Losing Our Marbles in the New Century? The Great Rebalancing in Historical Perspective

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The unending feedback of the dollars and pounds received by the European countries to the overseas countries from which they had come reduced the international monetary system to a mere child's game in which one party had agreed to return the loser's stake after each game of marbles.

—Jacques Rueff, 1961[1]

A remarkable amount of attention is now being paid to global imbalances, especially the growing U.S. current account deficit financed by increasing surpluses in the rest of the world, most notably in the Asian "dollar bloc" countries and among the oil exporting nations. The talk is no longer confined to obscure academic and policy debates. With insufficient space in his weekly columns to devote to the issue, in early February 2006 the *Financial Times*' Martin Wolf launched the "Economists' Forum" web site, stating that "the quantity of analysis devoted to the so-called 'global imbalances' is extraordinary. As is usual with economists, we have reached no conclusion. Yet what is happening is extraordinary enough to merit an attempt at least to clarify the basis of the disagreements." David Warsh considers the almost obsessive focus on the issue justified, since global imbalances constitute "the most exciting economic story of our times."[2]

Exciting and extraordinary it may be, but a relentless focus on trends from the recent past, on the current announcements of each quarter's balance of payments data, or on naïve extrapolations into the future has left one important perspective rather neglected: how can a more historically based long-term perspective inform our understanding of the contemporary issue of global imbalances at the start of the twenty-first century?

To address this question, we seek a meaningful comparison between past and present experience by focusing on the two modern eras of globalization: "then" being the period dating from 1870 to 1913, and "now" being the period since the early 1970s up to the present. We look at the special global macroeconomic position of each era's hegemons: Britain then, and the United States now. In adducing historical data to match what we know from the contemporary record, we proceed in the tradition of new comparative economic history to see what lessons the past might have for the present.

Although such an exercise in quantitative economic history could range far and wide, in this essay space limitations permit us only to look at what we consider two of the most controversial and pressing questions in the current debate.

First, are the current imbalances being sustained, at least in part, by return differentials? And if so, is this situation reassuring? If the United States can always earn some kind of privilege of this sort, then the degree of required adjustment will be reduced. Put another way, for any given trajectory of trade imbalances, we know that the current account and debt implications will look much more favorable or sustainable if such privileges persist. If not, any resulting adjustment difficulties will be that much more pronounced.

Second, how will any necessary adjustment take place? Will it be a hard or a soft landing? It is possible, again, that adjustments will happen smoothly. Depending on the extent to which expenditure shifts rather than switches, countries might avoid dramatic real exchange rate movements. If up and down shifts are coordinated across countries, or if switching is unhindered by trade policies or other frictions, then global demand might hold up, and a serious global recession might be averted. The fear is that adjustments might be much more abrupt, demanding large changes in real exchange rates. This situation could lead to politically awkward realignments of trade, and cause recession for one or more players in the game. If such a hard landing is likely, then policymakers face the challenge of devising suitable countermeasures to mitigate its effects.

Confronting these two questions, what insights can we take from the past?

To summarize our findings, on the persistence of privilege we find:

- Among G7 countries today, the United States is not unique in being able to enjoy a privilege in the form of higher yields earned on external assets relative to yields paid on external liabilities. This has been worth about 0.5 percent of GDP to the United States in the years 1981 to 2003. Similar privileges are detectable for Japan and the United Kingdom. France and Germany appear to have no privilege. Canada and Italy have negative privilege, or penalty.
- In the years 1870–1913, the previous financial hegemon, Britain, enjoyed a similar yield privilege, also amounting to about 0.5 percent of GDP.
- Measured as a differential in rates of yield, the U.S. privilege has been steadily declining since the 1960s, when it stood at around 3 percent per annum on all capital. It is now close to 1 percent per annum. Indirect measures may differ, and even the direct measures are subject to error. But if this trend continues, the United States will lose its privilege.
- Direct and indirect evidence on rates of yield for Britain in the past also suggests small and declining rates of yield privilege from the 1870s to 1910s, a similar pattern.
- For both the United States now and Britain then, declining rate of yield privilege meant that for a given leverage and a given composition of assets and liabilities, the income due to privilege (as a fraction of GDP) would have to shrink. In part this was offset either by expanding leverage (in the U.S. case today) or by shifting composition to riskier assets with higher returns (in both cases). These shifts may not be able to proceed without limit.
- It is often suggested that the United States might lose privilege if the net debt position grows too large. We find that rate of yield privilege has been correlated with the deterioration of the net external asset position in the postwar era.
- In the historical British case, leverage and indebtedness were not an issue. British net external assets roughly equaled gross external assets, and Britain became a very large net creditor. But a net credit position did not preclude a loss of privilege, suggesting that even if the United States could reverse its net debt position, this would not protect its privilege automatically.

• Rather, British experience suggests that over time, financial hegemons operating in a globalizing world face other pressures that squeeze privilege. Emerging markets mature and offer less outlandish risk-reward combinations, so the benefit of being a "loan shark" diminishes; the world becomes less risky as a whole; at the same time other rival financial centers emerge that can compete for lucrative business with the financial pioneer.

• Most of these perspectives bode ill for the persistence of privilege. But if we add capital gains to yields we can estimate a total return privilege for the United States. According to indirect estimates, total return privilege has risen since the 1960s. It also appears to have been steady in the 1980s and 1990s. Growing valuation effects have offset falling yield differentials, keeping up a total return privilege. It is unclear what mechanisms are driving these opposing trends.

• Looking at indirect evidence on total returns on the U.K. domestic and foreign portfolio 1870–1913, we also find a total return differential, but one that is very volatile over successive decades, and with very little systematic privilege overall.

• The large capital gains earned by the United States in the last 10 to 15 years are due to neither sustained price effects nor sustained exchange rate effects, both of which are close to zero on average; the effect is largely due to "other" capital gains. These remain a mystery, and until we understand them better, simple extrapolation of these trends may be ill advised.

On adjustment we examine the behavior of current accounts and the processes associated with current account reversals for a broad sample of countries between 1880 and 1913.

We attempt to verify whether there are any differences between the capital exporters like Britain, France, Germany, and the Netherlands, other core countries that import capital, areas that had recently been settled, also known as British offshoots (i.e., Australia, Canada, New Zealand, and the United States), and less-developed peripheral nations. Throughout we compare our findings to those from Edwards (2004) from the thirty years between 1970 and 2001.

In particular we look at summary statistics regarding the size of current accounts and incidence of reversals; the ability to sustain current account deficits or surpluses; connections between current account reversals, exchange rate movements, and financial crises; and patterns of movement of macroeconomic aggregates in the wake of large current account reversals, including the growth effects of reversals.

• We find that more-developed countries and the offshoots were able to run higher current account deficits more persistently, and that these countries had very different patterns of adjustment.

• In particular their current account reversals were generally associated with smaller real exchange rate fluctuations and less adjustment in the government surplus.

• Overall, we do not find overwhelming evidence that current account reversals had negative consequences for the aggregate growth of income per capita in the core or periphery. (Although many reversals involved serious crises that surely did have major distributional impacts.)

• Moreover, we are able to test some modern hypotheses with the historical data in ways that have not previously been done. We assess whether openness to international trade, financial and institutional development, and currency mismatches played a role in adjustment.

• We find little evidence that currency mismatches, openness to international trade, or the level of institutional and financial sophistication (proxied very roughly by higher income per capita) altered the severity of output losses associated with reversals in the nineteenth century.

• Nevertheless we do find some evidence that core Western European countries and the offshoots had lower growth losses in the adjustment process. Some countries even managed to see income rising in the face of reversals because previous investment was so productive. This offsets the negative growth experiences of other countries in the periphery leading to the finding that current account reversals were not systematically associated with output losses in this period.

Minimizing Adjustment: Are We Losing Our Marbles?

As has been noted frequently in current and past debates about global imbalances, some countries may enjoy a special privilege—an excess return on assets relative to liabilities—allowing them to sustain larger trade deficits in equilibrium. For example, if all borrowing occurs at a constant world interest rate, then, absent default or other forms of capital gains, a nation's long-run budget constraint would require a net

debtor like the United States to run future surpluses to extinguish the debt, requiring a large trade balance improvement. But if investment income surpluses can be earned even as a net debtor, as has been the case for the United States in recent decades, then the required degree of trade balance adjustment is mitigated.

Of course, this kind of scenario can cause umbrage among the creditors: those nations in the rest of the world who run persistent net trade surpluses are "winners" in a mercantilist sense, but gain nothing from this situation as they give back, in the form of net investment income flows, their "marbles" to the "loser," to use Jacques Rueff's memorable terminology. Rueff and his colleagues were bothered by the United States' ability to use this strategy during the heyday of the Bretton Woods era (Despres, Kindleberger, and Salant 1966). This French irritation was expressed in Valery Giscard d'Estaing's reference to "exorbitant privilege," a phrase frequently misattributed to de Gaulle (Gourinchas and Rey 2007, 12).

Why do these seemingly esoteric debates over return differentials matter so much? The differentials may seem small at first, and their contribution to overall capital and trade flows rather minimal, but it turns out that even small changes in the assumptions about the future path of these differentials can be the difference between seemingly manageable and seemingly disastrous paths of future national indebtedness. Or, put another way, these return differentials can be the deciding factor between a scenario in which drastic exchange rate adjustment is needed, and one where only a minor correction is required. How can small differentials make such a big difference? The reason is simple—compounding small differences for a long time can make a huge difference to outcomes further down the road.

In pioneering contributions, Lane and Milesi-Ferretti (2003, 2004, 2005a, 2005b), confronted the important question as to how a nation's external wealth evolves and how adjustment takes place. Their data, from the 1970s onward, provides important evidence on this subject. An even longer-run perspective on the postwar U.S. experience will be afforded by the soon-to-be released data of Gourinchas and Rey (2007). More recently, as global imbalances have grown over the last 10–15 years, a wave of policy analysis has followed these leads and has focused on the

trends evident in the U.S. balance of payments. For example, in a comparative study of several models that project future imbalances and U.S. external wealth, we find the following predictions (see Kitchen 2006, Table 1, based on Roubini and Setser 2004; Higgins, Klitgaard, and Tille 2005; Cline 2005):

- In "optimistic" scenarios where the United States continues to enjoy differentials in its favor of 500 basis points on income yields on foreign direct investment, and of 200 basis points on capital gains on all forms of external wealth, then by 2016 the U.S. net international investment position is likely to have a net debt in the range of –40 percent to –60 percent of GDP, with an income balance between –1.5 percent and +0.2 percent of GDP. The U.S. current account deficit might then be about –4 percent to –5 percent of GDP.
- In "pessimistic" scenarios, all else equal, where its privilege disappears and these differentials vanish, the United States may end up with an external debt position in excess of –100 percent of GDP, and an income balance between –3 percent and –7.2 percent of GDP. The current account might then be about –10 percent to –15 percent of GDP.

The range of these estimates depends on various other assumptions in the models studied, such as the speed at which the U.S. trade balance improves, and these estimates assume that all imbalances are accommodated by financing from the rest of the world. Still, the numbers are illustrative only, and the point is this: whether the United States' current privileges persist or not will make a big difference to future outcomes. An adverse outcome has the potential to double or triple our net debt position and our income payments to the rest of the world in ten years' time.

