GLOBAL IMBALANCES AND ASYMMETRIC RETURNS TO U.S. FOREIGN ASSETS: FITTING THE MISSING PIECES OF THE U.S. BALANCE OF PAYMENTS PUZZLE

The issue of whether the U.S. earns a persistently greater return on its foreign direct investment (relative to returns to foreign-owned direct investment in the U.S.) has received considerable attention but little closure in the 'global imbalances' debate. Measuring the rate of return to U.S. owned F.D.I. and F.D.I. in the U.S. at the four-digit industry level from 1999-2005 we find higher returns to U.S. foreign direct investment relative to foreign investment in the U.S. Given the evidence indicating excess returns to U.S. assets abroad, we link the irresolution in the contemporary literature about the existence of these returns to the unsettled debate over the origin and persistence of global imbalances. Much of the literature on U.S. imbalances fails to acknowledge that the U.S. trade deficit is, in part, the outcome of dollar hegemony as well as the internationalization of production by U.S. multinationals. Given the growth in U.S. multinational global supply chains, we argue that the U.S. trade deficit is consistent with relatively greater returns to U.S. direct investment. In closing we argue that the sustainability of the U.S. trade deficit rests on the stability of U.S. hegemony.

Keywords: Country and Industry Studies of Trade; foreign direct investment, International Investment; Long-Term Capital Movements; Multinational Firms; International Business; Current Account Adjustment, Short-Term Capital Movements.

JEL classification: F14, F21, F23, F32.

1. INTRODUCTION

The U.S. now owes the rest of the world, on net, more than four and a half trillion dollars.[i] While it may seem paradoxical that the world's richest economy is also its most indebted, as issuer of the world's primary vehicle and reserve currency[ii] the U.S. can borrow very cheaply from the rest of the world, huge sums of money, in its own currency, without the usual outcomes associated with rising sovereign indebtedness.

Nevertheless a striking feature of the U.S. balance of payments accounts (see figure 1) is that the U.S. continues to earn more on its foreign assets than it pays to service its much larger stock of external liabilities. As Figure 1 shows, despite the increase in U.S. foreign indebtedness, U.S. net foreign income receipts have been remarkably stable contrary to the predictions of many economists (see, for instance, Higgins, Klitgaard and Tille, 2005). That U.S. net foreign income—around 1 percent of domestic gross product—buoys the U.S. current account deficit is particularly evident when we disaggregate the latter account into its three main components: goods (manufacturing), services, and income balances (see Figure 2 below). Amidst the worsening of the manufacturing exports deficit—which amounts to about 5 percent of GDP—U.S. foreign incomes and services balances have remained positive.

The consensus in the field until fairly recently is that superior returns to American investment abroad relative to foreign-owned investment in the United States, particularly in the direct investment category, are driving these net income inflows. Using the Bureau of Economic Analysis's estimates, average excess annual returns to the U.S. from direct

investment abroad were a remarkable 663-772 basis points over twenty years (Hung and Mascaro 2004, Higgins 2005). Meanwhile the return differential on the equity and bond portfolios of U.S. claims versus U.S. liabilities was statistically insignificant (Curcuru, Dvorak and Warnock, 2008).

These persistent excess returns to U.S. foreign assets imply that the inter-temporal budget constraint is more relaxed for the U.S. relative to other economies that do not enjoy positive net income receipts in their balance of payments.[iii] Obstfeld and Rogoff (2005) argue that this rate of return advantage has allowed the U.S. to maintain positive income balances even as its net foreign obligations have mushroomed (Obstfeld and Rogoff 2005, 13). While earlier studies took it for granted that this rate of return differential was real (see, for instance, Laster and Maccauley, 1994; Landefeld 1992) a number of recent studies dispute its size and existence (Bosworth, Collins and Chodorow-Reich 2007, Curcuru, Dvorak and Warnock 2007.) Appreciating these excess returns to U.S. direct investment requires explaining the macro-financial context—the web of global imbalances in a world undergirded by dollar hegemony—in which these return differentials manifest. Many interpretations fail to appreciate that the current account deficit is, in part, the unintended consequence of U.S. hegemony and off-shore outsourcing by U.S. multinationals. In this light, positive income balances aren't puzzling but consistent with rising U.S. multinational firm profitability made possible by producing overseas.

We begin by analyzing the recent debate regarding the persistent return differential between U.S. owned direct investment abroad (USDIA) and foreign direct investment in the U.S (FDIUS). To contextualize the recent discussion on the differential

rates of return to U.S. assets, in section two we assess the earlier literature that assumes this return differential is real and focuses on the low profitability of FDIUS. Returning to the current debate, in section three, we classify the recent literature on the rates of return asymmetry into two types: studies that emphasize market failure and studies emphasizing market arbitrage. Examining the key models in the recent literature, we find controversies regarding asset valuation. In particular, there is disagreement about how to assess the cross-border comparability of foreign direct investment. In section four, we test for the existence of this return differential using the Bureau of Economic Analysis's multinational financial and operating data, and find it to hold across various different measures of profitability. In section five we examine the macro-financial debates regarding the sources of global imbalances. We argue that the standard literature ignores the contribution of U.S. predominance and U.S. multinational production to these global disequilibria and that that, for a variety of reasons including the weakening of the exchange rate adjustment process, U.S. imbalances are here to stay. Section six concludes.

2. Asymmetric Returns to U.S. Foreign Assets?

The earlier literature attributed the return differentials between American-owned direct investment (henceforth USDIA) and foreign-owned investment based in the States (henceforth FDIUS) to currency and country risk factors, relative interest rate differentials, capital gains and losses, and better corporate governance (see, for instance, Landefeld 2006 and McGrattan and Prescott, 2006). In particular, this literature highlighted that FDIUS generates comparatively lower rates of return compared to

USDIA because of differences in its asset characteristics such as the relative immaturity of foreign investment in the U.S., greater riskiness overseas, and, possibly, international tax arbitrage (see, for instance, Laster and MacCauley, 1994 and Landefeld and Lawson, 1991).

With regard to taxation, the argument was that foreign firms in the U.S. disproportionately engage in transfer pricing or other modes of tax arbitrage thereby artificially lowering their U.S. profits (Landefeld, Lawson, Weinberg 1992; Gros 2006; Kozlow 2006; Bosworth et al. 2007; Desai and Foley 2012). Bosworth et al. found that "about one third of the excess return earned by U.S. corporations abroad can be explained by firms reporting 'extra' income in low-tax jurisdictions of their affiliates" (Bosworth, Collins and Chodorow-Reich 2007, 16).[iv] Given the confidentiality of tax return-data it is difficult to estimate profit-sharing practices and harder still to assess the degree to which FDIUS relative to USDIA is prone to tax evasion.

