSS NATIONAL PRODUCT, AND NATIONAL INCOME (BILLIONS OF DOLLARS)

		2003	2004	2005
1	Gross domestic product	10,960.8	11,712.5	12,455.8
2	Plus: Income receipts from the rest of the world	336.8	410.2	513.3
3	Less: Income payments to the rest of the world	280.0	363.9	418.5
4	Equals: Gross national product	11,017.6	11,758.7	12,487.7
5	Less: Consumption of fixed capital	1,336.5	1,436.2	1,604.8
6	Equals: Net national product	9,681.1	10,322.6	10,882.9
7	Less: Statistical discrepancy	48.8	66.7	71.0
8	Equals: National Income	9,632.3	10,255.9	10,811.8

Source: Bureau of Economic Analysis

tion and interest rates, and U.S. asset and equity prices. The question arises: "What would be the implications for the expected performance of the U.S. economy if large trade deficits were to result in an environment of a falling exchange value of the dollar and higher inflation and interest rates?" Also, concerns exist about the ability to finance a large and growing U.S. net international debt position— as reflected in the Buffet quote described above. In the political realm, perceived adverse effects of large trade deficits or the potential for growing costs of servicing international debt could also lead to increased pressures for protectionist trade and international investment policies.

To further illustrate the issue of the "cost" for the United States of "servicing" its international debt position, consider some basics of national income accounting in the National Income and Product Accounts (NIPAs) as presented by the Bureau of Economic Analysis (BEA) (see Table 1). Gross domestic product (Table 1, line 1) is defined by the BEA as "The market value of goods and services produced by labor and property in the United States, regardless of nationality." The GDP output measure includes output that derives from capital assets (and a small amount of labor) owned by foreign individuals and businesses as well as from factors owned by U.S. residents; hence, some of the income earned is paid to the foreign owners of those factors of production. Similarly, for U.S.-owned assets and labor abroad, income from those assets and labor is paid to U.S. residents and businesses. The international income flows for those international factors of production are shown in lines 2 and 3 of Table 1. Consider some additional definitions. Gross national product (GNP) is defined as: "The market value of goods and

---

[2]The one exception is 1991 when the United States had a small current account surplus resulting from transfers for reimbursement of costs for the 1990-91 Persian Gulf War.

[3]See Eichengreen (2006b) for a discussion of alternative theoretical and expository interpretations regarding global imbalances.

[4]See Mann (1999), for example, regarding the issue of "sustainability."

services produced by labor and property supplied by U.S. residents, regardless of where they are located."[5] National Income is defined by BEA as "The sum of all incomes, net of consumption of fixed capital, earned in production" with perhaps adding the following for clarity: *for U.S. residents' factors of production.* So, as shown in Table 1, to transition from GDP to National Income, net international income flows (line 2 minus line 3) are added to line 1 to attain GNP (line 4), and consumption of fixed capital (depreciation) is subtracted to get Net National Product (NNP) (line 6). Finally, the difference between the accounting on the product side and the income side of the NIPAs is accounted for in the subtraction of the statistical discrepancy from NNP to attain National Income (line 8).

The primary point of this illustration is the relationship of net international income flows in the accounting from GDP to National Income. If international income flows were to become substantially negative, they would act as a "wedge" between GDP and National Income. Nonetheless, Table 1 shows that net international income flows for the United States continued to be positive in recent years (the United States receiving more income from abroad than was being paid to foreign owners of assets in the United States). The continued positive net income flows are a somewhat surprising result, given the persisting U.S. trade and current account deficits and the growing net international debt position of the United States. The relationships described in the next section help to explain this phenomenon. An important concern about "sustainability" in the international accounts is that international income flows could ultimately turn substantially negative—and potentially by a steadily increasing amount—thereby reducing the share of national income for the residents of the United States for a given output production of GDP.

Key Issues and Relationships Affecting the Outlook

A variety of key issues and relationships affect the outlook for the evolution of U.S. international trade and current account deficits, net international debt, and net income flows—and ultimately the sustainability of the U.S. international investment position.[6]

The Exchange Value of the U.S. Dollar and the Trade Deficit

The projected paths for the exchange value of the U.S. dollar and the trade deficit are the most important factors

that directly affect the outlook for the current account and the evolution of the U.S. international debt—and they are the ones that have attracted the most attention in analyses and academic research.[7] In addition, the oft-cited Houthakker and Magee (1969) conditions (higher income elasticity of demand for U.S. imports than for foreign demand for U.S. exports) also make it difficult to close the U.S. international trade gap. Hence, the theoretical and empirical relationships point to two fundamental conditions for reducing the U.S. trade deficit: higher real growth for foreign economies relative to the U.S. economy and a decline in the value of the dollar. Obstfeld and Rogoff (2005, p. 71) argue that "any correction to the trade balance is likely to entail a very large change in the real effective dollar exchange rate." Their base assumption was for a decline of 33 percent and an even greater depreciation in the event of an abrupt adjustment. Edwards (2005) argues that the U.S. current account deficit is not sustainable and that a substantial adjustment is likely to occur in the near future, with adverse effects on real growth in the United States. Blanchard, Giavazzi, and Sa (2005) present a model with results that lead them to anticipate further depreciation of the dollar at a small and steady rate, and with the bulk of the depreciation occurring relative to Asian countries. In the base and alternative cases described below, various scenarios are presented for the projected trade deficit and for the change in the exchange value of the dollar in order to illustrate a range of possible outcomes.