So a country's privileges are worth worrying about, and the realization that these favorable circumstances may prove ephemeral in the long run is increasingly a cause for concern. Despite past trends, Geithner (2006) warns that "nevertheless, going forward, the scope for positive net factor payments from abroad and sizeable valuation effects is limited." Should we worry? Or, to reframe the question as Rueff might have said: will the United States lose its marbles, sooner or later? For suggestive evidence, we compare past and present experience.

Measuring Privilege

We examine four ways of thinking about privilege. Suppose that at the end of the previous year, a country has external assets A, external liabilities L, and a net foreign asset position, $NFA = A - L$. In the current year, the country can earn an investment income flow that exceeds what would be predicted based on the world average rate of yield r if its rate of yield on assets is higher ($r_A > r$), or its rate of yield on liabilities lower ($r_L < r$) than the world average. This implies that net property income from abroad ($NPIA$) is

$$NPIA = r_A A - r_L L = [\underbrace{(r_A - r)}_{\substack{\text{rate of yield privilege on assets if >0}}} A + \underbrace{(r - r_L)}_{\substack{\text{rate of yield privilege on liabilites if >0}}} L] + r(A - L)$$

$$> r(A - L) = \underbrace{rNFA}_{\substack{\text{NPIA in the case of zero privilege}}}$$

Scaling by GDP we may write

$$(1) \quad \frac{NPIA}{GDP} = r\left[\frac{NFA}{GDP}\right] + \underbrace{\left[(r_A - r)\frac{A}{GDP} - (r_L - r)\frac{L}{GDP}\right]}_{\substack{\text{yield privilege as \% of GDP}}}.$$

The term in brackets represents the yield privilege, measured as a fraction of GDP (say, in terms of percent). This privilege arises whenever there is an advantage accruing to the country in the form of favorable yields; that is, whenever $r_A > r$ or $r_L < r$.

These yield privileges matter because they affect a country's wealth in the long run, and hence the adjustments necessary to satisfy the nation's long-run budget constraint. They show up in the current account (CA) since these yields are part of $NPIA$, which is one component of $NFIA$, or net factor income from abroad (the so-called income account).[3]

As an accounting identity, the change in external wealth W can be disaggregated into earnings on the trade balance TB, plus net unilateral transfers NUT, plus net labor income from abroad $NLIA$, plus net property income from abroad $NPIA$, plus capital gains KG. The last two items can then be thought of as the total returns on external wealth, as follows:

$$(2) \quad \Delta W = \underbrace{-FA}_{\substack{\text{net import of assets (-financial account)}}} + \underbrace{KG}_{\substack{\text{capital gains on external assets and liabilities}}} = \underbrace{CA + KA}_{\substack{-FA \\ \text{(BOP identity)}}} + KG$$

$$= \underbrace{TB + (NLIA + NPIA) + NUT}_{\substack{\text{CA definition}}} + KA + KG$$

$$= TB + \underbrace{NUT + KA}_{\substack{\text{transfers}}} + \underbrace{NLIA}_{\substack{\text{net labor income}}} + \underbrace{(r_A A - r_L L)}_{\substack{\text{net property income}}} + \underbrace{(\gamma_A A - \gamma_L L)}_{\substack{\text{capital gains}}}$$

$$= TB + NUT + NLIA + KA + (\rho_A A - \rho_L L)$$

where r denotes yields, γ denotes capital gains, and ρ denotes total returns (whether for assets or liabilities, as indicated by subscripts).

Thus, setting aside transfers and labor income (NUT+$NLIA$+KA) in the last equation (or treating them as exogenous), the evolution of external wealth is critically affected by the total rates of return (rates of yield plus rates of capital gains) on assets and liabilities. The higher are the privileges (in yields or capital gains), the larger is the deficit that can be run on the trade balance in the long run, all else equal—and, hence, the smaller is the adjustment needed for a country that is temporarily running a trade deficit at a larger nonsustainable level.

We can use many approaches to explore these effects. Several methods have been proposed in the extant literature. All of these approaches are closely related to one another, so we need to pause and take stock of these possible options.

1. *Perform a naïve comparison of income flow and asset position.* This is a simple way to illustrate privilege. Following equation (1) we can do a simple bivariate regression of y=$NPIA/GDP$ on x=NFA/GDP. The slope is an estimate of r and the intercept an estimate of the yield privilege term in brackets. The relationship can also be seen using an x-y scatterplot. Creditors with interest receipts sit in the positive quadrant, debtors with payments in the negative quadrant. In the other quadrants we find the paradoxical cases of debtors with receipts and creditors making payments. If an observation sits well above (or below) the diagonal with slope r through the origin, then we can say the country has a privilege (or penalty). We use this method as a simple descriptive tool in this paper, since the relevant data are widely available for past and present periods.[4] This method makes certain assumptions that may not always hold: the intercept need not be constant, and changes over time might be detect-

able either due to changes in the balance sheet (A and L) or in the yield differentials. A fixed intercept only measures the average privilege. The slope may also change, for example, if there are changes in inflation, since the slope is a nominal not a real yield.

2. *Perform a direct calculation of privilege.* A direct computation of rates of yield on assets is found by taking investment income credits from balance of payments data, divided by total assets obtained from net international investment position (NIIP) data. The rate of yield on liabilities equals investment income debits, taken from balance of payments data, divided by total liabilities obtained from NIIP data.[5] This method can be applied to disaggregated asset classes when disaggregated data on income flows and positions are available. For example, disaggregation shows that the current U.S. yield privilege is driven by foreign direct investment yield differentials (see Higgins, Klitgaard, amd Tille 2005). This method can also be extended to include capital gains when capital gains data are available. A leading example of this approach using current U.S. data is Kitchen (2006). He finds a large total return privilege in recent years, partly due to yields and partly due to capital gains of unidentifiable origin. The method cannot be applied historically in the aggregate because gross position data are not available for the past; however, microeconomic data do permit some comparisons.

3. *Perform an indirect calculation of privilege.* This could be done by ignoring reported income flow data and instead using market data to compute returns for synthetic portfolios. These should match actual portfolios as closely as possible, for instance by using portfolio-weighted stock market data. This method does not suffer, then, from errors in investment flow data (as in the accrual basis used for computing interest flows; see Buiter 2006). It should also avoid problems resulting from underreporting of investment income (the likely major source of the global current account deficit). However, this approach also relies on assumptions that the weights are correct and that returns and valuation changes derived from stock and bond indexes track those of the actual portfolio. The most fragile calculations are the imputations of returns to foreign direct investment, especially for privately held companies. Subject to these caveats, and after a lot of work, imputed yields and imputed capital gains on synthetic asset and liability positions can be estimated. A leading example is Gourinchas and Rey (2007), who find that the United States has enjoyed a large and growing privilege in total returns since the 1950s. Some of this increase is due to a growing return differential in all asset classes, and some is due to a composition shift toward higher yielding but riskier assets.

4. *Compute a privilege-adjusted net foreign asset position.* This approach is not a new concept, but just a reworking of the second method discussed. Instead of focusing on the return differentials, this method replaces the official (market value) measures of assets A and liabilities L, with adjusted measures A^* and L^* so that under a uniform world rate of yield r, the modified positions yield the actual income flows seen, that is, $r_A A = rA^*$ and $r_L L = rL^*$. Hence, in cases of privilege, where $r_A > r$ or $r_L > r$, external assets increase and liabilities shrink, $A^* = r_A A/r > A$ and $L^* = r_L L/r < L$. This method can also be applied to disaggregated asset classes. While this approach does not consider capital gains (meaning total returns), in principle it could be extended in that way. This method was proposed by Hausmann and Sturzenegger (2006), who arbitrarily set r equal to 5 percent. They find that whereas the conventional NFA position of the United States has deteriorated, its adjusted NFA position, NFA* = A* – L*, reveals virtually no change since the 1970s. Given that the foreign direct investment component contains all of the yield differential, inevitably it is in this component that almost all of the adjustments occur en route to A* and L*.

While none of these methods proves ideal in practice, due to a combination of theoretical and empirical concerns, taken together these approaches offer corroborating evidence when the underlying data are fragmentary, so we shall not rely on any single approach in the analysis that follows, as we try to identify U.K. and U.S. privilege then and now.[6]

Some Simple Estimates of Privilege

Following method 1, we begin with the simplest of comparative exercises. Looking across time and space, we see whether countries are able to earn more on the investment income account than would be predicted under an assumption of a uniform world real interest rate. To do this we run a regression

$$(3)\quad \frac{NPIA}{GDP} = \beta\left[\frac{NFA}{GDP}\right] + \alpha_i + u_{it},$$

which is the econometric analog of equation (1).

For the time being we assume that the slope is constant across any sample (we allow this to vary later). We also assume that the intercept is constant over time, but we allow it to vary across countries. The slope is an estimate of the world average rate of yield r in equation (1), and the intercepts are estimates of a country's average yield privilege as a fraction of its GDP.

Figure 3.1 shows a simple example of this naïve method calculated for the United States using data for the 1981–2003 period. The slope is 2.3 percent, a measure of the world average rate of yield. The intercept is 0.5 percent of GDP, a sign that the United States enjoyed an average level of privilege equal to about 0.5 percent of GDP over two decades. The details of the corresponding regression (3) appear in Table 3.1, panel (a), column 1. The result is not surprising: since the mid-1980s the United States has been a net debtor, but for more than two decades it has maintained a positive, albeit declining, investment income balance: in Figure 3.1 the U.S. data points for this period sit in the paradoxical zone in the upper-left quadrant of the scatterplot. The points line up along the line of best fit. One way to see the extent of U.S. privilege is to plot the line of best fit and a parallel line through the origin. The vertical distance between the two equals the privilege or intercept, which is worth on average 0.5 percent of GDP.

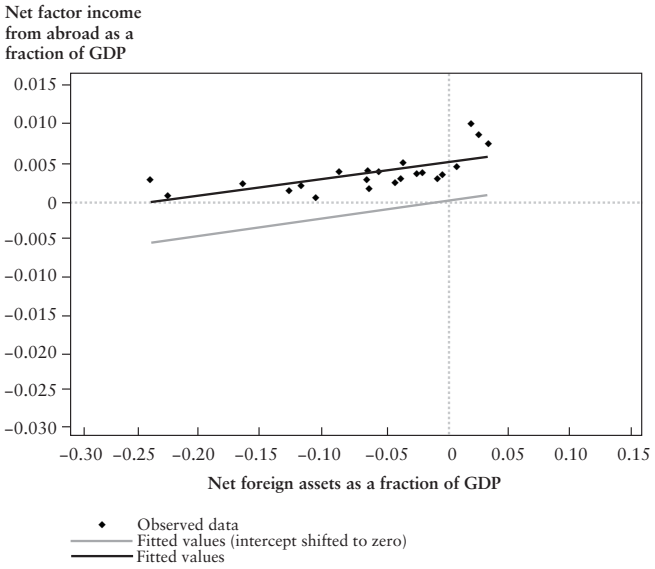

Figure 3.1
U.S. Privilege Relative to GDP, 1982–2003
Source: Authors' calculations based on various sources (see the section on Data Methodology, this chapter).