A fourth hypothesis explaining the low returns to FDIUS was that foreign investors willingly lowered profits to capture a share of the large U.S. market (Godley and Milberg, 1994; Mataloni 2001; Mann and Pluck 2005). There is some indirect evidence supporting this claim, for instance Goldberg et al., who show that the exchange rate pass-through of exchange rate fluctuations into the final prices of import goods is much less for the U.S. relative to other countries (Goldberg and Dillion, 2007; Campa and Goldberg, 2006; Goldberg and Tille, 2006). [v]

This rate of return anomaly has received renewed attention in the 'global imbalances' debate that examines the sustainability of the U.S. trade deficit. Some studies

argue that the relatively lower rate of return paid by the U.S. on its debt relative to the higher earnings on U.S. foreign assets is driving these asymmetric returns (Gourinchas and Rey 2005; Lane and Milesi-Ferretti (2006, 2005)). Others, for instance, Hausmann and Sturzenegger (2005) and McGrattan and Prescott (2007) emphasize that the stock of U.S. foreign assets is grossly undervalued resulting in artificially higher rates of return. Recent analyses may be classified into two categories: studies that assume international financial market arbitrage (Hausmann and Sturzenegger 2005, Gros 2006) and studies which attribute excess returns to U.S. foreign assets to large-scale 'market failure' (Gourinchas and Rey 2005, Lane and Milesi-Ferretti 2006).

2.1 Market-Arbitrage Models

Noting the discrepancy between positive net foreign income flows and large net liabilities in the U.S. balance of payments (BoP), Hausmann and Sturzenegger claim that official statistics grossly underestimate U.S. foreign assets abroad. In particular, BoP statistics do not capture intangible U.S. exports such as the liquidity and insurance premia imbedded in dollar-denominated financial assets bought by foreigners or the know-how or brand-recognition imbedded in U.S. foreign direct investment overseas. While abroad, these exports produced income, at least part of which should eventually show up as foreign investment income (see Buiter, 2006).

Hausmann and Sturzenegger shed light on the inadequacies in measuring intangible service exports. This issue is of growing relevance as multinationals increase their exports of intangible assets.[vi] While there is little doubt that exports of intangibles,

especially financial know-how, are growing, it is difficult to fully account for these exports.[vii] However the authors' gross attempt to measure these previously unmeasured assets by simply capitalizing U.S. net foreign income receipts by an arbitrary discount rate of 5% which estimates to $3.1 trillion worth of 'dark matter' is problematic. Among other things, because of the heterogeneity of capital it is erroneous to use uniform rates of return to estimate capital stocks (see Buiter 2006).

2.2. Portfolio Composition Effects

Unlike Hausmann and Sturzenegger, Curcuru, Dvorak and Warnock (2007), Gourinchas and Rey (2005), Lane and Ferreti (2005), and Higgins et al. (2007) argue that differences in the portfolio composition of U.S. foreign assets (relative to foreign-owned U.S. assets) drive their superior earnings. This 'composition effect' reflects the higher share of debt in the foreign-owned U.S. assets portfolio relative to the F.D.I. and equity-heavy U.S.-owned portfolio (see Tille, 2005). Emphasized here is the structural asymmetry in the American external balance sheet, in which seventy percent of U.S. foreign assets are in riskier foreign currency assets, whereas almost all American foreign liabilities are in low-yielding dollar-denominated assets (Gourinchas and Rey, 2005).

Higgins (2005) finds that more than half of the increase in U.S. liabilities from 1982 onwards has been in interest-bearing assets while the increase in U.S. owned foreign assets has been much more evenly spread out across interest-sensitive assets, equities, and F.D.I. Returns on interest-sensitive assets and liabilities moved in tandem with each other whereas, in sharp contrast, returns to U.S. foreign direct investment were

considerably higher relative to returns to foreign-owned direct investment in the U.S. While the share of F.D.I in U.S. foreign assets has been fairly stable from 1990 onwards (around 25-30%) the share of F.D.I in foreign owned U.S. assets is only 15%. However others, for instance Habib (2010), find that the portfolio composition effect is not an important determinant of the rate differential.

2.3. Market Failure Models

Gourinchas and Rey (2005) provide one of the most detailed studies investigating the rates of return asymmetry. They argue that the U.S.'s 'exorbitant privilege' or extraordinary return to its assets overseas may arise either from a 'return effect' or 'composition effect'. The former refers to a return differential between U.S. and foreign assets for each asset category. Decomposing returns for each asset class, the authors estimate that differential rates of return between U.S. assets and liabilities are most pronounced in equities. They calculate that the U.S. earned an average of 211 basis points in excess annualized returns on foreign investment from 1952-2004. The 'return effect' rather than the composition effect was the predominant factor driving these asymmetrical returns. Gourinchas and Rey estimate that the differential rates of return between U.S. assets and U.S. liabilities were most pronounced in equity.[viii] Contrary to much of the literature they find that the return differential favoring U.S. foreign direct investment was the smallest across asset categories: only 34 basis points, on average, from 1973-2004. Meanwhile the 'composition effect' has been growing and accounted for between a quarter to one-third of post Bretton Woods (1973—) excess returns. Gourinchas and Rey

argue that U.S. 'exorbitant privilege' has considerably increased since the advent of the floating exchange rate system in 1973.

Extending Gourinchas and Rey's hypothesis, Habib (2010) tests 'exorbitant privilege' for 50 countries from 1987-2007. He finds that the U.S. stands out as the most exceptional generator of excess returns across different asset classes. Excess returns to U.S. foreign investment compared to foreign-owned investment in the U.S. are, according to the author, the result of an 'extraordinary return. Habib finds that excess returns to U.S. investment are predominantly driven by capital gains. Like Gourinchas and Rey (2005), Habib finds that the composition effect does not appear to explain excess returns to U.S. or other country assets. He also finds that country risk has "an ambiguous" impact on total excess returns.

3. FOREIGN DIRECT INVESTMENT AND ASSET VALUATION

Common to both the 'market failure' and 'market arbitrage' perspectives is a critique of how foreign direct investment is valued in the official balance of payments. Several authors have commented on the huge discrepancy between (positive) net foreign income flows and (negative) net foreign asset stocks. For instance, Bosworth et al. have calculated that cumulated U.S. current account balances would imply net U.S. liabilities of $5.5 trillion at the end of 2006 compared to their actual value of $2.6 trillion (Bosworth 2007, 2). These significantly greater stock-flow inconsistencies in the U.S. balance of payments as compared with stock-flow discrepancies (between the cumulated

current account and the change in the net international investment position) of other O.E.C.D. country balance sheets imply that the way in which stocks are valued in the U.S. balance of payments accounts may be the source of this apparent rate of return differential (Gros, 2006).

Curcuru, Dvorak and Warnock (2007) demonstrate the impact of stock-flow discrepancies in the balance of payments positions data and the flows series on the rate of return differences. In the official statistics, the rate of return on foreign direct investment is calculated as the ratio of recorded income flows to the stock of foreign direct investment. While the positions or stock data are fully revised, the flows data are only partially revised. The result, argue Curcuru et al., is that returns using (unrevised) flows are always higher than the returns using the revised stock or net international investment position series (Curcuru et al., 23).