Relative Rates of Return for U.S.-Owned Assets Abroad and Foreign-Owned Assets in the United States.

The observed rate of return for U.S. direct investment abroad has historically been much higher than for foreign direct investment in the United States. The effective rate of return for U.S. direct investment assets abroad during non-recession periods over the past three decades averaged 10.3 percent compared to the much lower 4.9 percent for foreign direct investment assets in the United States (see Figure 1). Mataloni (2000), Hung and Mascaro (2004), CBO (2005), and Cline (2005) are among the studies that have examined the issues and possible relationships that lie behind the higher rates of return for U.S. direct investment assets abroad relative to the returns for foreign direct investment assets in the United States. The CBO (2005) study, for example, identifies "three factors [that] may account for the difference in returns on cross-border direct investment," including

[5]GNP was used as the primary measure of U.S. production prior to 1991, when it was replaced by GDP.
[6]See Kitchen (2006) for detailed methodology, accounting framework, and discussion of the relationships affecting the outlook for U.S. international deficits, debt, and net income payments.

[7]See Bergsten and Williamson (2004), for example, as well as other studies cited earlier.

FIGURE 1

EFFECTIVE RATES OF RETURN ON DIRECT INVESTMENT

Percent

Shaded areas U.S. recession years.
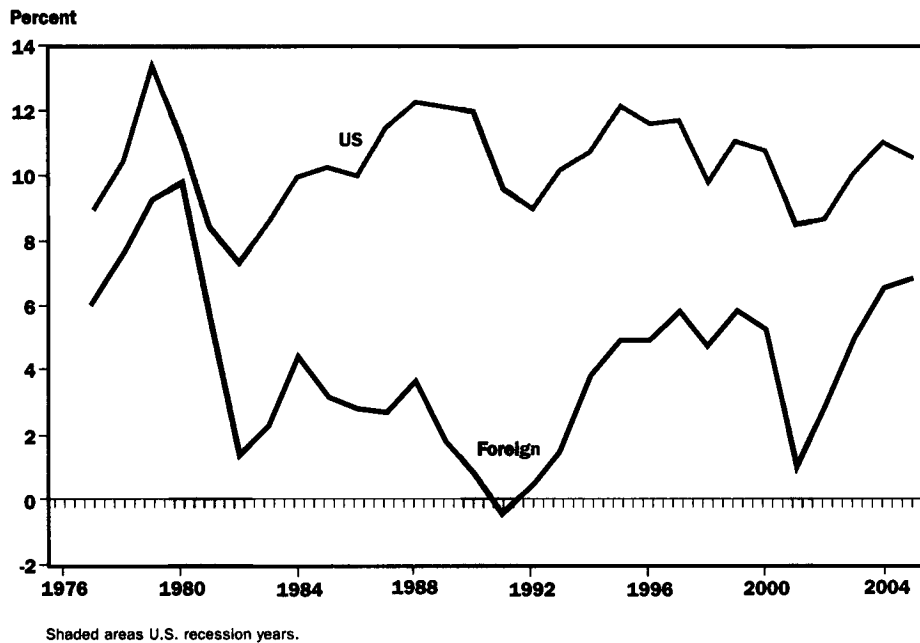
non-banking institutions, while more than two-thirds of foreign-owned assets in the United States are in these lower-yielding assets. In terms of the financial flows, the measured *flow* returns to corporate stock would be in the form of dividends, so that much of the observed gain for corporate stocks over time (in the form of capital gains) will show up as changes to the *value of* the overall stock of assets (to which the discussion now turns).

Valuation Effects for the Nominal Levels of Asset Stocks.

The values of the stocks of international assets change as a result of changes in exchange rates, asset prices, and "other" factors. Consider the following

greater maturity of business ownership and operations for U.S. subsidiaries abroad than for foreign subsidiaries in the United States, compensation for higher political and economic risks for U.S.-owned assets abroad, and the possible overstatement of profits on U.S.-owned assets abroad for tax reasons. A recent alternative and controversial explanation is that the observed, measured higher effective rates of return result from mis-measurement of the true value of assets, with an understatement of the value of U.S. assets abroad and, hence, the existence of "dark matter" asset valuation (Hausmann and Sturzenegger, 2005, and this issue).

Composition of U.S. and Foreign Asset Portfolios.