Having noted the existence and extent of U.S. privilege, we focus on two comparative questions: is this privilege unique by contemporary global standards? And is it unique by historical standards? Some answers are shown in the remainder of Table 3.1 and later in Figures 3.2 and 3.3.

Most conjectures about the source of a country's privilege tend to focus on certain characteristics of the privileged nation. Hegemonic explanations tend to stress economic or military strength. Institutional "safe haven" explanations stress a country's record of property rights (security from expropriation risk) and economic stability (security from inflation or other risks). Purely economic explanations would stress the special abilities of a country's financial or investment sector to provide know-how, or other intangible but economically valuable services. A country's position as a financial center could also be important in cases where concentration and size matter, for example, in the provision of market depth and liquidity. Reserve currency status also might matter. Where else but the United States might such privileges be found in the contemporary world economy?

As a first step, we think it natural to look at a group of other large, advanced countries: the G7. Table 3.1, column 3 reports regression (3) for the G7, including the United States. Unreported results for the G7 excluding the United States, and for each remaining G7 country individually, yield qualitatively similar findings. Compared to column 1, the slope reveals a world rate of yield of 2.5 percent. But the intercepts are revealing. The United States again has a privilege that is still 0.5 percent of its GDP. Yet so too do Japan and the United Kingdom.[7] France and Germany have intercepts of 0.2 percent of GDP, which are slightly positive but not statistically significant. Canada and Italy have negative intercepts, a sign that these nations are incurring penalties that are statistically significant, respectively, –2.5 percent and –0.8 percent of GDP.

Table 3.1
Privilege: Relative to GDP

(a) Estimates

Dependent Variable is NFIA/GDP	United States 1981–2003		G7 1981–2003		United Kingdom 1870–1913	
	(1)	(2)	(3)	(4)	(5)	(6)
NFA/GDP	0.023	0.001	0.025	0.015	0.040	0.039
	(4.16)**	(0.08)	(4.39)**	(1.98)*	(16.51)**	(16.16)**
INFL*NFA/GDP		0.915		0.332		0.019
		(1.76)		(2.12)*		(0.90)
U.S.	0.005	0.005	0.005	0.005		
	(9.95)**	(10.46)**	(4.96)**	(4.87)**		
U.K.			0.006	0.005	0.006	0.007
			(5.38)**	(5.22)**	(1.89)	(1.99)
CAN			–0.026	–0.025		
			(11.78)**	(11.53)**		
FRA			0.002	0.002		
			(1.49)	(1.56)		
DEU			0.002	0.002		
			(1.82)	(1.77)		
ITA			–0.008	-0.008		
			(7.09)**	(7.04)**		
JPN			0.006	0.006		
			(5.32)**	(5.50)**		
Observations	23	23	161	161	44	44
R-squared	0.45	0.52	0.89	0.90	0.87	0.87

(b) Frequency of Privilege/Penalty†

U.S.	100% / 0%	100% / 0%	100% / 0%	100% / 0%		
U.K.			76% / 9%	71% / 9%	80% / 0%	85% / 0%
CAN			32% / 68%	32% / 68%		
FRA			56% / 24%	56% / 18%		
DEU			66% / 16%	66% / 16%		
ITA			32% / 68%	32% / 65%		
JPN			94% / 0%	94% / 0%		

Absolute value of t statistics in parentheses
* Significant at 5 percent
** Significant at 1 percent
† Observations more than 2 s.d. above/below r NFA/GDP, where r is the slope estimate.

To illustrate these patterns, Figure 3.2 shows a scatterplot diagram using the same axes as Figure 3.1. A diagonal line through the origin is plotted with a slope equal to the estimated common value of *r*. For countries with a zero intercept, all points should sit on this line, which we might call the "neutral line" where neither penalty nor privilege is present. Points above this line correspond to privilege, those below to penalty, using our terminology. To permit comparison with Figure 3.1, the U.S. points in Figure 3.2 are depicted with an "x" symbol. All of the U.S. points sit in a zone well above the neutral line. Only a fraction of the non-U.S. points sit in this neutral zone, and many are close to or below the diagonal line.

To add a little more detail to this description, panel (b) of Table 3.1 computes an indicator variable based on the regressions in panel (a). We compare the distance between each point and the neutral line, and com-

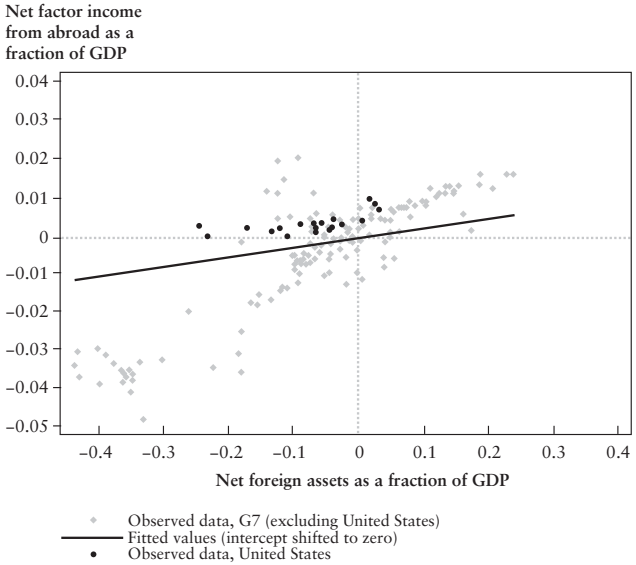

Figure 3.2
Privilege of G7 Countries Relative to GDP, 1981–2003
Source: Authors' calculations based on various sources (see the section on Data and Methodology, this chapter).

pare it to the standard deviation of the fitted value. If the point is 2 standard deviations or more above the neutral line, we label this country-year observation as being in the privilege zone; if it is 2 standard deviations below we label it as in the penalty zone.[8]

Columns 1 and 3 confirm that the United States has been in the privilege zone 100 percent of the time during the 1981–2003 period. The rest of the G7 countries have spent more time either in the neutral or in the penalty zone. Japan has spent 94 percent of this time period in the privilege zone, and the United Kingdom 76 percent. During this period, France and Germany are in the privilege zone 56 percent and 66 percent of the time, respectively, but also clocked a nontrivial amount of time in the penalty zone. Canada and Italy spend two-thirds of this time period in the penalty zone.

To sum up, among the G7 countries, privilege can be often be found outside the United States, particularly in the cases of Japan and the United Kingdom. Although not hegemonic military powers like the United States, these two countries are both global financial centers and issue important global currencies.

What about historical precedents? Several conjectures in the current debate surrounding contemporary global imbalances lead us to focus on the experience of Britain in the 1870–1913 period as a case study of privilege in the past. In this era, Britain was the undisputed hegemonic political and military power of its time, held a global empire, and despite the economic rise of the United States and other competitors, was still a leading industrial power. It was also, famously, a "banker to the world" before that term was gradually applied more to the United States in the years after 1914. The British pound sterling was the most important key currency of the period preceding World War I. How relevant is comparing the United Kingdom then and the United States now for this paper? Many commentators have speculated on the similarities between the financial privilege that Britain enjoyed in the late nineteenth century and that enjoyed by the United States in the period following World War II, noting the ways in which this privilege relaxed Britain's long-run budget constraint and eased adjustment. For example, James Foreman-Peck writes that:

> The international use of sterling raised British and world incomes by foreigners effectively giving Britain interest-free loans by holding sterling, and by sterling's enhancement of world liquidity. . . . By analogy with the role of the U.S. dollar after 1945, the key currency system contained the seeds of its own destruction. . . . British industry had to export less in order to buy a given quantity of imports than if sterling had not been a reserve currency. The adjustments of prices in the British economy and of the industrial structure, necessary to maintain a balance of payments equilibrium, were reduced. If Britain had been forced to adjust faster the structure of her industry, not only would the eventual adjustment have been less wrenching, but the rate of industrial growth in the late nineteenth century may have been higher (Foreman-Peck 1983, 169–170).

So let us examine the empirical evidence for British privilege in the four decades before World War I. Table 3.1, column 5 repeats our regression analysis for the United Kingdom in the years 1870 to 1913, the so-called age of high imperialism when Britain rose to preeminence as the world center of global finance. The results are quite similar to those seen for the contemporary United States in column 1. A slope of 4 percent represents the estimated rate of yield. An intercept of 0.6 percent of GDP suggests that the United Kingdom did enjoy some privilege during this period. Panel (b) indicates that during this time, the United Kingdom was in the privilege zone 80 percent of the time, and otherwise in the neutral zone. The corresponding scatter diagram appears in Figure 3.3.

However, two key differences, and one similarity, stand out when comparing Britain then and the United States now.

First, as a fraction of GDP, between 1870 and 1913, Britain's yield privilege was only marginally statistically significant, and this at the 10 percent confidence level, not the 5 percent level.

Second, as is apparent from a brief review of Figure 3.1 and an examination of Figure 3.3, Britain was in a very different position to the United States today. During the 1870–1913 period, Britain was a large net creditor: its NFA was positive, constantly increasing, and approached 200 percent of GDP by the period's end. But today the United States is a large net debtor, with its NFA falling below zero in the early 1980s and nearing –30 percent of GDP as of 2003. The United Kingdom in this earlier period inhabited the normal upper-right quadrant in Figure 3.3, but the United States inhabits the paradoxical upper-left quadrant shown in Figure 3.1.

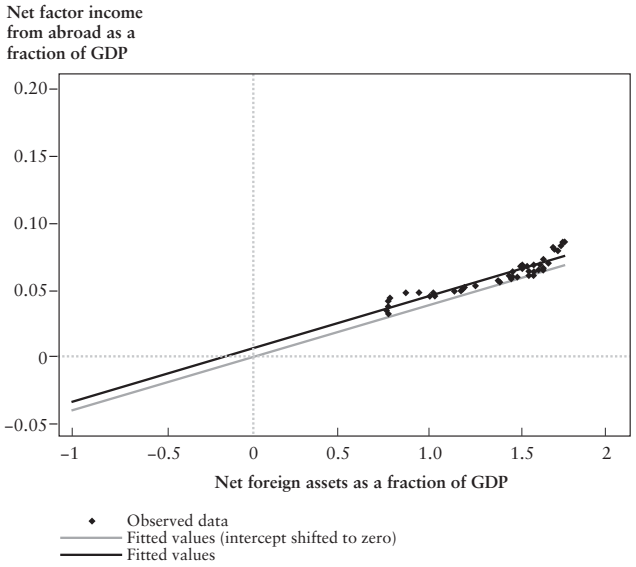

Figure 3.3
U.K. Privilege Relative to GDP, 1870–1913
Source: Authors' calculations based on various sources (see the section on Data and Methodology, this chapter).

Third, we note that the extent of the privilege enjoyed by the United Kingdom then and the United States now was quite volatile, measured as a fraction of GDP. Treating the privilege as the gap between the actual observed NFIA/GDP and that predicted by the fitted line constrained to pass through the origin, the implied measures of privilege are shown in Figure 3.4. Both figures show a distinct W shape.