Gourinchas and Rey (2005) and Curcuru (2005) et al. find serious flaws in the BEA data and reconstruct the U.S. international investment position through exchange rate as well as capital gains adjustments that they claim are not accounted for in the official series. However the problem with these revised estimates is that they are difficult to compare not only with official statistics but also with each other given various differences in estimating stocks, flows, valuation effects, and data-sources used. Also at issue is whether the above estimates while precise aren't accurate. In an unusual public statement, the BEA dismissed what it termed "alternate views" of the U.S. balance of payments data claiming that they were "not consistent with existing or proposed new international statistical standards, they each raise a number of conceptual problems, and

some of them contain inaccurate statements about BEA's methodologies or international statistical standards" (see BEA, 2006).

This controversy highlighted the problems with measuring assets in the balance of payments data: how to account for intangible foreign assets (important in Hausmann and Sturzenegger, Gros, and McGrattan and Prescott); capital gains; exchange rate movements; and inflation on asset values and the cross-border comparability of F.D.I. How foreign direct investment—universally measured by firms at historical rather than current-cost—should be valued is particularly controversial. At odds with Curcuru et al. (2007), we argue that income data (based on reported flows) is more reliable than assets data (based on computed capital stocks). However, given tax evasion and other modes of profit-shifting by multi-national firms it is possible that income flows data itself might not be entirely reliable.

Do excess returns to U.S. foreign investment hinge on statistical problems associated with asset valuation, as suggested by Hausmann and Sturzenegger's "dark matter" thesis? This would imply that USDIA and/or FDIUS assets are systemically biased but we do not find evidence of downward bias in U.S. assets that would, ceteris paribus, reduce its profitability. At the same time, significant stock-flow discrepancies between the net foreign liabilities and the cumulated current account deficits of the U.S. relative to other O.E.C.D. countries suggest the value of using alternate measures to capture the profitability of U.S. direct investment abroad compared to that of foreign direct investment in the U.S.

4. Measuring the rate of return asymmetry

To help advance this debate, we measure the profitability of foreign direct investment using, alongside the standard measures, cash-flow measures of profitability that don't rely on the controversial F.D.I. stock data in the Balance of Payments. While such cash-flow measures of profits are uncommon (exceptions include Shaikh 1995), in their investigation of the dynamic efficiency of U.S. direct investment, Desai, Foley and Hines use similar measures. Comparing repatriated earnings on U.S. foreign direct investment overseas against net foreign investment spending by parent companies from 1982-2010, Desai et al. (2011) find much higher rates of cash-flow surplus generation for the foreign affiliates of U.S. companies compared to their U.S. parent companies.

The Bureau of Economic Analysis (BEA) publishes detailed financial and operating data for U.S. owned foreign direct investment overseas (USDIA) and foreign-owned direct investment in the U.S. (FDIUS) at the industry, aggregate, and country level. This rich source of industry data is gathered from mandatory annual surveys of multinational firms conducted by the BEA (see Appendix 1). We calculate the average and incremental rate of profit for non-bank majority-owned affiliates (USDIA and FDIUS) from 1999 – 2005 at the 4-digit (NAICS based) international survey industry (ISI) level. Given the problem of measuring value-added in the financial, real estate and management sectors—real output in this sector is imputed from incomes rather than measured through market expenditures (see Foley and Basu, 2011)—we exclude them.

Our flow-based incremental rate of profit (IROP) is the ratio of the change in overall gross nominal profits to the previous period's gross nominal capital expenditures.

Conceptually, it is similar to the marginal rate of return on investment (Shaikh 2007, 174; Damodoran 2001, 695)). In comparison, the average rate of return is the rate of total profits to the (lagged) capital stock. In order to test the robustness of our results, we run several iterations of the average rate of return (ROPs), the incremental rate (IROPs), the returns on assets and profit margins. We calculate both net and gross returns where the former measures don't include capital consumption allowances while the latter measures retain them. We also calculate the volatility of returns measured by standard deviations and coefficients of variation.

We find that through 1999-2005, FDIUS consistently underperforms USDIA across all iterations of the average rates of return, the incremental rates of return, profit margins and returns on assets for the weighted 'all industry' and 'aggregate manufacturing' averages. As table 1 shows, rates of return differentials (absolute) are about double for the net relative to the gross rates of return. (Average USDIA rates of return increase for the net returns relative to the gross returns whereas the average FDIUS returns fall because of relatively higher depreciation allowances for FDIUS.) Given that FDIUS is overwhelmingly brown-field investment, acquired through mergers and acquisitions (M&A)[ix], the writing down of assets post M&A appears to be reflected in FDIUS's relatively larger depreciation allowances. From a classical perspective, however, the appropriate measure of capital advanced is gross of how depreciation and depletion allowances are allocated (Shaikh 1999, pg. 106). Jorgenson, Griliches and Hulten, among others, argue that output measured gross of depreciation is consistent with production theory (OECD 2001, Pg, 32; Hulten 1992, S10). In fact, much of

contemporary productivity research uses output measures gross of depreciation (OECD 2001, 14).

Contrary to the risk-return correlation synonymous with the efficient market hypothesis, we find that returns to FDIUS are not only poorer but also more volatile as measured by their standard deviations and coefficient of variations[x] across all aggregate measures of the profit rates including the incremental rates, the return on assets, and the profit margins. This is also true for aggregate 'Manufacturing' across all profit rates.[xi] Across industries**,** absolute return differentials[xii] are least pronounced for profit margins followed by the returns on assets (see appendix for details regarding the calculations of the return on assets and other measures).

As expected, we find that as first differences of the profit rate, the incremental rates are much more volatile compared to the previous measures of profitability and aggregate returns to USDIA are even greater for the incremental rates compared to the gross profit measures (except for ROP1). For aggregate *manufacturing*, however, differential excess returns to USDIA are considerably *less* for the incremental rates of profit compared to the *pre-tax* gross and net capital stock returns. For instance, the rate of return differential between USDIA and FDIUS manufacturing is just 6 percentage points higher for USDIA using the IROP2 (the pre-tax incremental rate) measure and disappears altogether for IROP1 (the pre-income tax inventory adjusted incremental rate of return). While manufacturing aggregates for IROP1 suggest the tendential equilibrium of the incremental rates of returns consistent with classical analysis, *aggregate weighted industry* differentials are still substantially higher (about 14% more) for USDIA. Our results using the direct investment data are consistent with Habib's (2010) findings, using

the balance of payments assets data, that excess net returns to U.S. assets (relative to U.S. liabilities) aren't because of their relatively greater risk or 'leverage' but because of an "extraordinary "return" effect". [xiii]

5. The Macro-Financial Context: A Gestalt Approach

Despite evidence indicating otherwise, the literature disputes the existence of excess returns to U.S. assets abroad. We connect this lack of resolution to the larger debate over the origin and persistence of global imbalances. Understanding the macro-financial context—the relative importance of trade-based, financial, or investment-led drivers of the U.S. current account deficit, in particular, and the related global trade and financial imbalances, in general—in which these excess rates of return to U.S. foreign direct investment manifest themselves may, in turn, help shed light on the rate of return anomaly.