Beyond the observed rate of return by specific asset type, the investment "portfolio" for U.S.-owned assets abroad is also much more heavily weighted toward higher earning assets in comparison to that for foreign-owned assets in the United States. Table 2 shows the relative allocations by major types of assets for 2005. For U.S.-owned assets abroad, the combined share of total assets invested in higher-yielding direct investment and corporate stock is 55 percent; for foreign-owned assets in the United States, a much smaller share of just over 30 percent is in those higher-yielding assets. This implies that about 45 percent of U.S.-owned assets abroad is in (relatively) lower-yielding bonds and money-market instruments in banking and

TABLE 2

PORTFOLIO SHARES FOR INTERNATIONAL INVESTMENT ASSETS, 2005

	U.S.-owned Assets Abroad	Foreign-owned Assets In the U.S.
Direct Investment	24.5	14.8
Corporate Stocks	30.8	16.7
Banks & Nonbanks Assets	32.1	24.9
Bonds, Government, Currency	12.6	43.6

equation describing the BEA accounting relationship for the change in the net international investment position:

$$I_t = I_{t-1} + f_t + p_t + e_t + o_t$$

where I_t is the international investment position at the end of period t, f_t is international financial flows during period t (comprised primarily of the current account deficit), p_t is price change effects on the valuation of the stocks of investment assets during period t, e_t is exchange rate effects on the valuation of the stocks of investment assets during period t, and o_t is "other" effects on the valuation of the stocks of investment assets during period t.

As a result of the valuation effects, the U.S. net international debt position—the difference between the values of U.S. and foreign-owned *stocks* of assets—can shift for

reasons independent of the period-to-period financial *flows* (i.e., trade and current account deficits).

Price change valuation effects: Changes in the prices of international assets directly affect the value of U.S. and foreign-owned assets. And, at the margin, such asset price changes have stronger effects for the value of total U.S.-owned assets abroad than for total foreign-owned assets in the United States, a result related to the heavier weighting of corporate equities in the U.S. asset portfolio than in the portfolio of foreign-owned assets in the United States, as shown in Table 2.

Change in exchange value of the dollar: Asset values (primarily U.S.-owned assets abroad) are directly affected by changes in the exchange rates between the U.S. dollar and the foreign currencies in which the assets are denominated. As a result, a declining value of the dollar would mean "beneficial" valuation effects that would, *ceteris paribus*, reduce the U.S. net international debt position.[8]

"Other" valuation effects: The negative effects on the U.S. international debt position from the large financial flows associated with current account deficits have been offset historically by remarkably persistent "other"—largely unidentified—valuation changes. These "other" valuation changes have increased the value of U.S. assets held abroad and reduced the value of foreign-owned assets in the United States. To illustrate the magnitude of

these other valuation effects, consider the averages over the past five years: Over the 2001-2005 period, the U.S. current account deficit averaged five percent of GDP, while the "other" valuation offset averaged 1.2 percent of GDP—about one-fourth of the negative international financial flow. Although the sources of these other valuation effects remain unclear, their historical persistence indicates a relatively high likelihood that they will continue at some level in the future.

In summation, the variety of relationships described here help explain why the United States historically has been able to continue to run positive net international income flows despite the large current account deficits and the growing U.S. net international debt position. Looking forward, the same relationships will affect how the U.S. international deficit and debt positions—and the "cost of servicing the debt"—will evolve.

A Base Projection ... and Illustrative Alternatives

This section presents a base scenario and alternative projections to illustrate how the relationships described above can affect the outlook for the U.S. international debt position and for the net international income flows to service the debt.

Assumptions for Alternative Projections

Table 3 presents summary information for the assumptions for the key relationships for the projections.[9]

Base case. The Base case projection uses the Blue Chip

[8]See, for example, Tille (2005) and Gourinchas and Rey (2005a, 2005b).

TABLE 3

KEY ASSUMPTIONS FOR ALTERNATIVE PROJECTIONS

Case	Description	Exchange Value of the Dollar	Trade Deficit % of GDP 2016	U.S. and Foreign Asset and Portfolios	Relative Rates of Return Received on Direct Investment	U.S. Interest Rates	Valuation Effects
Base	Blue Chip Based Projection	-12 percent	-2.9%	Recent Trends Continue	Differential persists: US: 10% Foreign: 5.25%	Blue Chip	YES "Other" effects on declining trend
ALT I	Recent Situation Extended	No Change	-5.5%	Recent Trends Continue	Differential persists: US: 10% Foreign: 5.25%	Blue Chip	YES "Other" effects on declining trend
ALT II	"Pessimistic" Outcome	+10%	-8.0%	Foreign holdings of US assests shift more toward higher return assests	Differential eliminated US: 8% Foreign: 8%	US Higher by 1.5% points	YES "Other" effects difference eliminated
ALT III	"Optimistic" Outcome	-30%	-1.5%	Recent Trends Continue	Historical Differential: US: 10.3% Foreign: 4.95%	Blue Chip	YES "Other" effects historical average
Note: Historical Comparison		about -25% past 4 years	-5.8% (2005)		Historical Differential: US: 10.3% Foreign: 4.95%		"Other" differential at 2 percentage points of value historically

---

Economic Indicators (2006) outlook for GDP, net exports, inflation, interest rates, and exchange rates. For this Base case, the exchange value of the dollar is assumed to decline by 12 percent over the next decade, and the Blue Chip projections show the trade deficit declining steadily to 2.9 percent of GDP by 2016.[10] Recent trends are assumed to persist for the asset portfolio allocations (notably, persisting higher portfolio shares for direct investment and corporate equities for U.S. assets abroad compared to foreign-owned assets in the United States). The differential in the effective rate of return for U.S. direct investment assets abroad relative to foreign-owned direct investment assets in the United States is assumed to persist near historical levels. Valuation effects are assumed to persist, albeit with "other" valuation effects becoming steadily smaller in magnitude over the projection relative to the historical relationships.