To use the terminology of Higgins, Klitgaard, and Tille (2005), both of these countries have at times enjoyed a "series of fortunate events" taking their investment income balance far above trend in certain periods. In the early 1870s, U.K. returns were high after a loan boom, before a wave of crises and defaults hit emerging markets, and investment returns fell. The same pattern was witnessed in the 1890s, before and after the Baring crash. This volatile pattern highlights the possibility of recurring "peso problems" (see Buiter 2006) even for a country with privilege: risky

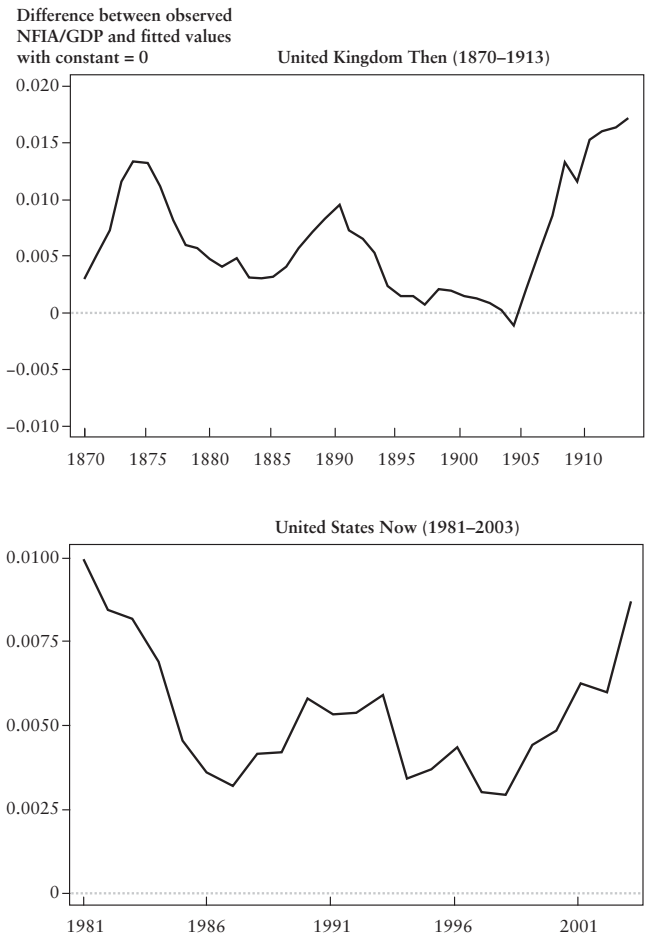

Figure 3.4
Privilege Relative to GDP, United Kingdom Then and United States Now
Source: Authors' calculations based on various sources (see the section on Data and Methodology, this chapter).

foreign assets may generate supranormal returns for a time, but these trends may not be sustainable.

In the current case of the United States, some of the same factors are possibly at work, along with exchange rate effects. Net income yields were low during the strong dollar periods of the mid-1980s and the late 1990s, and these were also times of default for many emerging market bonds. The recent uptick in privilege for the United States in 2000–2003 echoes that experienced by the United Kingdom in 1905–1913. But if the clock had been stopped earlier in each case—in 1905 for United Kingdom, and 2000 for the United States—then an unmistakable downward trend in privilege would be evident.

Before proceeding it should be noted that in the regressions reported so far, we have been analyzing a nominal yield r based on the slope estimates in regression (3). Should such nominal yields be stable? This is, for example, the implicit assumption made by Hausmann and Sturzenegger (2006), who use a constant arbitrary 5 percent discount rate; that is, a "price-earnings" ratio of 20 for all assets. An alternative approach would recognize that r is a rate of nominal yield, and that it might fluctuate systematically with the rate of inflation π. In this case we might be better off estimating a variant of equation (3):

$$(4)\quad \frac{NPIA}{GDP} = \beta\left[\frac{NFA}{GDP}\right] + \theta\left[\pi\frac{NFA}{GDP}\right] + \alpha_i + u_{it}\,.$$

If the Fisher effect holds for all assets and their yields, then in equation 4 the coefficient θ should equal unity. But this may not be the case in practice. If loans payments are tied to a floating rate of interest, the pass-through of inflation to yields will depend on the speed of market adjustment and the accuracy of expectations. If fixed income yields are tied to a fixed interest rate, no change in yields will occur. In principle, this situation ought to be resolved by changes in the market value of the underlying debt, but from an empirical standpoint it is doubtful that all such loans and debts are properly revalued in the data. Thus, we do not impose a unity restriction on θ (for if we did, it would be rejected) when we estimate (4) in columns 2, 4, and 6 of Table 3.1, panel (a). The bottom line is unchanged, however. The measures of privilege by country are only slightly affected when this simple inflation adjustment is carried out, as all the findings based on columns 1, 3, and 5 are valid.

The lesson from these simple calculations is that the privilege the United States enjoys today is not unprecedented by contemporary standards. We even find evidence of a historical precedent in the case of Britain between 1870 and 1913, during the first age of globalization. In the following sections we look at some of the details that lie behind these simple comparisons, trying to understand what was going on in the past for the British case, and what is taking place in the present for the U.S. case, though still using the G7 as background to this analysis of the United States.

Disappearing Privilege Then and Now?

We first turn to the trend in privilege over time. The privilege term in (1) need not be constant, of course. Two factors operate to affect the size of this term. First, consider the differential between rates of yield on assets and liabilities: the bigger the rate of yield differential, the bigger the privilege term. Second, consider leverage: if there are yield differentials, these can be exploited by enlarging the size of the nation's balance sheet, increasing A and/or L.

The implication of both these considerations is that if a country faces declining yield differentials on its portfolio, then to preserve its privilege one of two things must happen.

First, there might be a reweighting of the country's asset and liability portfolios that raises aggregate differentials via composition effects. For example, if debt and fixed income assets yield less than equity or foreign direct investment, a country will earn more if it sells foreigners less high-yield home equity and more low-yield home debt. A country also earns more if it purchases more high-yield foreign equity and less low-yield debt. It has been suggested, for example, that recent political maneuvers to block foreign takeovers in a number of countries could reflect, in part, this sort of concern.

Second, an increase in leverage may occur, which helps offset a fall in differentials. For example, if the yield differentials are cut in half, then the same amount of investment income can be attained by doubling the size of the national balance sheet; that is, by doubling A and L.

While these two kinds of responses would show up in macroeconomic aggregates, these would represent a manifestation of microeconomic decisions by investors. Either way, each individual investor, and in aggregate the privileged country, takes on more risk, either by engaging in a quest for yield or by ramping up leverage.

The interplay between these two forces could be of importance both in the past and the present. For example, we will show that rate of yield differentials appear to have shrunk progressively for the two hegemons in the periods we study: Britain during the 1870–1913 period and the United States in the postwar period. This development appears to have been true in the aggregate portfolios, even allowing for the fact that in the search for yield, both countries are thought to have reweighted their portfolios toward riskier and higher yielding equity assets over time.

In Table 3.2 we repeat the analysis of Table 3.1 for the United States now and the United Kingdom then, but include an "early" indicator to

Table 3.2
Privilege: Relative to GDP, Early Versus Late

Dependent Variable is NFIA/GDP	United States 1981–2003	United Kingdom 1870–1913
	(1)	(2)
NFA/GDP	0.013	0.051
	(1.75)	(11.41)**
EARLY	0.002	0.009
	(1.69)	(2.93)**
United States	0.004	
	(3.45)**	
United Kingdom		–0.011
		(1.69)
Observations	23	44
R-squared	0.86	0.99

Absolute value of t statistics in parentheses
* Significant at 5 percent
** Significant at 1 percent
EARLY = 1 when year is less than or equal to 1880 (United Kingdom) or 1992 (United States).

test for an early period of "high privilege" in the sample; pre-1880 for the United Kingdom and pre-1992 for the United States. We find evidence that U.K. and U.S. privilege, as a fraction of GDP, was much higher in the early years compared to the late years. For the United Kingdom, privilege was 0.9 percent of GDP higher before 1890, a difference significant at the 1-percent level. For the United States, privilege was 0.2 percent higher before 1992, but the difference is of borderline significance using a 10-percent (two-tailed) test. These results offer the first suggestion that yield privilege can be difficult to sustain. What message lies behind these results?

We begin with the historical example of Britain. An important fact to remember is that we do not possess gross asset and liability positions for this period, so direct calculation of the privilege term in (1) and its components is not feasible, ruling out method 2. Instead we can turn to methods 3 and 4: look at market yield data on portfolio assets, or perform an adjusted NFA calculation.

We begin with the simpler adjusted NFA approach. We employ an arbitrary 4 percent discount rate and infer the British-adjusted NFA position. To perform this calculation, we take the net investment income each year from 1870 to 1913, multiply by 25, and call this NFA*. We can compare this with NFA, the conventional measure of the net position derived by economic historians by accumulating the current account and adding it to some known absolute position data for a given benchmark year.

The result of this comparison is shown in Figure 3.5. We recall that Hausmann and Sturzenegger's NFA* is not a new concept—it is just another way of expressing yield differentials and the privilege associated with them. By implication, if these privileges are big, then NFA* should deviate very significantly from NFA—in a positive direction for a privileged country, and in a negative direction for a penalized country.[9]

In contrast to recent U.S. experience, for the earlier British case Figure 3.5 shows no evidence of any substantial deviations from 1870 to 1913. The two measures NFA* and NFA track each other very closely. Given the isomorphism between yield differentials and the size of the NFA adjustment, this finding gives an indirect test of the presence of yield differentials in the British case. Minimal or nonexistent differences between NFA and NFA* imply minimal or nonexistent British yield privilege.

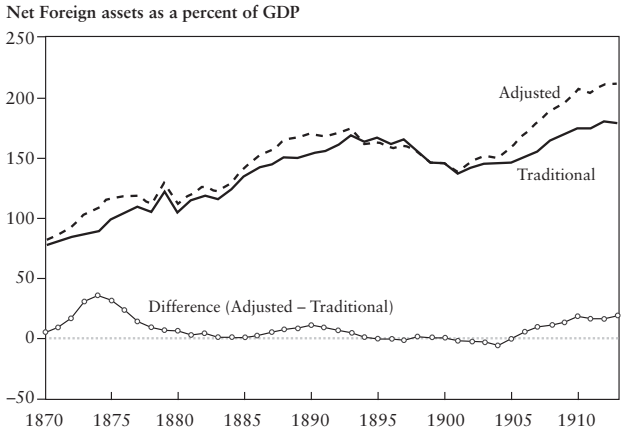

Figure 3.5
The United Kingdom's Minimal Privilege, 1870–1913
Source: Authors' calculations based on various sources (see the section on Data and Methodology, this chapter).
Note: This figure uses a 4 percent discount rate (or a Hausmann-Sturzenegger PE ratio of 25) based on the estimated yield in Table 3.1.