5.1. Contemporary Explanations of the U.S. Trade Deficit

In contemporary trade theory the correlation between external deficits and economic growth is explained by the Fisher separation theorem. In this view, countries that borrow from abroad should be able to invest more (as they are less constrained by domestic saving) and therefore should grow faster (Prasad 2007 et al., 4-5). The standard presumption is that given efficient markets, investment should flow where returns are greatest (presumably to the global South where capital is more scarce). Therefore,

domestic saving rates would be uncorrelated with domestic investment rates. This separation theorem implicitly underpins influential explanations of the U.S. trade deficit such as Cooper's 'financial accommodation' hypothesis and Bernanke's 'savings glut' as discussed below.

Bernanke argues that specific 'trade-related factors cannot explain either the magnitude or the sharp rise in U.S. current account imbalances" (Bernanke 2005, 2). He argues that the U.S. trade deficit is the unintended consequence of financial inflows into the U.S.: "the U.S. balance . . . for the most part . . . has been passively determined by foreign and domestic incomes, asset prices, interest rates, and exchange rates, which are themselves the product of more fundamental driving forces." (Bernanke 2005, 2). World savings ploughed into U.S. financial instruments arises, explains Bernanke, from export-driven regimes as well as the savings of rapidly aging economies. This massive influx of foreign savings into U.S. assets, particularly since the mid-nineties, explains the much larger stock of U.S. assets held by foreigners (U.S. liabilities) compared to the stock of foreign assets held by U.S residents.[xiv]

Cooper shares the view that financial inflows drive the U.S. trade imbalances: he emphasizes that the current account should be considered a deficit only in accounting terms (Cooper 2005, 5; also see McKinsey 2012). However other scholars including Eichengreen (2006), McKinnon (2010) and Obstfeld and Rogoff (2004) blame America's fiscal indiscipline for these large trade deficits—Mckinnon (2010) is one of the few to attribute the U.S's excessive foreign borrowing to its hegemonic status.[xv]

The financial accommodation hypothesis not only rests on the superiority of U.S. 'safe haven' assets but also on the greater productivity and higher profitability of U.S. domestic firms. As Bordo elaborates, the financial accommodation of the global savings glut takes place "above all in the U.S. which has seen a disproportionate growth in the demand for its assets because it offers a higher real rate of return based on the economy's long-run good performance" (Bordo 2004, 6, italics mine). The empirical evidence however contradicts Bordo's claim. While FDI inflows into the U.S. have grown at a faster rate than FDI outflows since 1995, a growing source of U.S. financial inflows are deposited in low-yielding debt securities rather than high yielding equity undermining Bernanke, Cooper and Bordo's hypotheses that foreign investors are buying U.S. equity to maximize (risk-adjusted) long-term returns (also see Eichengreen, 2006, 6).

An alternative theory of the U.S. deficit is proposed by Dooley et al. (2004) in their espousal of the re-emergence of a 'Bretton Woods' type international monetary regime over the last decade. The authors claim that the U.S. trade deficit is an unintended consequence of 'peripheral' development strategy. The contemporary Bretton Woods II version is based on a dualism where 'periphery' countries—including China—rely on pegged exchange rates to promote export-led growth while 'center' countries—i.e. the U.S. (and other advanced countries)—maintain a parallel system of flexible exchange rates and accumulate persistent current account deficits. The authors argue that in exchange for U.S. direct investment and international financial intermediation, China runs trade surpluses in order to accumulate dollar reserves. Dooley and Garber claim that China's dollar-denominated foreign exchange reserves function as "collateral" to secure U.S. foreign direct investment (Dooley and Garber, 2004).[xvi] China's massive

accumulation of dollar-denominated assets helps buoy up the USD and necessitates exchange rate intervention and the strict enforcement of capital controls in China.

No doubt other export-driven economies also rely on the U.S. as their largest export-market and as buyers of dollar-denominated financial assets, but why are these economies willing to bear the risk in this exchange by purchasing huge amounts of low-yielding U.S. debt while the U.S. takes advantage of superior rates of return on investment based in China as well as the ability to write-off its debt to China through dollar depreciation? Dooley and Garber imply that these are the burdens of 'original sin' that must be borne by the periphery. In other words, China is willing to sacrifice a higher rate of return on foreign assets or more domestic-driven aggregate demand for its long-run export-growth strategy.

Dooley and Garber maintain that the contemporary financial regime in which the periphery is willing to accumulate U.S. debt is stable. Their optimism is shared by a number of prominent economists including Bernanke, Cooper and Bordo for whom the 'underlying force of financial globalization' will make the unwinding of global imbalances a benign process (Cooper, 2005). As Bordo explains: the demand for U.S. instruments by foreigners and the decline in investor home bias along with the 'underlying long-run positive fundamentals' will make for a fairly smooth adjustment process (Bordo 2004, 6). We however argue in section five that these imbalances are unlikely to adjust for several reasons.

Yet another problem with the 'saving glut' and 'financial accommodation' theses is the way in which they elide how the U.S. has inordinately benefited from overseas

borrowing. Gourinchas and Rey (2005) and Lane and Ferreti (2005) are among the few economists that highlight the "asymmetric interdependence between 'creditor' (advanced) and 'debtor' (developing) countries" (Lane and Ferretti 2005, 1). The fact that U.S. foreign debt is overwhelming denominated in dollars means that exchange rate exposure has shifted to the rest of the world (Poole, 2006, 6). This asymmetric burden of adjustment is 'instrumental in the stabilization' of the U.S.'s external accounts (Gourinchas and Rey 2005, 13).[xvii] The power of its currency has allowed the U.S. to run persistent trade deficits through more borrowing. Dollar hegemony has also shaped the perverse 'uphill' direction of global capital flows from poorer to richer countries. On the whole, dollar hegemony makes U.S. domestic and foreign budgets less constrained relative to all other countries that do not benefit from their currency being the world's money.

5.2. A Complex Web of Imbalances: What do multinationals have to do with it?

Another issue that requires further attention in the global imbalances debate is: what is the meaning of the U.S. trade deficit when almost half of all U.S. imports are by U.S. multinationals themselves (see Landefield and Kozlow (2003)). Dorman (2007), Blecker (2009), Milberg and Schmitz (2011) and Palley (2011) argue that that finance-led explanations fail to appreciate the production and trade-led factors that have contributed to these global imbalances. An increasingly competitive environment has meant for tremendous growth in intra-firm and intermediate inputs trade. In 2006, more than one-third of U.S. imports and more than one-fifth of U.S. exports were intra-company (Porter

2012) i.e. parent companies sourcing inputs from their foreign subsidiaries (these numbers doesn't capture arm's length imports by U.S. multinationals with foreign contractors in other countries).

Trade statistics further muddle the issue. While the exports of intangible goods or services to U.S. multinational subsidiaries abroad may not show up in trade flows data, global supply chains exaggerate trade volumes. Whenever intermediate or final products cross borders they are recorded as an import and export and value-added may be counted multiple times over. In other words, not only do trade statistics not capture intellectual property correctly as Hausmann and Sturzenegger emphasize, but—measured as they are on gross terms (OECD, 2011)—they inadequately measure each country-based contribution to value-added along incredibly complex global supply chains.