Alternative I: Status quo, no sustained improvement in trade deficit. To illustrate the outlook for a situation in which U.S. international flow imbalances continue at recent levels, the Alternative I scenario includes assumptions of no change in the exchange value of dollar and the trade deficit continuing at about 5.5 percent of GDP over the ten-year projection period. Assumptions for the portfolio composition, valuation effects, U.S. GDP growth, interest rates, and the relative domestic and foreign effective rates of return are the same as in Base scenario.

Alternative II: Pessimistic outcome. Under this alternative, the exchange value of the dollar is assumed to increase by ten percent; and the trade deficit is assumed to continue to grow, rising to eight percent of GDP by 2016.

U.S. interest rates are assumed to increase by 1.5 percentage points relative to the Base case, and the relative effective rates of return for direct investment assets are assumed to equalize, with the rate for U.S.-owned assets abroad falling, and the rate for foreign-owned assets in the United States rising. Portfolio allocations shift to be less favorable to the U.S. position, with foreign-held portfolio in U.S. assets shifting more toward higher ROR assets (direct investment and corporate equities). Exchange rate and price valuation effects continue, although with the exchange value of the dollar rising, that effect increases the U.S. international debt. The "other" valuation effects differential, which has historically benefited the U.S. position, is assumed to be eliminated.[11]

Alternative III: Optimistic outcome. In this alternative, the exchange value of the dollar falls by 30 percent on a steady decline over the next ten years. That depreciation of the dollar, coupled with assumed stronger foreign growth, generates a decline in the U.S. trade deficit to 1.5 percent of GDP. The "other" valuation effect is assumed to persist at historical average levels—a more beneficial relationship than in the Base case. The effective rate of return differential for direct investment assets is assumed to continue at the historical average—a slightly wider spread than in the Base case. Portfolio allocations and interest rates are the same as in the Base case.

Projection Results

Projections for the Base and Alternative scenarios described above were made for a ten-year projection period.[12] Results are summarized in Table 4.

[9]For other studies showing alternative projections of the trade deficit and the estimated impacts on the U.S. international debt position see, for example, Cline (2005), Higgins, Klitgaard, and Tille (2005), and Roubini and Setser (2004).

[10]The assumptions for the exchange rate presented in the *Blue Chip Economic Indicators* are for a subset of forecasters and for only through the end of 2007; changes in the exchange rate are assumed to persist beyond 2007, but with a decay rate for the rate of decline in the dollar.

[11]One can imagine a situation such as Alternative II in which the U.S. economy exhibits unexpected continued strong growth, keeping the exchange value of the dollar strong and contributing to higher domestic interest rates and stronger imports. Hence, the label of "pessimistic" applies to the international imbalance outlook and not necessarily to the domestic performance of the U.S. economy.

[12]The modeling framework used to generate the projections described in this section is described in detail in Kitchen (2006).

TABLE 4

PROJECTION RESULTS FOR BASE AND ALTERNATIVE SCENARIOS (% of GDP, 2016)

Case	Description	Trade Deficit	Current Account Deficit	Net International Debt	Net International Income Payments
Base	Blue Chip Based Projection	-2.9%	-4.4%	-42%	-0.8%
ALT I	"Status Quo" Outcome	-5.5%	-7.7%	-58%	-1.3%
ALT II	"Pessimistic" Outcome	-8.0%	-15.2%	-108%	-6.5%
ALT III	"Optimistic" Outcome	-1.5%	-1.7%	-15%	+0.5%
Note: Value in 2005:		-5.8%	-6.4%	-21%	+0.2%