Should we believe an indirect test? One reason for doubt is that the source data for the British investment income data series is rather conjectural. Imlah (1958, 59–64) had no records on actual investment income flows and instead imputed annual U.K. NFIA based on estimates—some might say educated guesses—about the rate of return on the British overseas portfolio. The rate was then applied to an estimate of the British NFA position, which was equally fragile, not least because it depended in part on cumulated NFIA as an element in cumulated CA (Imlah 1958, 64–81). In other words, in the above calculations, all the indirect method does is reveal what Imlah thought the British rate of return on external assets was doing from year to year.

To probe further, we might like to get additional and more precise direct or indirect evidence on yields. Unfortunately, the direct method is impossible in the aggregate data, as noted, so the best hope right now is the indirect method 3. However, data limitations mean we cannot replicate Gourinchas and Rey (2007) until we have yield and position data for

the British portfolios, or at least a large share of these. But fortunately we do have some more recent yield measures that ought to be more accurate than Imlah's conjectured yields from fifty years ago.

For a sample of British companies at home and abroad, realized rates of profit were computed by Davis and Huttenback (1986). Their important findings for the 1870 to 1913 period are summarized in Figure 3.6. In the early years of this period, Britain enjoyed very high returns on its overseas investments, notably its investments in its empire, something the authors attribute to Britain's role as a pioneer in the business of foreign investment in the 1870s and 1880s. However, these high returns soon evaporated. By 1900 and later, foreign nonempire investment, empire investments, and domestic investments were all showing similar rates of yield.[10]

Concerning government debt obligations, we know that ex ante yields experienced dramatic convergence from 1870 to 1913, as shown in Figure 3.7. We recall again the peso problem; ex post yields were surely

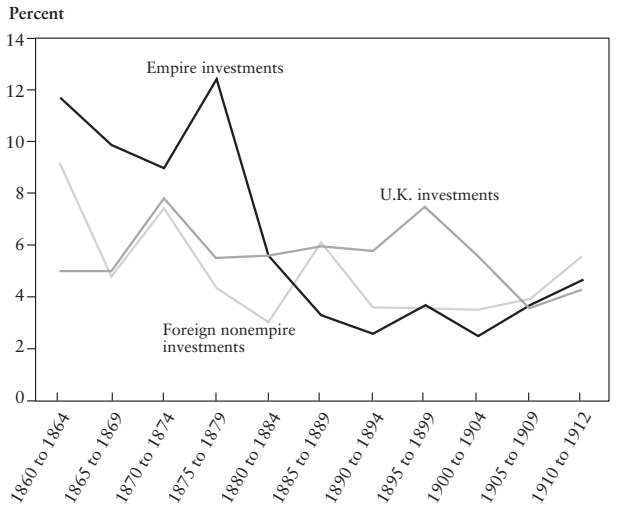

Figure 3.6
Rate of Yield on Selected U.K. Investments in Home and Overseas Firms, 1870–1913
Source: Davis and Huttenback (1986).

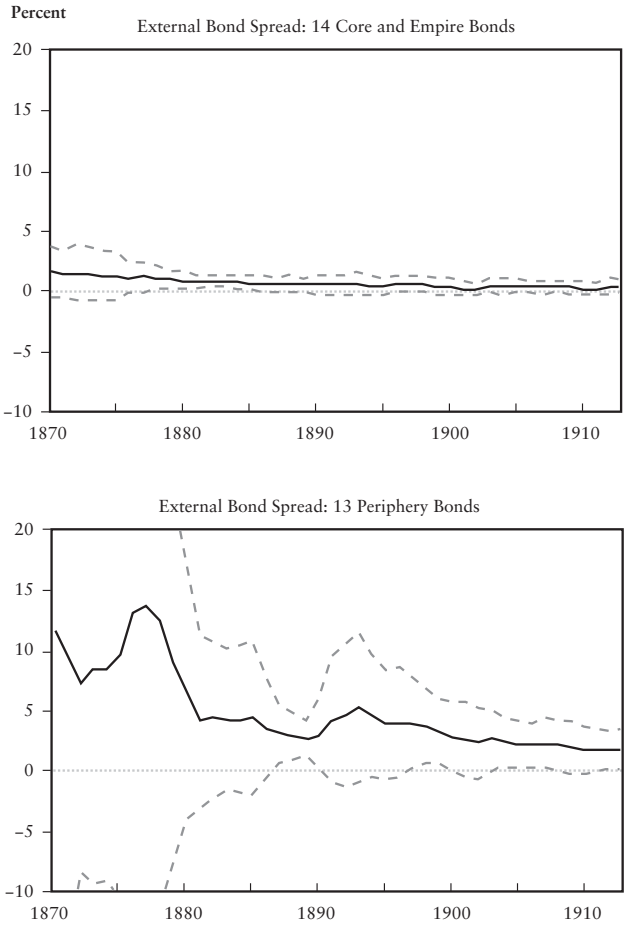

Figure 3.7
Yield to Maturity on Sovereign Bonds, 1870–1913
Source: Obstfeld and Taylor (2004).

never so high and some of this convergence was probably due to the diminution of risk premia. We might expect ex post returns to have converged rather less.

From this fragmentary evidence—the lack of privilege suggested by the adjusted NFA calculation and the suggestive evidence on yield differentials—we might conclude that the British faced declining yield differentials even when at the apex of their economic and military power, and even when London stood as the world's undisputed financial center, a locus of investment know-how, and an unimpeachable safe haven. True, the British did expand their balance sheet dramatically (as we saw in Figure 3.3), and they did shift to more risky assets in the private sector and in nonempire emerging markets as time went by. But apparently these maneuvers were not enough to deliver a strong and persistent measure of privilege relative to GDP: as we saw in Table 3.1, the British intercept was positive but had only weak statistical significance.

One theme that must be emphasized and reiterated throughout this paper is that when trying to predict the future, naïve extrapolation from the past is ill advised, whether the past constitutes the last 20 years or the 1870–1913 period. Still, the British experience in the late nineteenth century cautions against ever assuming that privilege is automatically perpetuated. Perhaps the British did have some initial advantages in the 1870s and 1880s that delivered privilege. But these circumstances did not last. Other countries like France, Germany, and later the United States entered the fray to compete with Britain in overseas investment, and the British share of world overseas assets shrank from 78 percent in 1855 to 50 percent in 1914 (Obstfeld and Taylor 2004). As an explanation for this decline, Britain may have lost its pioneer advantages in some markets, and in other countries risk premia may have fallen as the institutional environment improved.

Bearing these cautionary words in mind, we turn to the experience of the United States since the 1960s. Now, the direct method 2 is feasible to use, and we need not beat about the bush with indirect evidence. Figure 3.8 illustrates the bottom line regarding rates of yield using U.S. Bureau of Economic Analysis (BEA) data. Rates of yield on assets and liabilities (in nominal dollar terms) obviously peaked in the late 1970s and early 1980s as U.S. inflation reached its postwar peak. But the important issue

for us is not the level of these rates of yield, but the differential—which, fortunately, is naturally purged of any effects of inflation.

The yield differential appears at the bottom of Figure 3.8. Its trend is unmistakably downward. We can also see that U.S. yield differentials tend to rise and fall in line with the strength of the dollar: the dollar value of yields on overseas assets tends to be low (relative to the yield paid on liabilities) when the dollar is strong. In the mid-1980s and again in the mid-1990s, the U.S. yield differential is low. This is not surprising when there are deviations from purchasing power parity in the short run. A good deal of foreign investment income is denominated in local currency, and its dollar value will be depressed when the dollar is strong.

Figure 3.8 helps us understand the indignant stance of the French in the early 1960s: at that time the U.S. yield differential was a whopping 3 percent or 300 basis points (bps). Since 1975 it has barely risen above 2 percent. Since 1995, it has averaged about 1.5 percent, reaching a low of under 1 percent or 100 bps in 1999. Over this period the rate of yield privilege has fallen by about 200 bps. Many fewer marbles are being returned these days, compared to how the game was played during the Bretton Woods era.[11]

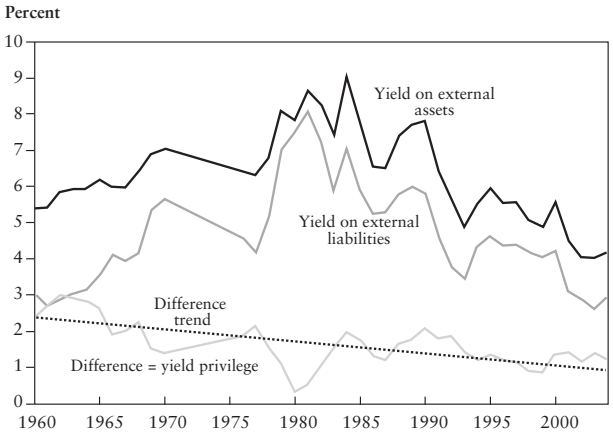

Figure 3.8
U.S. Rates of Yield and Differentials, 1960–2003
Source: U.S. Bureau of Economic Analysis.

Table 3.3 and Figure 3.9 show how the United States stacks up against the rest of the G7 where the yield differential is computed from 1981 onward using a dataset that is comparable across countries.[12] Table 3.3 shows that among the G7 countries, the United States has enjoyed a large and statistically significant rate of yield differential of about 167 bps on average. But since 1981 two other countries have enjoyed positive and significant yield differentials: Japan (112 bps) and, ironically, France (80 bps). Italy (–52 bps) and Canada (–139 bps) have had adverse rate of yield differentials.[13]

Figure 3.9 exposes the volatility of this differential over time and also reveals a declining trend: the United States began with quite high levels of privilege relative to the rest of the G7 (where on average, differentials have been about zero), but the trend over time has been an inexorable convergence of the U.S. yield differential toward zero. Regression analysis confirms that the U.S. yield differential has a negative and statistically significant time trend (in the G7, only the United Kingdom has enjoyed a positive and statistically significant time trend in this yield differential). Again, as in Figure 3.8, we see that the U.S. yield differential has been declining, with this trend only abating in periods when the dollar is weak.

Only time will tell what the long-term outcome will be, but the recent uptick in the differential in 2000–2003 is the source of much controversy.

Table 3.3
G7 Rate of Yield Differentials (Assets versus Liabilities), 1981–2003

	Obs.	Mean	Std.Error	[95-percent confidence interval]	
U.S.	23	0.0167*	0.0018	0.0130	0.0204
U.K.	23	0.0009	0.0010	–0.0011	0.0030
CAN	23	–0.0139*	0.0021	–0.0182	–0.0096
FRA	23	0.0080*	0.0015	0.0049	0.0111
DEU	23	0.0032	0.0016	–0.0002	0.0066
ITA	23	–0.0052*	0.0015	–0.0083	–0.0021
JPN	23	0.0112*	0.0013	0.0084	0.0140

* significant at the 5-percent level

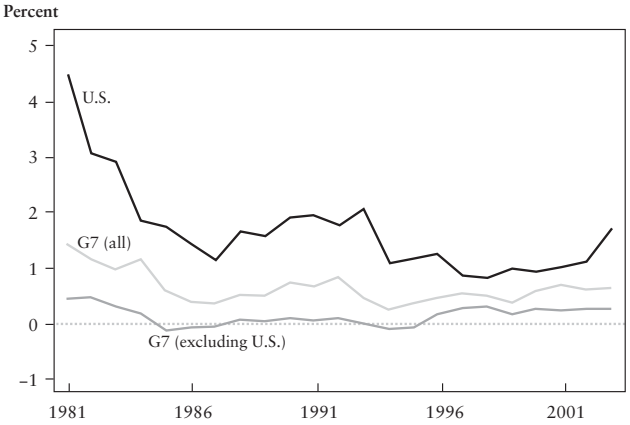

Figure 3.9
U.S. versus G7 Rate of Yield Differentials, 1981–2003
Source: Lane and Milesi-Ferretti (2004).
Note: G7 (excluding the United States) and G7 (all) are averages weighted by positions; that is, total income divided by total position for all 6 or 7 countries, expressed in U.S. dollars.