For instance, every time an iPhone is shipped to America, U.S. trade data registers an increase in the trade deficit by the final good's price at the factory gate in the 'last reported country of origin (OECD, 2011), say China, say $195, minus the U.S. inputs shipped to China to produce the iPhone (worth, for instance, $25). In other words, the U.S. bilateral trade deficit with China increases by $170 per phone while the Chinese bilateral trade surplus with the U.S. increases by $195. Yet Apple, a U.S. multinational, makes most of the profits—profit margins for its Chinese suppliers are typically quite thin—on the sale of this product (see, for instance, Dedrick et al. 2011). Meanwhile, other countries such as Korea that export most of the sub-components of the Iphone to China for assembly do not configure at all in this bilateral accounting imbalance (see Xing, 2011). If accounted for properly, the Korean surplus – U.S. deficit would increase more than the U.S. China imbalance (OECD 2011, 39).

While conventional accounting understands the iPhone shipped from China to the U.S. as an import, an ownership-based framework would count these as U.S. exports given that Apple is a U.S. company. Estimating Chinese-U.S. bilateral trade using this alternative framework, Xing finds that the Chinese trade deficit in iPhones is reduced to less than 4% of its original size (Xing 2011). Another study by Xu et al. which focuses on foreign direct investment reveals that the overall Chinese trade surplus with the U.S. is reduced to less than one third of the conventional measure in 2003 using ownership-based accounting (Xu et al., 2010). Given that the U.S. and China are two of the largest contributors to global imbalances (see Aizenmann 2009) these revisions are significant.

Other factors like tax avoidance strategies such as domiciling businesses offshore impact the U.S. trade deficit too. A recent McKinsey report finds that that the U.S. deficit in insurance services is mainly driven by off-shoring re-insurance activities to tax havens (McKinsey 2012). The same report also notes that U.S. foreign income surpluses from royalties overseas are compatible with the U.S. trade deficit in computer and information services as many U.S. multinationals "apportion sizable export revenue to Ireland [and other tax havens] because of the tax breaks available there." (McKinsey 2012, 30).

In short, off-shoring as well as tax-shifting artificially inflate the U.S. deficit. To view the current account balance simply as the 'passive outcome' of movements in the financial account is misleading because of its disengagement from the disaggregated firm-level decisions that influence the trade balance (see Godley 19955, 28). In fact, U.S. trade deficits might very well be consistent with higher profitability for U.S. multi-nationals (see Milberg 2006 and Milberg and Schmitz 2011). It is worth noting that

Godley-type structuralist trade models where a country's trade deficit reflects its loss of competitiveness also fail to account for the contribution of off-shoring and out-sourcing. Declining U.S. competitiveness would imply declining growth in exports yet the growth of U.S. exports has been pretty similar to the growth in U.S. imports, on average 10% over 1973-2011 (author's calculations, BEA 2013[xviii]).

While in competitive advantage and 'developmental strategy' models as well as certain finance-driven models, there is a long-term proclivity for U.S. trade deficits, other models including Bernanke's and Cooper's—where a complicated convergence of factors such as differences in economic growth rates, interest rate differentials, exchange rate regimes, differing consumption preferences, changing demographic preferences, and the financial safe haven provided by the U.S.—are more ambiguous in their conclusions. Given that U.S. imbalances are over-determined coupled with the internationalization of firm supply chains, we argue—unlike Gros, Krugman, Mann and Feldstein among others who have called the U.S. balance of payments deficits unsustainable—that 'global imbalances' are here to stay. However, significant changes in the way in which cross-border flows are accounted for may reduce the magnitude of trade imbalances.

5.3. Global Imbalances and the weakening of exchange rate adjustment

Traditionally, one of the adjustment mechanisms of reducing imbalances is the real exchange rate. Even though "[m]odern dynamic theory makes no such claim for a strong connection between the external imbalance and the real exchange rate" (Backus, 8)—the current literature ascribes the U.S. trade deficit to differences between the U.S.

and its trading partners such as demographic factors, economic growth rate differentials, and, as mentioned earlier, the financial safe haven argument—the idea that the exchange rate will adjust continues to dominate discussions on the global imbalances.

In standard trade theory international trade imbalances are self-correcting through the real exchange rate (see, for instance, Shaikh 1999; also see Shaikh 2007). Protracted external imbalances are ruled out as a country's terms of trade or relative international prices adjust so as to balance the trade account. In contrast to the standard mechanism (that hinges on the quantity theory of money), in competitive advantage models there is no automatic adjustment mechanism to clear the deficit (Shaikh 2007a). Hence persistent trade imbalances—based on absolute rather than comparative cost differences in a country's export sectors—are possible (Shaikh 2007, Shaikh 1996, Milberg 1995).

Looking at the short-term evidence, Roubini (2005) finds that periods of dollar appreciation are associated with worsening trade balances (1980-85, 1995-2002) and periods of dollar depreciation (1986-1990) are associated with improving trade balances. Observing the long-term trade-weighted dollar index (figure 3), however, the coexistence of persistent trade deficits with a moderate (30%) deterioration in the trade-weighted dollar exchange rate over thirty years indicates the relatively minor role played by the devaluation as an adjustment mechanism. In part, this is because world-wide dollar invoicing and pricing to the U.S. market means that U.S. import prices are relatively insensitive to changes in exchange rates compared to all OECD countries (see Goldberg and Dillon, 2007). Devaluation as a means of addressing the imbalances is further constrained because of the institutional macro-environment in which several export giants including China informally peg their currencies to the dollar. Hence dollar depreciation is

a limited mechanism to improve the U.S. trade deficit. This intuition parallels the findings by Wang and Won (2008) that the Chinese trade imbalance is stable and isn't likely to diminish with the devaluation of the renminbi. Given the multi-lateral aspect of these global imbalances, conflicting domestic policies of different countries, and the absence of global institutions to manage and coordinate policy, upward exchange rate revaluation for trade surplus countries and downward for deficit countries seems unlikely.

6. Conclusion

The puzzle of why the U.S. earns a persistently greater return on its foreign direct investment (relative to returns to foreign-owned direct investment in the U.S.) has received considerable attention in the 'global imbalances' debate. While the official Balance of Payments data finds that foreign companies operating in the United States are 'remarkably unprofitable' (Krugman, 2006), a number of economists dispute the validity of the official data. Reviewing key models in both sides of this debate we find disagreements, in particular, regarding asset valuation in particular. In our empirical investigation based on multi-national data from 1999-2005, we find asymmetrically higher returns to U.S. foreign direct investment. Traditional mainstream analyses rigidly focus on national savings and investment imbalances as the sources of these global disequilibria. We advocate taking a broader perspective of U.S. trade imbalances by understanding their origins in a dollar-based international monetary system, the heavy reliance of export-driven economies on the U.S., and the internationalization of U.S. multinational supply chains. Given the tremendous growth in globalized production, we advocate that official statistics place more importance on developing disaggregated

ownership-based accounts that more fully accounts for the complex global web of multinational firm activity compared to contemporary borders-based trade data. If the U.S. trade deficit is consistent with asymmetrically higher returns to U.S. direct investment is it sustainable from a balance of payments perspective? We maintain that the U.S. trade deficit is not a sign of 'weakness' but instead of the U.S.'s centrality to global production, investment, and trade. Short-term measures to re-orient global growth on a more "balanced" growth path will have the unintended consequence of reducing global growth. In the long run however, the U.S's exorbitant privilege is a burden rather a privilege without which the country is better off. The U.S.'s role as absorber of world savings and exports not only has a negative impact on U.S. manufacturing (see McKinnon, 2013) but also makes the country vulnerable to Dutch diseases in its financial sector. It is time that alternative currency arrangements measures that share Keynes's vision of the *bancor* are taken for more than non-starters in global policy circles.