FIGURE 2

BASE CASE: TRADE AND CURRENT ACCOUNT DEFICITS

% of GDP

Base Trade Deficit

Base Current Account Deficit

1976 1981 1986 1991 1996 2001 2006 2011 2016

FIGURE 3

NET INTERNATIONAL DEBT—HISTORY AND ALTERNATIVE

% of GDP

Alt III
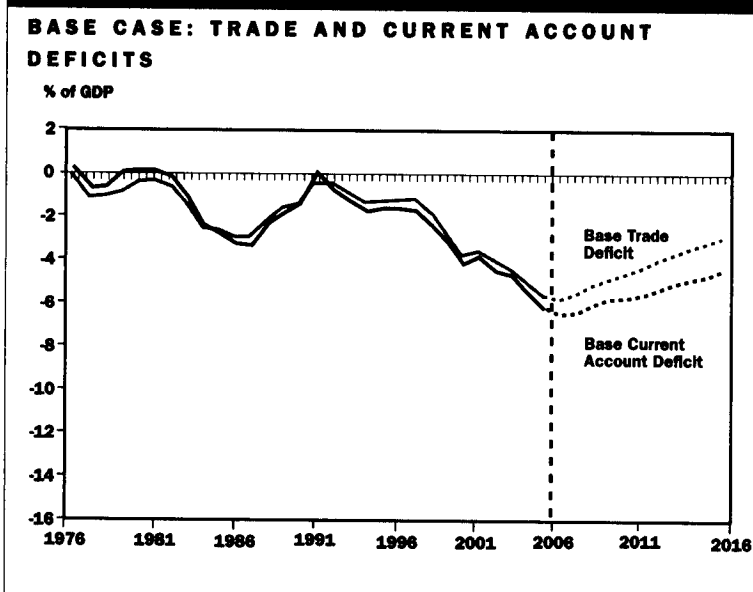
Base

ALT I

ALT II

1976 1981 1986 1991 1996 2001 2006 2011 2016
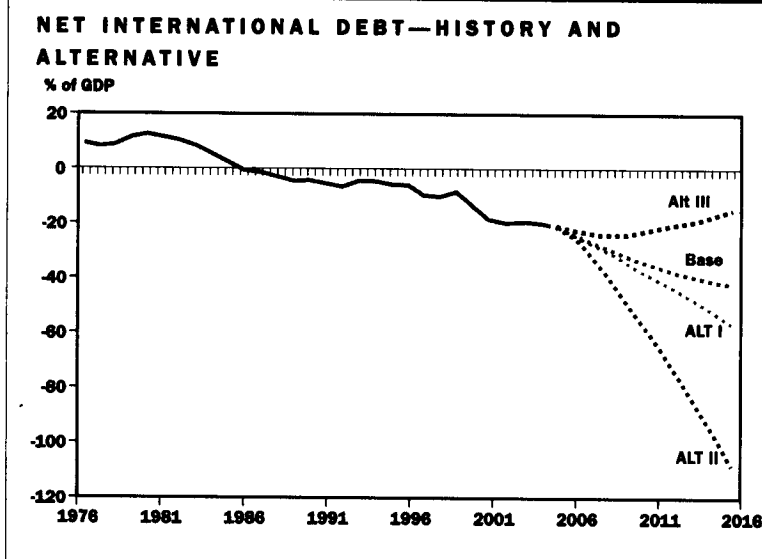
Base scenario. With the trade deficit projected to decline steadily in the Blue Chip consensus to 2.9 percent of GDP over the ten-year projection, the current account falls from 6.4 percent in 2005 to 4.4 percent in 2016 (Figure 2). The U.S. net international debt position is projected to double, rising from 21 percent of GDP in 2005 to 42 percent of GDP in 2016 (Figure 3). Even with the doubling of the U.S. net debt position, though, the beneficial effects from the higher relative effective rates of return for U.S. assets abroad, the asset portfolio allocations, and the valuation effects keep the cost of servicing that debt position relatively low with net international income flows at less than one percent of GDP (Figure 4). These results, based on Blue Chip consensus projections, point to a relatively benign relationship for the outlook for U.S. international imbalances and the costs of servicing the net international debt.

Alternative I. Under the "status quo" scenario with no change in the exchange value of the dollar and the trade deficit continuing at about 5-1/2 percent of GDP over the next decade, the current account deficit rises to nearly eight percent of GDP by 2016 (Figure 5). The U.S. international debt position nearly triples in size relative to the base, rising to 58 percent of GDP (Figure 3). Even so, the assumed persistence of the favorable differential in the effective rates of return on direct investment, beneficial portfolio allocations, and positive "other" valuation effects, generates the result that the net international income flow is projected to deteriorate only gradually, reaching the still relatively mild level of -1.3 percent of GDP by 2016 (Figure 4). Still, that -1.3 percent of GDP would represent income on domestic production that flows to foreign owners of factors of production—not to domestic U.S. factors of production.

Alternative II. Under the "pessimistic outcome" of Alternative II, the trade deficit rises to eight percent of GDP (Figure 6), the dollar appreciates by ten percent, and virtually every relationship is assumed to move against U.S. international balances. Such a scenario generates an increase in the current account deficit to more than 15 percent of GDP, with the U.S. net international debt position rising to more than 100 percent of GDP (Figure 3). Further, the cost of servicing the international debt soars, rising to about 6.5 percent of GDP by 2016 (Figure 4). Clearly—and in contrast to the Base and Alternative I scenarios—such an outlook is unlikely to be "sustainable," as ever-increasing shares of domestic production would have to be paid as income to foreign owners of factors of production—essentially the Buffet scenario.