A longer run perspective seems to indicate that although that uptick is there, the longer run trend for the United States is likely one of vanishing yield differentials or disappearing privilege, just as in the British case a century before.

Maintaining Privilege via Leverage?

At the start of this section we showed that the United States has managed to maintain a nontrivial privilege that has averaged about 0.5 percent of GDP over the last two decades. Close scrutiny of Figure 3.1 suggests that, relative to the fitted values, privilege relative to GDP has been fairly stable over the years, with a slight upward blip evident in the years after 2001 (the points farthest to the left on the scatterplot). This blip is largely driven by the aforementioned uptick in yield differentials observed in 2000–2003.

Yet, notwithstanding a couple of such blips, we have also seen that over time U.S. yield differentials followed a downward trend since 1981. So, looking at equation (1), we reach the immediate conclusion

that the United States has only been able to maintain its privilege as a fraction of GDP by raising its leverage to offset the diminution in yield differentials.

Figure 3.10 explores this mechanism further. Using BEA and U.S. historical statistics data going back to the 1960s, we examine the actual path of the yield privilege as a fraction of GDP, and its counterfactual path under the assumption that rate of yield differentials had been *constant* at their average 1960s values throughout the period (about 300 bps). In the counterfactual example, yield differentials would thus be much higher in later years than was actually seen.[14]

Figure 3.10 shows what we would expect. We know that the United States has been increasing its leverage dramatically since the 1960s. If the U.S. balance sheets had expanded thus with constant 1960s average yield differentials over the *entire* period, then in 2003 the privilege, rather than being about 1 percent of GDP, would have been about 2 percent. Put another way, if leverage massively increases over several decades, then

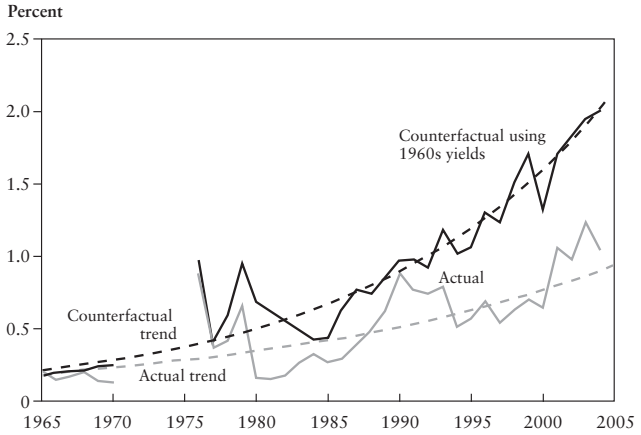

Figure 3.10
Actual versus Counterfactual U.S. Investment Income as a Percent of GDP, 1965–2004
Source: Authors' calculations based on various sources (see the section on Data and Methodology, this chapter).
Note: "Actual" shows declining yield differentials; "Counterfactual" shows constant yield differentials at 1960s levels.

it is not that reassuring when we find privilege merely holding steady as a fraction of GDP (Hausmann and Sturzenegger 2006). If U.S. yield differentials—the ultimate basis of the privilege—were stable, then privilege ought to have exploded relative to GDP, counterfactually, as in Figure 3.10. The reason these did not increase is that the yield differentials are narrowing. From this perspective, U.S. privilege is disappearing.

When we focus on this trend, subject to the caveat about naïve extrapolation, there are two reasons why the future outlook for the United States is surely less rosy. First, if the yield differential keeps shrinking, then astronomic and implausible explosions in leverage would be needed to maintain U.S. privilege at its current level as a fraction of GDP; if the differential reaches zero, privilege will vanish. Second, the 2000–2003 blip may or may not be sustainable, and some or all of it is due to transitory effects—overseas earnings are boosted by a weakening dollar, there has been a tax amnesty, there have been low interest rates on debt liabilities, and so on (see Higgins, Klitgaard, and Tille 2005).

One might add a third observation. Correlation does not imply causation, but this shrinkage in the yield differential obviously does coincide with the United States sliding from a net creditor position to a net debtor position, as shown in Figure 3.11. If there is a causal link here, and differentials shrink as net debt increases, then a Laffer curve type of argument tells us that at some point the United States will reach (or may already have reached) a point of maximum privilege relative to GDP.

Capital Gains

So far, the paper's main focus has been on the yield differentials that underpin privilege in equation (1). However, the evolution of wealth is also affected by capital gains, as seen in equation (2). So even if a country suffers a decline in yield differentials, it might be of no consequence for the long-run budget constraint if this decline is offset by an increase in the capital gain differential; thus adjustment may be avoided if capital gains offset any change in yields.

The evidence on capital gains is even more fragile and fragmentary than for investment income yields, but we will make a few observations. Using indirect measures of total returns, Gourinchas and Rey (2007) find evidence that U.S. total return differentials (for assets minus liabilities)

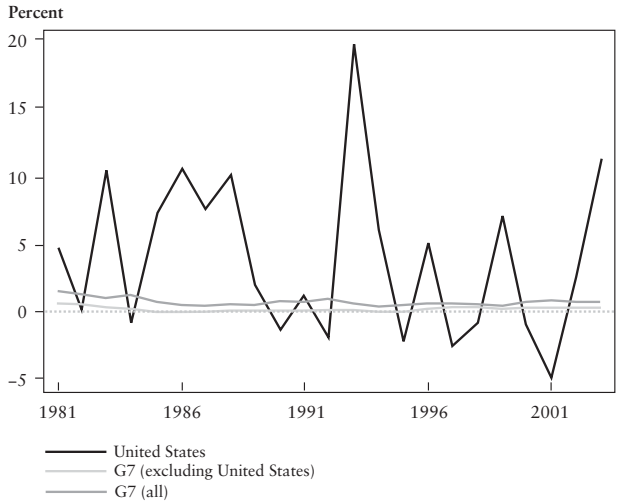

Figure 3.11
Total Rate of Return Differentials: United States Versus G7
Source: Lane and Milesi-Ferretti (2004).
Note: G7 (excluding the United States) and G7 (all) are averages weighted by positions; that is, total income and capital gain divided by total position, for all 6 or 7 countries, expressed in U.S. dollars.

may have grown in the post-Bretton Woods period as compared to the Bretton Woods period. Given that the total return differential equals the yield differential plus the capital gain differential, this says that the capital gain differentials must have grown enormously, since we know from the above that yield differentials have shrunk. If anything, in the Bretton Woods era the United States incurred a penalty on the capital gains differential, averaging about –2 percent of GDP. Then, once the floating rate period began, the United States enjoyed positive valuation effects. It is tempting to infer that it was the breakdown of the gold-backed dollar standard—and the ability of the United States to reap exchange-rate-driven capital gains—that caused this shift. But as we shall see in a moment, as an explanatory mechanism, the exchange rate channel seems weak. The data show that capital gains on external wealth moved in favor of the United States in every year until the turn of the millennium,

when the U.S. stock market approached a peak. Capital gains were then zero or negative for several quarters.

Another perspective is presented by Kitchen (2006). He examined trends only since 1989 using direct BEA measures, and in that shorter window no firm time trends emerge, leading him to conclude that a positive 2 percent rate of capital gain differential in favor of the United States is the norm in recent years.

We raise two questions here. First, if this capital gain differential is flat, will it offset a declining yield differential trend, should that trend continue? Obviously the answer is no, even if such a constant differential can be assumed to continue. Second, where are these capital gains coming from? This turns out to be a dark secret. Kitchen (2006) relates how the BEA classifies valuation effects as arising from three factors: first, "prices" (meaning changes in prices of assets in the currency of denomination); second, "exchange rates" (this barely affects liabilities, but reflects changes in the dollar values of nondollar assets due to changes in currency values); finally, "other" is the remaining category.

It turns out that since 1989 the price component of capital gains has delivered a rate of return of about 1.5 percent on both external assets and liabilities: no differential there. On average, annual exchange rate changes have been zero (but large in some years). The positive differential in the rate of capital gains on assets versus liabilities has, on average, been entirely due to the final mysterious "other" category: about 100 bps on assets and 100 bps on liabilities (with both in favor of the United States for a total differential of 200 bps). What comprises this "other"? Apparently "discussions with BEA staff indicate that the source of much of this 'other' valuation change is simply unidentified" (Kitchen 2006, 16), a claim which prompts Cline (2005) to call these gains "statistical 'manna from heaven.'" The inability to account for this unidentified source of the capital gains is quite worrying. We ought to feel slightly uneasy if we cannot really understand these gains, and we should feel very uneasy about the idea of extrapolating from something we cannot understand.[15]

Notwithstanding the mystery surrounding the source of these capital gains, have these been enough to offset the declining U.S. yield differential? Table 3.4 and Figure 3.11 show that they have. These figures repeat

Table 3.4
G7 Total Rate of Return Differentials (Assets versus Liabilities), 1981–2003

	Obs.	Mean	Std.Error	[95-percent confidence interval]	
U.S.	23	0.0369*	0.0117	0.0127	0.0612
U.K.	23	0.0025	0.0060	–0.0099	0.0149
CAN	23	–0.0006	0.0151	–0.0319	0.0307
FRA	23	0.0019	0.0091	–0.0170	0.0207
DEU	23	–0.0062	0.0058	–0.0183	0.0059
ITA	23	–0.0034	0.0087	–0.0215	0.0147
JPN	17	0.0009	0.0186	–0.0385	0.0403

* significant at the 5-percent level

the format of Table 3.3 and Figure 3.8, but show the total rate of return differentials for the G7, not just the rate of yield differentials. The difference is just capital gains, and since the capital gains are a volatile measure (partly accounted for by nature, partly due to measurement error) these data have much higher variance. The bottom line is that switching to total rates of return places the United States in a unique position as the only privileged country among the G7.

Table 3.4 shows that among the G7 countries, the United States has enjoyed a large and statistically significant rate of total return differential of about 370 basis points on average.[16] Of the U.S. total return differential, we have already seen that about 167 bps was due to yields, so the remaining 203 bps is due to capital gains.[17] On average these two parts of the differential have played an almost equal role. But the trends of the two components are obviously different. The trend in the total return differential is flat (which is confirmed by regression analysis). But because Figure 3.8 showed that the rate of yield differential was closing, the result here implies that the differential in the rate of capital gains must be widening.