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Figure 1: U.S. Balance of Payments

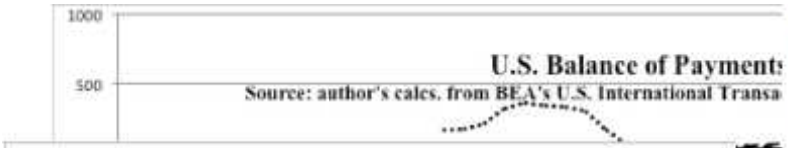

Figure 2: Current Account Balances

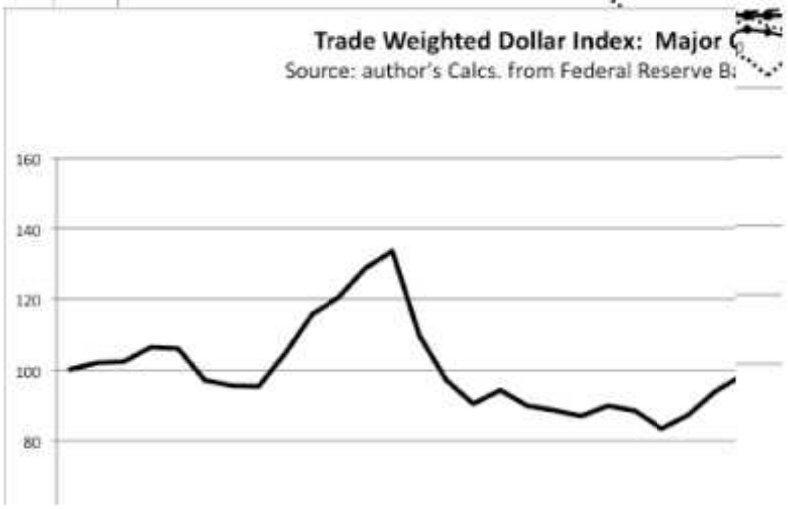

Figure 3: Trade Weighted Exchange Index: Major Currencies

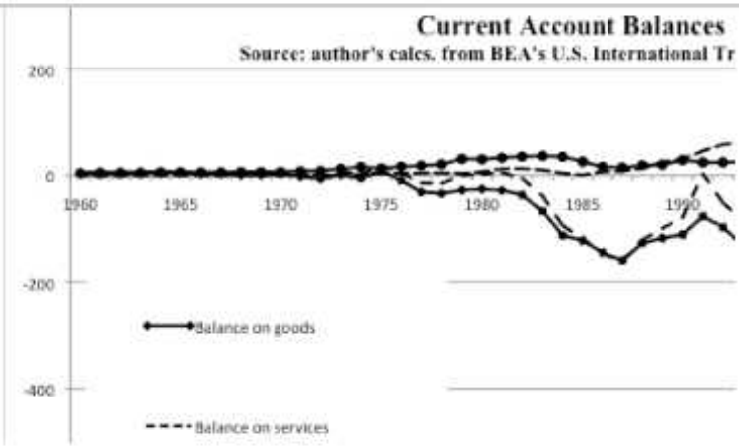

TABLE 1: PROFIT RATES

	Weighted Average	Excess return to USDIA	Standard Deviation	Coefficient Of Variation
ROP1				
All industries (USDIA)	22%	10%	3%	13%
All industries (FDIUS)	12%		2%	17%
Manufacturing (USDIA)	21%	10%	1%	5%
Manufacturing (FDIUS)	11%		3%	27%
ROP2				
All industries (USDIA)	17%	8%	2%	14%
All industries (FDIUS)	9%		2%	21%
Manu. (USDIA)	18%	10%	1%	14%
Manu. (FDIUS)	9%		2%	21%
ROP3				
All industries (USDIA)	26%	17%	6%	23%
All industries (FDIUS)	9%		4%	49%
Manu. (USDIA)	25%	17%	3%	11%
Manu. (FDIUS)	8%		4%	56%
ROP4				

All industries (USDIA)	19%	14%	5%	28%
All industries (FDIUS)	5%		3%	60%
Manu. (USDIA)	20%	15%	3%	17%
Manu. (FDIUS)	5%		3%	64%

TABLE 2: OTHER MEASURES OF PROFITABILITY

	Weighted Average	**Excess return to USDIA**	**Standard Deviation**	**Coefficient Of Variation**
Return on Assets				
All industries (USDIA)	5%	4%	1%	26%
All industries (FDIUS)	1%		2%	200%
Return on Assets				
Manu. (USDIA)	6%	5%	1%	13%
Manu. (FDIUS)	1%		2%	200%
Profit margins				
All industries (USDIA)	8%	3%	1%	8%
All industries (FDIUS)	5%		1%	20%
Profit margins				
Manu. (USDIA)	8%	2%	0%	4%

Manu. (FDIUS)	6%		1%	17%

TABLE 3: THE INCREMENTAL RATES OF RETURN

	Weighted Average	Excess returns to USDIA	Standard Deviation	Coefficient Of Variation
IROP1				
All industries (USDIA)	26%	14%	30%	115%
All industries (FDIUS)	12%		21%	175%
IROP1				
Manu. (USDIA)	16%	0%	24%	150%
Manu. (FDIUS)	16%		35%	219%
IROP2				
All industries (USDIA)	21%	12%	23%	108%
All industries (FDIUS)	9%		20%	227%
IROP2				
Manu. (USDIA)	17%	6%	21%	122%
Manu. (FDIUS)	11%		31%	287%

Source: author's calculations using BEA data, see appendix 1, 2 and 3 for sources and definitions.

Appendix 1: Data Sources

A1. Overview and Data Sources

The data on U.S. multinationals come from surveys conducted annually by the Bureau of Economic Analysis (BEA). These are mandatory and confidential surveys as mandated by the International Investment and Trade in Services Survey Act (Mataloni, 1995. 12). Survey respondents were asked to follow Financial Accounting Standards Board Statement, No. 52 (FASB 52) i.e. a yearly average exchange rate for income statement items and to use a year-end exchange rate for balance sheet items such as capital stock detailed in the methodology section of the 1999 benchmark survey. (U.S. Bureau of Economic Analysis, 2004). For both the annual and the benchmark surveys, the multinational financial and operating industry accounts data are collected at the enterprise, or company, level and are classified according to the primary industry of the consolidated business enterprise (Mataloni 1995, pg. 51).