Alternative III. Figure 7 shows that under an "optimistic" scenario (from the perspective of U.S. international balances), the U.S. trade deficit declines to about 1.5 percent of GDP by 2016, and the U.S. exchange value of the dollar falls by 30 percent. The current account deficit *falls* to 1.7 percent of GDP (Figure 7), and the U.S. international debt position *falls* to 15 percent of GDP (Figure 3). The net international income flows *rise* to a positive 0.5 percent of GDP (Figure 4). Under such a scenario, the
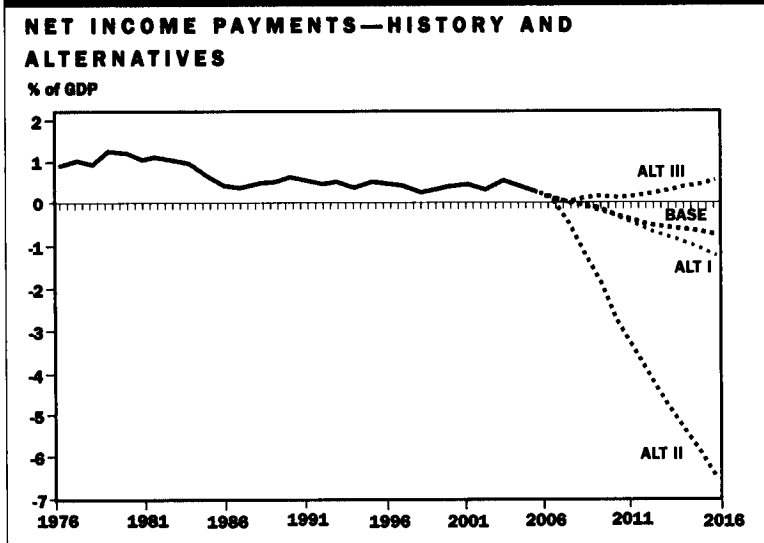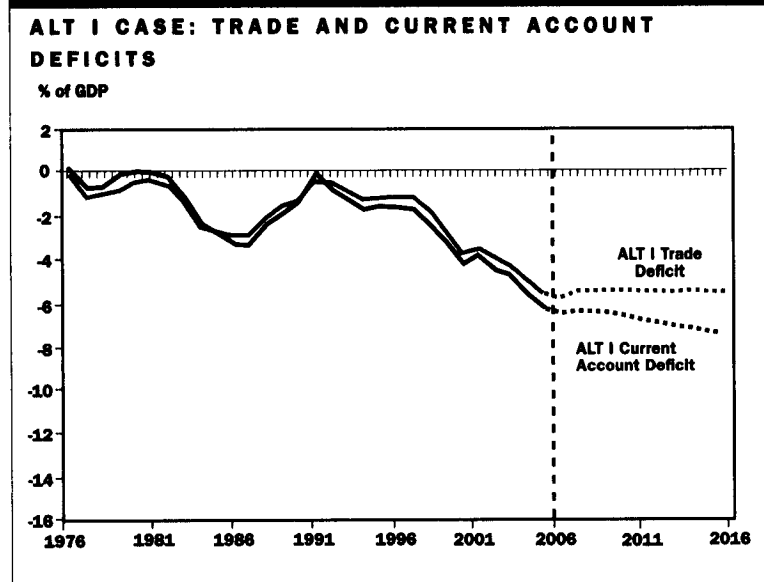
FIGURE 4

NET INCOME PAYMENTS—HISTORY AND ALTERNATIVES

% of GDP

FIGURE 5

ALT I CASE: TRADE AND CURRENT ACCOUNT DEFICITS

% of GDP

United States returns to a position of low international debt, with income earnings from abroad exceeding the payments the United States makes to foreigners.

These projections provide a broad range of outcomes that help to illustrate the risks to the outlook for U.S. international imbalances—and the relationships that would drive those results.

Further Illustrations of Sensitivity to the Key Relationships

The results presented above show broad alternative scenarios with combinations of changes in key relationships, including large differences in assumptions about the projected paths for the trade deficit. To provide additional information on the effects of specific factors beyond the alternative paths for the trade deficit, Table 5 shows results for scenarios with changes to individual factors or relationships, holding the Base case trade deficit constant. Line 1 of Table 5 shows the Base scenario results for comparison.

Lower differential on relative rates of return on direct investment. The United States has historically benefited from the higher effective rate of return on direct investment abroad relative to that on foreign-owned assets in the United States. Line 2 shows the effect on the Base projection from changing the assumption about the differential in the effective rate of return on direct investment, reducing the Base case spread of 4.75 percentage points (ten percent for U.S.-owned assets abroad minus 5.25 percent for foreign-owned assets in the United States) to an ultimate value of two percentage points (eight percent vs. six percent). The resulting projection shows that, even with the same net export path, the current account deficit in 2016 would be higher than in the Base case (5.1 percent of GDP vs. 4.4.
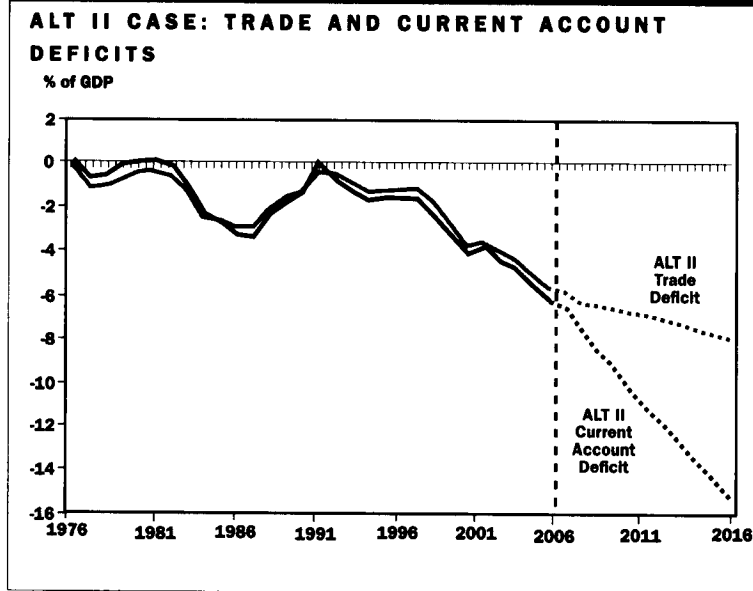
TABLE 5