It would be interesting to see how trends in capital gains (or total returns) evolved in the past for the case of Britain from 1870 and 1913. Unfortunately, the limitations of the current historical macroeconomic data preclude any calculation of gross valuation effects, even with

the limited degree of precision we accept today. Imlah (1958, 59–81) ignored capital gains entirely, and assumed that gains and losses roughly cancelled out. However, as with our earlier discussion of yields, we can make use of some more recent data based on samples of traded securities.

Edelstein (1982) has computed total returns for home and foreign portfolios of equity and debenture assets in the U.K. portfolio in the late nineteenth century. The summary data in Figure 3.12 suggest no discernible trend movement in the yield differential between home and foreign assets. Indeed, a noticeable differential is apparent only for debentures (including both government and private bonds and debt), suggesting that even as ex ante differentials converged, ex post differentials were rather steady.

There is suggestive evidence here that Britain then, like the United States now, made a transition from "banker" to "venture capitalist" mode, whereby returns to investors increasingly took the form of capital gains rather than yield differentials. So the good news from the past for the U.S. position today is that such a relatively painless transition is possible, although it is worrisome that the U.S. data provide us with no comprehension of where these gains originate. The bad news is that U.K. return differentials were quite volatile in the long run—a decade or so of large positive differentials can be followed by another decade with a large negative differential. To repeat, naïve trend extrapolation is unwise.

Summary: Privilege has its Memberships

Over the last half-century, the United States has gradually become the world's largest debtor and the world's largest creditor nation. Over that same period, official data show that the United States has earned higher yields (and higher total returns) on its external assets than the rest of the world has earned on U.S. external liabilities. Yet the rate of the yield differential has fallen, from 300 bps in the early 1960s to maybe 150 bps today. And if some of this remaining 150 bps is due to understated income payments to foreigners, the gap today could in reality be nearing zero (see Gros 2006).

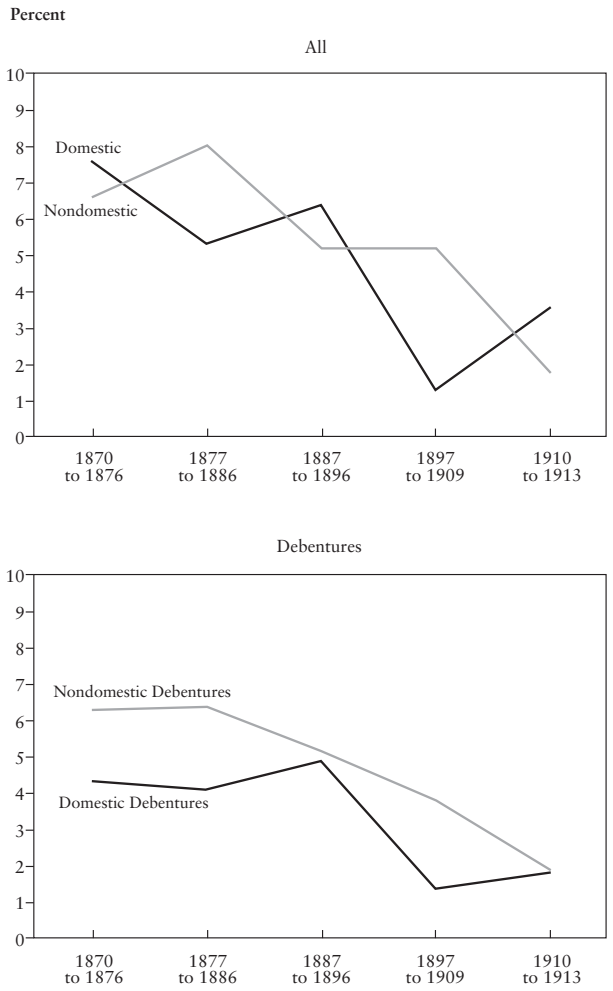

Figure 3.12
U.K. Total Rates of Return for Samples of Securities, 1870–1913
Source: Edelstein (1982).

It appears that by expanding its leverage, the United States has offset diminishing yield differentials to prop up its privilege as a fraction of GDP. Yet the future extrapolation of this trend is doubtful: the net external position cannot trend up forever, and if the yield differential continues to trend down, no amount of leverage will help. At the present time a significant contribution from ill-defined capital gains is propping up the U.S. measures of privilege, and more research will be required to verify and identify these mysterious additions to U.S. external wealth.

Compared to the United States today, a century ago Britain enjoyed a similar hegemonic position—economically as well as geopolitically. Britain also appeared to enjoy some modest privilege at times between 1870 and 1913. But this privilege could not be sustained, even from a massive net credit position. International financial competition, the global quest for superior yields, and the maturing of emerging markets all put a squeeze on British privilege. Similar forces are at work today that are affecting the United States. In both eras the hegemons possibly gained privilege during the "pioneer" phase of globalization, but for the British at least, holding on to its privilege proved elusive in the long run.

As privilege shrinks from, say, 2 percent of GDP to 1 percent or to zero, this enlarges yet further the eventual adjustment needed to bring a high trade deficit to a sustainable long-run level. With the trade deficit around 6 percent of GDP, the adjustment grows from 4 percent to 5 percent to 6 percent, given near balance on the income account.

Scenarios for the Inevitable Adjustment: The Good, the Bad, and the Ugly

The second part of this paper examines the implications of how large adjustments to the current external balances may play out, again with an eye to history.

Data and Methodology

We use a panel data set for over 20 countries between the years 1880 and 1913 to address the questions posed above. Our data come from various sources, including those used in recent work on crises by Bordo, Eichengreen, Klingebiel, and Martínez-Peria (2001) and subsequently updated by Bordo and Meissner (2007). We also make use of the extensive data generated by Obstfeld and Taylor (2003). Our data for current accounts comes from Jones and Obstfeld (2001). Data for the Netherlands come from Smits, Horlings, and van Zanden (2000) and for Chile from Braun et al. (2000). In the places where the Jones and Obstfeld data set did not have information available, we used the trade balance (exports minus imports), following the practice in previous studies such as Adalet and Eichengreen (2007) and Catão and Solomou (2005).

We define the core countries to include Belgium, Denmark, Norway, Sweden, and Switzerland. During this period, these were high-income countries with robust institutional features, but which also imported a fair amount of capital. France, Germany, Great Britain, and the Netherlands, also in the core, are classified as a group of capital exporters and/or financial centers. Since surplus countries often had different experiences in adjustment, we leave these countries out of the core group when we analyze the adjustment process in detail. Furthermore we place Australia, Canada, New Zealand, and the United States into an "offshoots" category. These regions were extensive capital importers, were settled by immigrants of European origins, and also had a special institutional heritage, being members (or once having been members) of the British Empire. The periphery is defined to include Argentina, Austria-Hungary, Brazil, Chile, Egypt, Finland, Greece, India, Italy, Japan, Mexico, Portugal, Russia, Spain, Turkey, and Uruguay. We divide the remainder of the world in this manner because the periphery was, on average, poorer, less financially developed, had institutions that were less conducive to economic growth, and relied extensively on external financing due to its low per capita incomes and deficient pools of domestic savings. At the same time, most of the nations in the periphery had floating exchange rate regimes for significant portions of the period and only a few spells being on a gold standard. At times we separate countries simply into the rich and poor. We define the rich countries to be those with an income per capita in 1913 higher than $2,892, which was the median level of per capita income in 1913.

Current Account Evolution over Time

In Figures 3.13 and 3.14 we illustrate the distribution of current account surpluses using box and whisker plots. These show the median, the 25th

and 75th percentile, and the key outliers at either end of the distribution. These plots also exhibit the adjacent values for each category of country.[18]

Figure 3.13 shows that the core countries had persistently higher surpluses than the other nations, although there are quite a few more outliers at each end of the distribution in the core. The offshoots have a skewed distribution. There are many more country years of deficit than of surplus in the offshoot nations. There are also fewer outliers than in the other two categories. The periphery countries seem to be much more bunched toward the middle as the outside values on the bottom end are far fewer in number. Figure 3.14, which separates countries by whether they are rich, an offshoot, or poor, shows a similar picture. Rich countries again have a much more varied experience than either of the two other categories.

Figures 3.15 through 3.17 represent the time series properties of current accounts in each group of countries for the 1880–1913 period. Figure 3.15 shows the unweighted average current account surplus in the core, offshoots, and the periphery. Figure 3.16 divides the countries of the world into the categories of rich, offshoots, and poor. It is clear that there

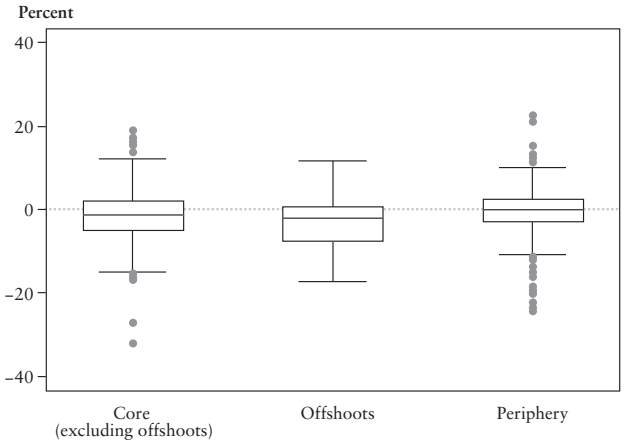

Figure 3.13
Current Account Surplus for All Countries as a Percent of GDP, 1880–1913
Source: Authors' calculations based on various sources (see the section on Data and Methodology, this chapter).

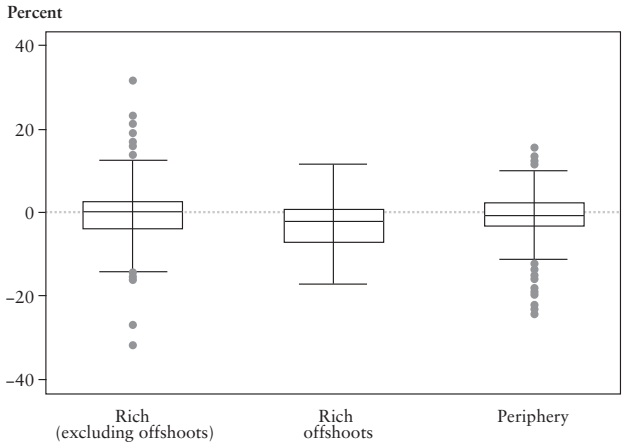

Figure 3.14
Current Account Surplus for Rich versus Poor Countries as a Percent of GDP, 1880–1913
Source: Authors' calculations based on various sources (see the section on Data and Methodology, this chapter).