The survey of U.S. Direct Investment Abroad (USDIA) details the operations of U.S.-headquartered multinationals (parents), while the survey of Foreign Direct Investment in the United States (FDIUS) is concerned with the operations of U.S.-based affiliates of foreign-owned multinationals (affiliates) [xix]. Our 4 digit International Survey Industry (ISI) data begins when the BEA supplants its ISI classification system from the older 1987 Standard Industrial Classification (SIC) codes to the NAICS (North American

Industrial Classification system) codes beginning with data for 1997 for foreign direct investment in the United States and for 1999 for U.S. direct investment abroad. (U.S. Government Accountability Office, page 41). As Corrado et al. note the industrial classification of both surveys varies over time, complicating efforts to combine them into a consistent time-series (Corrado, Lengermann and Slifman, 2005). This is why trend analysis at the 4-digit industry level is not possible for earlier years (prior to 1997 for FDIUS and 1999 for USDIA).

In addition, the level of industry detail varies over time, across variables, and across surveys. Derived as it is from company balance sheets, the financial and operating data (both FDIUS and USDIA) is in company book value or current dollars. Constant dollars are only available for manufacturing (Mataloni, 1997). Using current rather than constant dollars adds volatility to output but bear in mind that the unadjusted dollars are largely for OECD countries (73% of the value added of foreign affiliates were located in high income countries in 2009). The BEA regularly uses current dollar estimates in its annual updates on the operations of U.S. multinational corporations where it measures output and growth in output of U.S. multinationals (Barefoot and Mataloni, 2011). In our empirics we normalize absolute numbers, such as profits, with capital stock for that year, both in current dollars. This ratio cancels the price vectors and becomes a price-adjusted variable: thus all our profit rates are price-adjusted real rates of return.

Source for USDIA: Bureau of Economic Analysis, International Economic Accounts, Operations of Multinational Companies, U.S. Foreign Direct Investment, Product Guide for U.S. Foreign Direct Investment abroad, 1b. “Operations of U.S. Affiliates of Foreign Companies, Comprehensive Financial and Operating Data”, Majority Owned Non-Bank Affiliates, Years 1999-2005; Tables 3A2 B3-4; 3E2; 3G2; 3K2; 3J4.
(http://www.bea.gov/scb/account_articles/international/iidguide.htm#USDIA1).

Source for FDIUS:

Bureau of Economic Analysis, International Economic Accounts, Operations of Multinational Companies, Product Guide for Foreign Direct Investment in the U.S, various years, IIb. Operations of U.S. Affiliates of Foreign Companies, Comprehensive Financial and Operating Data, Majority Owned Affiliates (1997-2005). Tables J2 (1997-2001); 3A2; 3B1; 3E10; 3I1; 3F1; 3I6; 3I6 (2002-2005). (http://www.bea.gov/scb/account_articles/international/iidguide.htm#FDIUS).

Appendix 2: The calculation of profit rates

In order to test the robustness of our results, we run two iterations of the average rate of return (ROPs) and four measures of the incremental rates of return (IROPs). We also calculate the volatility of returns measured by standard deviations and coefficients of variation.

Definitions of Various Profit Rates

In order to test the robustness of our results, we ran four iterations of the average rate of return (ROP) and the incremental rates of return (IROP), return on assets and the profit margin. We calculated both net and gross profit rates where the former doesn't include capital consumption allowances. In other words, the net capital stock is used in the denominator with the net operating surplus as the numerator (defined as gross operating surplus (value added - employee compensation – indirect business taxes) minus capital consumption allowances).

Given that:

GVA_t = Gross value added of industry i at year t.[xxv]

$NIBT_t$ = Indirect business taxes of industry i at year t.[xxi]

EC_t = Compensation of employees of industry i at year t (variable capital)[xxii].

K_{t-1} = Stock of plant and equipment of industry i at year t-1 (gross and net).

I_{t-1} = Investment in fixed assets (plant, property, and equipment) of industry i at year t-1[xxiii]

CT_t = Corporate income taxes of industry i at year t.

$\Delta I_{t-(t-1)}$ = Change in Inventories

CCA_t = Capital Consumption Allowances of industry i at year t.

ROP1: Profits defined as (Value Added – Employee Compensation - Indirect Business Taxes)/ (Lagged Gross Capital + Inventories)

$= ((GVA_t - EC_t - NIBT_t /)/(K_{t-1} + I_{t-1})$

ROP2: Profits defined as (Value Added – Employee Compensation - Indirect Business Taxes - Foreign Income Taxes)/(Lagged Gross Capital + Inventories)
$= ((GVA_t - EC_t - NIBT_t - CT_{t-1})/(K_{t-1} + I_{t-1})$

ROP3: Profits defined as (Value Added – Employee Compensation - Indirect Business Taxes - Capital Consumption Allowances)/(Lagged Net Capital + Inventories)

$= ((GVA_t - EC_t - NIBT_t - CCA_t /)/(NK_{t-1} + I_{t-1})$

ROP4: ROP defined as (Value Added – Employee Compensation - Indirect Business Taxes – Foreign Income Tax - Capital Consumption Allowances)/(Lagged Net Capital + Inventories)

$= ((GVA_t - EC_t - NIBT_t - CT_{t-1} - CCA_t)/(\text{Net } K_{t-1} + I_{t-1})$

IROP1: Change in Profits defined as (Value Added – Employee Compensation - Indirect Business Taxes)/(Lagged Capital Expenditures + Change in Inventories)

$= ((GVA_t - EC_t - NIBT_t)-(GVA_{t-1} - EC_{t-1} - NIBT_{t-1}))/ (I_{t-1} + \Delta I_{t-(t-1)})$

IROP2: Change in Profits defined as in (Value Added – Employee Compensation - Indirect Business Taxes -Foreign Income Taxes)/(Lagged Capital Expenditures + Change in Inventories)

$= ((GVA_t - EC_t - NIBT_t - CT_t)-(GVA_{t-1} - EC_{t-1} - NIBT_{t-1} - CT_{t-1}))/ (I_{t-1} + \Delta I_{t-(t-1)})$

Profit margins defined as (profits after income tax) divided by sales

Return on Assets defined as Net income divided by Total Assets

Appendix 3: Guide To Industry Classification for International Surveys

Guide to Industries	**ISI digit**	
All		All (private non-bank) industries
Manufacturing	2	Manufacturing
Manufacturing ND	3	Food
Manufacturing ND	3	Beverages and tobacco products
Manufacturing ND	3	Textiles, apparel, and leather products
Manufacturing ND	3	Paper
Manufacturing ND	3	Printing and related support activities
Manufacturing ND	3	Petroleum and coal products
Manufacturing ND	3	Chemicals
Manufacturing ND	4	Basic chemicals
Manufacturing ND	4	Resins and synthetic rubber, fibers, and filaments
Manufacturing ND	4	Pharmaceuticals and medicines