PROJECTION RESULTS FOR ILLUSTRATING SENSITIVITY TO KEY RELATIONSHIPS (% of GDP, 2016)

Case	Description	Trade Deficit	Current Account Deficit	Net International Debt	Net International Income Payments
1	Base Projection	-2.9%	-4.4%	-42%	-0.8%
2	Lower ROR Differential	-2.9%	-5.1%	-45%	-1.5%
3	"Other" Valuations Effects Eliminated	-2.9%	-5.0%	-55%	-1.3%
4	Higher U.S. Interest Rates	-2.9%	-5.7%	-49%	-2.1%
	Note: Value in 2005:	-5.8%	-6.4%	-21%	+0.2%

FIGURE 6

ALT II CASE: TRADE AND CURRENT ACCOUNT DEFICITS

% of GDP

FIGURE 7

ALT III CASE: TRADE AND CURRENT ACCOUNT DEFICITS

% of GDP

shows that the immediate elimination of other valuation effects would result in a higher current account deficit in 2016 relative to the base case (5.0 percent of GDP vs. 4.4 percent), a higher net debt position (55 percent of GDP vs. 42 percent), and a higher deficit in net international income flows (-1.3 percent of GDP vs. -0.8 percent).

Higher U.S. interest rates. If U.S. interest rates were to rise significantly relative to foreign interest rates, the income payments on foreign-owned U.S. financial debt instruments would rise. Line 4 shows the projection results from assuming that U.S. interest rates rise by one percentage point relative to the Blue Chip projected path of the Base case. With the higher interest rates, the current account deficit increases to 5.7 percent of GDP in 2016, the net debt position rises to 49 percent of GDP, and the net international income flows fall to -2.1 percent of GDP (nearly three times higher in absolute value relative to the Base case).[13]

These projections illustrate the sensitivity of the results to key relationships. In general, although the Base case shows a relatively benign outcome based on Blue Chip projections and the likely continuation of historical relationships, the alternative projections shown in Table 4 and the sensitivity results shown in Table 5 help to illustrate the risks of a more adverse outcome— and the potential sources of such an adverse outcome— for U.S. international deficits, debt, and income flows.

Summary and Conclusions

A variety of key issues and relationships will be of fundamental importance in the determination of the future paths for the U.S. current account, international debt position, and net international income flows. This paper presents a description of the key relationships that will determine the outlook for U.S. international balances and their "sustainability." Results from a variety of projections illustrate the sensitivity of the outcomes to the key relationships. The Base case presented in the paper shows a relatively benign outcome based on Blue Chip economic and trade deficit projections and the likely continuation of key relationships near their historical levels and patterns. In the Base case results, the U.S. net international debt position
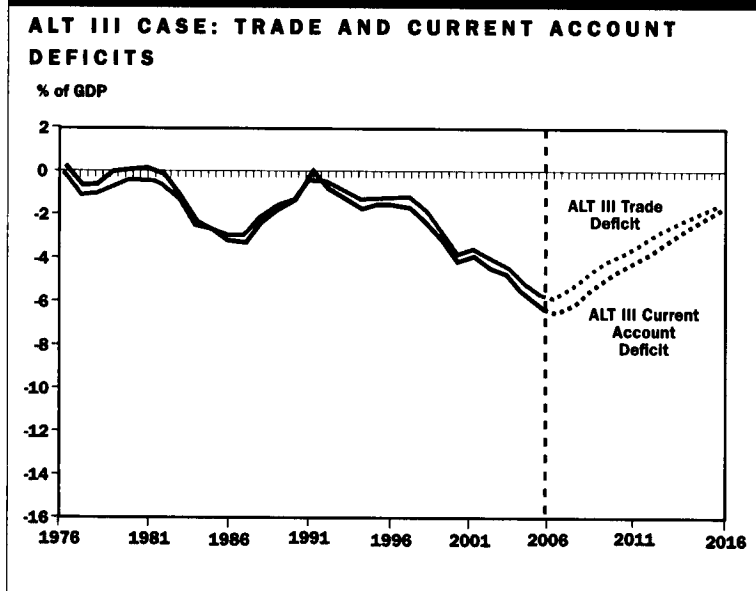
percent), the net debt position would be higher (45 percent of GDP vs. 42 percent), and the net international income flow would be substantially worse (-1.5 percent of GDP vs. -0.8 percent).