Manufacturing ND	4	Soap, cleaning compounds, and toilet preparations
Manufacturing ND	4	Other chemicals
Manufacturing D	3	Plastics and rubber products
Manufacturing D	3	Nonmetallic mineral products
Manufacturing D	3	Primary and fabricated metals
Manufacturing D	3	Primary metals
Manufacturing D	3	Fabricated metal products
Manufacturing D	3	Machinery
Manufacturing D	4	Agriculture, construction, and mining machinery
Manufacturing D	4	Industrial machinery
Manufacturing D	3	Other machinery
Manufacturing D	3	Computers and electronic products
Manufacturing D	4	Computers and peripheral equipment
Manufacturing D	4	Communications equipment
Manufacturing D	4	Semiconductors and other electronic components
Manufacturing D	4	Navigational, measuring, and other instruments
Manufacturing D	4	Other computers
Manufacturing D	3	Electrical equipment, appliances, and components
Manufacturing D	3	Transportation equipment
Manufacturing D	4	Motor vehicles, bodies and trailers, and parts
Manufacturing D	4	Other transportation equipment
Manufacturing D	3	Other manufacturing
WS	2	Wholesale trade
Retail	2	Retail trade

Info	2	Information and Cultural Industries
Info	3	Publishing industries
Info	3	Motion picture and sound recording industries
Info	3	Broadcasting (except internet) and telecommunications
Info	3	Internet, data processing, and other information services
Finance	2	(Non-bank) Finance and insurance
Finance	3	(Non-bank) Finance
Finance	3	Insurance carriers and related activities
Real&Rental	2	Real estate and rental and leasing
Real&Rental	3	Real estate
Real&Rental	3	Rental and leasing (except real estate)
Profess.	2	Professional, scientific, and technical services
Profess.	4	Architectural, engineering, and related services
Profess.	4	Computer systems design and related services
Profess.	4	Management, scientific, and technical consulting
Profess.	4	Other professional, scientific and technical services
Other industries		Other industries
Agriculture	2	Agriculture, forestry, fishing, and hunting
Mining	2	Mining
Utilities	2	Utilities
Construction	2	Construction
Transportation	2	Transportation and warehousing
Management	2	Management of nonbank companies and enterprises
Admn&Waste	2	Administration, support, and waste

		management
Health&Soc.	2	Health care and social assistance
Accom.food	2	Accommodation and food services
Other Services	2	Miscellaneous services (except Public Administration

Source: North American Industry Classification System (NAICS) 2007, Statistics Canada, http://www.statcan.gc.ca/subjects-sujets/standard-norme/naics-scian/2007/list-liste-eng.htm

U.S. Bureau of Economic Analysis. 2007.

Appendix 4: Sectoral Exclusions

Industries	ISI digit	
Manufacturing ND	4	Chemicals: Soap, cleaning compounds, and toilet preparations
Manufacturing ND	4	Chemicals: Other chemicals
Info	2	Information and Cultural Industries
Info	3	Publishing industries
Info	3	Motion picture and sound recording industries
Info	3	Broadcasting (except internet) and telecommunications
Info	3	Internet, data processing, and other information services
Finance	2	(Non-bank) Finance and Insurance

Finance	3	(Non-bank) Finance
Finance	3	Insurance carriers and related activities
Real&Rental	2	Real estate and rental and leasing
Real&Rental	3	Real estate
Real&Rental	3	Rental and leasing (except real estate)
Profess.	2	Professional, scientific, and technical services
Profess.	4	Architectural, engineering, and related services
Profess.	4	Computer systems design and related services
Profess.	4	Management, scientific, and technical consulting
Profess.	4	Other professional, scientific and technical services
Management	2	Management of nonbank companies and enterprises
Admn&Waste	2	Administration, support, and waste management
Health&Soc.	2	Health care and social assistance

Accom.food	2	Accommodation and food services
Other Services	2	Miscellaneous services (except Public Administration

i Bureau of Economic Analysis, September 24, News Release, International Investment Position 2013).

ii
about 87% of all global currency transactions are conducted in dollars (Bank for International Settlements, 2013).

iii **Many developing country governments live under 'original sin': forced to borrow in foreign currencies because they are unable to borrow on a large-scale in their own currencies.**

iv Desai, Foley and Hines provide striking evidence that reported rates of return to U.S. investment are higher in low-tax foreign locations than in high-tax foreign locations (Desai, Foley and Hines, 2003).

v Mann claims that "exporters don't want to risk losing market share in the large and competitive American market—even if that means decreasing their own profit margins to keep prices stable in the United States" (Mann and Pluck, 2004).

vi Accounting for intangible assets also plays a key role in Bridgman (2007) and McGrattan and Prescott's (2007) estimates of the return gap between USDIA and FDIUS. McGrattan and Prescott find that incorporating mismeasured incomes and capital stocks into the official data explains more than half of the difference in the return gap. Like Hausmann and Sturzenegger, McGrattan and Prescott conclude that official current-account deficits that appear unsustainable may actually be quite stable.

vii Take, for instance, dollar seignorage: notwithstanding the difficulty of fully accounting for its quantitative contribution to 'dark matter', it is probably very small compared to the $3.1 trillion in stock worth of 'dark matter' as calculated by Hausmann and Sturzenegger. According to some estimates, at most one sixth of the three trillion worth of 'dark matter' may be accounted for by dollar seignorage.

viii
This finding is echoed by Lane and Milesi-Ferretti (2006).

ix personal correspondence, William Zeile, Bureau of Economic Analysis, 2010;

x
Note that the coefficient of variation—the more appropriate way of comparing volatility in series with different means—is always higher for FDIUS.

xi
for which both standard deviation and coefficient of variation measures are relatively higher for FDIUS.

xii but not the relative return differentials

xiii

The question arises, what generates these excess returns to U.S. foreign assets? In other work, we explore that question but not here.

xiv In 1985 the U.S. net international investment position was zero.

xv

Note how very different the above perspectives are compared to competitive advantage models that emphasize that the competitiveness of a nation's export sector drives its long-term trade balance (Shaikh 2000; Shaikh 1999; Godley 1995;

Chang 2011). From this perspective, the fact that a country running a persistent trade deficit should continue to make a net return on its external financial portfolio is puzzling.

[xvi] For instance, if the Chinese state seizes U.S. private capital in China, the U.S. would simply refuse to pay interest or redeem Chinese owned U.S. treasury bills.

[xvii]

Perpetuating this asymmetry are valuation effects: in the case of the U.S., for example, dollar depreciation will not only increase net exports but also increase the dollar value of financial holdings abroad, positively affecting net U.S. foreign asset stocks. While "the US has always faced a weakened external constraint", valuation effects—including changes in exchange rates and asset prices (capital gains)—have not only become much more pronounced but also in favour of the US after the advent of floating exchange regime in 1973 (Gourinchas and Rey, 5).

[xviii] Bureau of Economic Analysis, U.S. International Transactions Accounts Data, Release Date: December 18, 2012, Table 1. U.S. International Transactions Data.

[xix] See Mataloni (2002) and Zeile (1999) for detailed descriptions of the methodologies for the two surveys.

[xx] Unlike sales which includes value added within the affiliate and the value of intermediate inputs purchased by the affiliate, value added data is free from double-counting (see Desai and Foley, p. 8)

[xxi]
"Indirect business taxes" refers to taxes other than income and payroll taxes plus production royalty payments to governments minus subsidies received from governments.

[xxii] see Cockshott and Cottrell (2003)

[xxiii]

Our investment proxies are 'capital expenditures' (USDIA series) and 'property, plant and equipment expenditures' (FDIUS series).