Elimination of "other" valuation effects. Although "other" valuation effects have consistently generated beneficial valuation changes that have helped to keep the U.S. debt position lower than the financial flows over time would produce—and the Base scenario assumes a gradual reduction in those beneficial effects over the projection— it may be informative to show what would happen if those beneficial effects were immediately eliminated. Line 3

[13]The interest rate change is considered in isolation in this example. In practice, a change in interest rates would be associated with a change in either effective real interest rates or inflation expectations. In turn, changes in real interest rates or inflation expectations would be associated with related changes in the exchange value of the dollar (in the absence of changes to foreign interest and inflation rates).

continues to grow, but the falling trade deficit, effects of persisting differentials in effective rates of return on direct investment, beneficial asset portfolio allocations, and ongoing favorable valuation effects—among other relationships—keep the net international income flows at less than one percent of GDP. In contrast to the benign outlook of the Base case, alternative projections illustrate the sensitivity of the outlook to variations in the behavior of key relationships, helping to reveal the risks of a more adverse outcome for U.S. international deficits, debt, and income flows. Nevertheless, the persistence of the observed beneficial relationships for the known historical periods indicates a high likelihood of persistence into future periods as well. Ultimately, much remains unknown, and future research and observation will help in promoting better understanding of the behavior of the key relationships and the likely paths for U.S. international imbalances. ■

REFERENCES

Bergsten, C. Fred and John Williamson. 2004. *Dollar Adjustment: How Far? Against What?* Institute for International Economics. November.

Blanchard, Olivier, Francesco Giavazzi, and, Filipa Sa. 2005. "The U.S. Current Account and the Dollar." *Brookings Papers on Economic Activity*. 1.

Blue Chip Economic Indicators. 2006. New York, NY: Aspen Publishers. October.

Buffett, Warren. 2005. Letter to shareholders, available at: *www.berkshirehathaway.com/letters/2004ltr.pdf*, March

Cline, William R. 2005. *The United States as a Debtor Nation.* Institute for International Economics.

Congressional Budget Office. 2005. "Why Does U.S. Investment Abroad Earn Higher Returns Than Foreign Investment in the United States?" *Economic and Budget Issue Brief*. November 30.

Edwards, Sebastian. 2005. "Is the U.S. Current Account Deficit Sustainable? And If Not How Costly Is Adjustment Likely To Be?" *Brookings Papers on Economic Activity*. 1.

Eichengreen, Barry. 2006a. "The Blind Men and the Elephant." *Issues in Economic Policy*. The Brookings Institution. January.

———. 2006b. "Global Imbalances: The New Economy, the Dark Matter, the Savvy Investor, and the Standard Analysis." *Journal of Policy Modeling*. August.

Gourinchas, Pierre-Olivier and Helene Rey. 2005a. "International Financial Adjustment." NBER Working Paper No. 11155. February.

———. 2005b. "From World Banker to World Venture Capitalist: The US External Adjustment and The Exorbitant Privilege," paper presented at NBER Conference on G7 Current Account Imbalances: Sustainability and Adjustment. July.

Hausmann, Ricardo and Frederico Sturzenegger. 2005. "U.S. and Global Imbalances: Can Dark Matter Prevent a Big Bang?" Working Paper, Kennedy School of Government. November.

———. 2007. "The Valuation of Hidden Assets in Foreign Transactions: Why 'Dark Matter' Matters." *Business Economics.* January.

Higgins, Matthew, Thomas Klitgaard, and Cedric Tille. 2005. "The Income Implications of Rising U.S. International Liabilities." *Current Issues in Economics and Finance.* Federal Reserve Bank of New York. December.

Houthakker, Hendrick S. and Stephen P. Magee. 1969. "Income and Price Elasticities in World Trade." *Review of Economics and Statistics*. 51:2, pp. 111–125.

Hung, Juann H. and Angelo Mascaro. 2004. "Return on Cross-Border Investment: Why Does U.S. Investment Abroad Do Better?" Technical Paper Series 2004-17, Congressional Budget Office. December.

Kitchen, John, 2006. "Sharecroppers or Shrewd Capitalists?" Manuscript, February.

Mann, Catherine.1999. *Is the U.S. Trade Deficit Sustainable?* Institute for International Economics.

———. 2004. "Managing Exchange Rates: Achievement of Global Re-Balancing or Evidence of Global Co-Dependency." *Business Economics*. July.

Mataloni, Raymond J. 2000. "An Examination of the Low Rates of Return of Foreign-Owned U.S. Companies." *Survey of Current Business.* Bureau of Economic Analysis, U.S. Department of Commerce. March.

Obstfeld, Maurice and Kenneth Rogoff. 2004. "The Unsustainable US Current Account Position Revisited," NBER Working Paper No. 10869, October.

———. 2005. "Global Current Account Imbalances and Exchange Rate Adjustments." *Brookings Papers on Economic Activity*, 1.

Roubini, Nouriel and Brad Setser. 2004. "The US as a Net Debtor: The Sustainability of the US External Imbalances." Manuscript, November.

Tille, Cedric. 2005. "Financial Integration and the Wealth Effect of Exchange Rate Fluctuations." Federal Reserve Bank of New York, Staff Report No. 226. October.

NABE
National Association for Business Economics