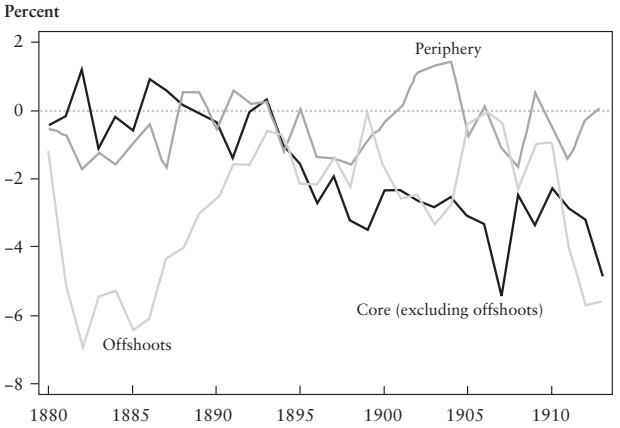

Figure 3.15
Current Account Surplus as a Percent of GDP in Periphery, Offshoots, and Core, 1880–1913 (Unweighted Averages)
Source: Authors' calculations based on various sources (see the section on Data and Methodology, this chapter).

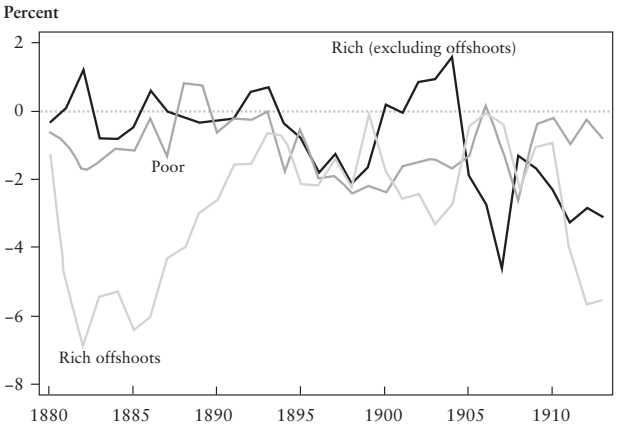

Figure 3.16
Current Account Surplus as a Percent of GDP in Rich and Poor Countries, 1880–1913 (Unweighted Averages)
Source: Authors' calculations based on various sources (see the section on Data and Methodology, this chapter).

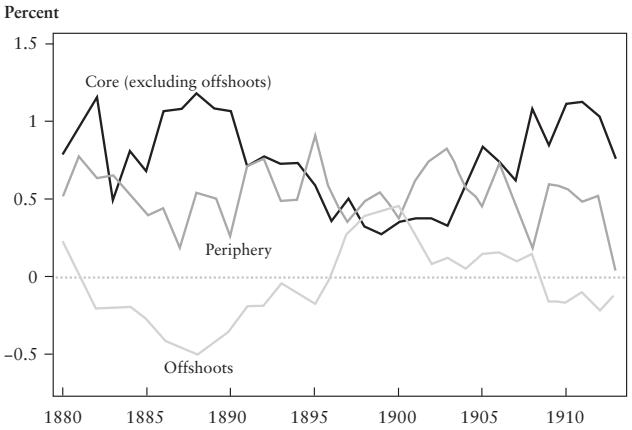

Figure 3.17
Current Account Surplus as a Percent of GDP, Core, and Periphery, 1880–1913 (GDP-Weighted Averages)
Source: Authors' calculations based on various sources (see the section on Data and Methodology, this chapter).

is a strong inverse correlation between current account movements in the periphery nations and in the core. When surpluses in the core countries are high, the periphery tends to move into deficit. These cycles are well known in the historical literature and coincide with movements in the global, and especially the British, business cycle (see Fishlow 1986). In particular, when British investment (usually in residential housing) was high, British capital stayed home and the trade balance in the periphery turned positive. As investment cooled in Britain, capital ventured abroad and allowed for significant increases in the current account deficits of the peripheral nations.

Downturns in the global economy (meaning in Great Britain and in the Western European core, which together made up the principal export markets for the periphery) coincide with increased current account deficits in the periphery as export markets fizzled.[19] Reversals from deficits to surpluses in the periphery are often associated with economic recovery in the core countries, as capital flows emanating from the core dried up during cyclical downturns in the core regions. But such reversals in this period tended to be largely healthy in the sense that these were the natural conclusion of a cycle whereby capital flowed into the less-developed regions to fund infrastructure and other productive investment. When export markets ripened in the core, exports from the peripheral nations increased, helping to repay obligations previously incurred and smooth the adjustment process.

Figure 3.17, showing the *weighted* averages of current account deficits, illustrates these co-movements even more clearly. Although weighting in this way should balance out deficits and surpluses, this is not the case depicted here. For most years a downward shift equivalent to 0.5 percent of GDP would make it so that there was global balance. The reason this does not happen in the sample period of 1880 to 1913 could be because of missing current account information for a small portion of the world's total output. Nevertheless, this figure shows that the total surplus of the core or the total deficit of the periphery was not usually higher than 1 percent of GDP. However, this figure does obscure the large and persistent surpluses previously discussed in the case of Britain.

Current Account Persistence

Early work by Bordo, Eichengreen, and Kim (1998) used AR (1) regressions of the current account to compare persistence of the current account

in the past and present. They found that current account imbalances were significantly more persistent in the past than these have been recently. Taylor (2002) ran separate regressions for 15 countries allowing for dynamic error correction. We generalize these regressions by pooling the data and implementing the following type of vector error correction model

$$\Delta \frac{CA_{it}}{GDP_{it}} = \beta_i \frac{CA_{it-1}}{GDP_{it-1}} + \gamma_i \Delta \frac{CA_{it-1}}{GDP_{it-1}} CA_{it-1} + \mu_i + \delta_t + \varepsilon_{it} .$$

Our sample is slightly larger than that in Taylor (2002). Here, the country-specific β_is represent the adjustment coefficients for each country in the sample. A small adjustment coefficient (in absolute value) implies that current accounts persist at levels far from their long-run values longer than for countries with larger absolute values. Figure 3.18 plots these coefficients and reveals a ranking compatible with previous qualitative assessments. The first batch of countries (from right to left) include the financial centers like Britain, France, and Holland. In the next group of countries, we find the extensive capital importers that ran persistent deficits such as Australia, Canada, and the United States. The implied half-life for current account deficits is roughly three years. Countries further out on the periphery that tended to indulge in revenue financing using the international capital markets, or which were smaller and more susceptible to changes in the moods of the capital markets, such as Chile, Finland, Japan, and Uruguay, witnessed significantly faster adjustment. Their average coefficient of roughly –0.6 implies a half-life of roughly nine months, or three-fourths of a year. The bottom line is that during the 1880–1913 period, many important capital importers were in fact able to run highly persistent deficits, and that surplus countries persistently ran current account surpluses.

We also tested whether several country attributes might be associated with the observed persistence of current account deficits. Specifically, we allowed the adjustment parameter to vary with the level of exports relative to output, the lagged level of output per capita, and the level of the government's currency mismatch. Countries with higher levels of exports for a given level of output (used as a proxy for the level of total trade to GDP) could be expected to have an easier time adjusting in the future, and hence capital markets might be expected to keep the money

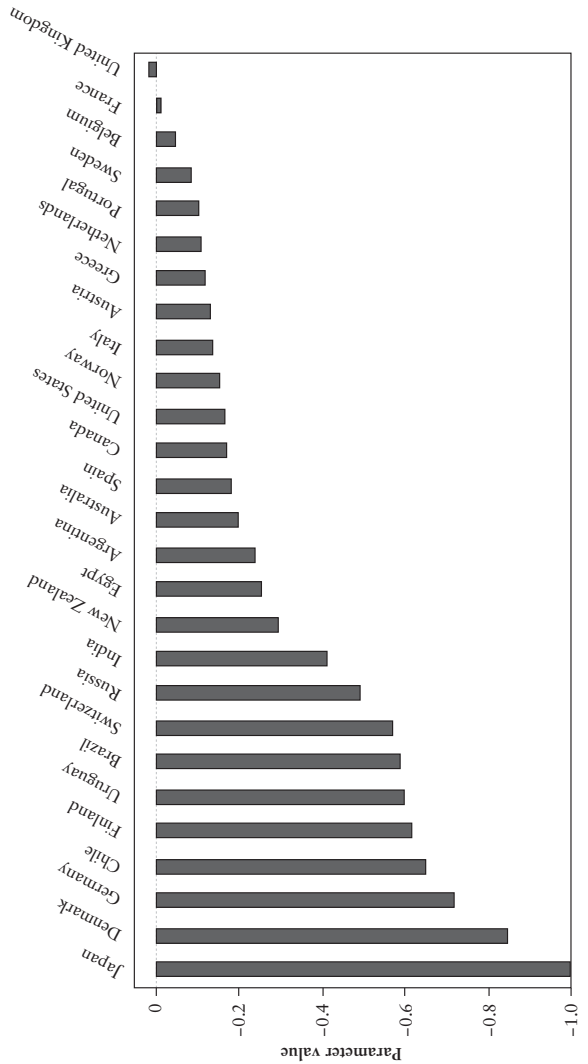

Figure 3.18
Adjustment Parameters, 1880–1913
Source: Authors' calculations based on various sources (see the section on Data and Methodology, this chapter).

flowing in the face of global shocks. On average, such countries would be expected to run more persistent imbalances.

A similar logic might be applied to countries with higher per capita income. At the same time, a higher share of British surplus capital was attracted to higher income per capita countries because investment opportunities were better in these wealthier countries. This division, along expected investment returns, then attempts to control somewhat for differences between imbalances derived from development finance and those associated with stop-gap external funding of frivolous government budget deficits. Fishlow (1986) made such a distinction and argued that the latter type of funding could quickly turn around as markets realized borrowing costs were growing more rapidly than revenue streams or the real economy. Fishlow also argued that countries using foreign capital for development finance could bide their time in the face of slowing export demand by borrowing even more from the international capital markets as these countries' financial sustainability was not necessarily in doubt. Markets could be expected to fulfill this role in the short term, as revenue and profits would be expected to be higher in the medium term. Similarly, if expectations of faster growth relative to world averages were strongest in the wealthy offshoot countries, their current account imbalances could be well justified.

We also checked whether countries with a fixed exchange rate or currency mismatch problems on the aggregate balance sheet had any observable differences in persistence. The logic of including a control for whether the country had a gold standard or not is that flexible exchange rates are typically argued to provide shock absorbers and thus equilibrate more quickly any potential imbalances through much faster changes in the real exchange rate. We define the economy's currency mismatch to be the level of outstanding debt payable in foreign currency or in a fixed amount of gold specie, minus the total reserves in the country normalized by the level of exports (cf. Bordo and Meissner 2007). Countries with larger mismatches could also face confidence problems if, in the event of a current account reversal, the real exchange rate depreciated and made the real burden of repayment more difficult and hence repayment more risky.

To control for all of these risk factors, we ran a regression similar to that above but included interaction terms between the lagged level of the current account and the lagged value of these various controls. If the interaction is found to be positive, it would suggest that the adjustment parameter would move toward zero, and hence that such a variable made it easier to sustain current account imbalances. Table 3.5 shows that countries that have higher per capita output have more persistent current account imbalances. This is further evidence that the capital exporters and the rich offshoots ran more persistent imbalances. Results regarding the exchange rate regime seem inconclusive. The interaction effect is not highly statistically significant nor is the coefficient on the interaction term very large. This is also the case for the terms including an interaction with openness to exports or the currency mismatch variable. Table 3.6 shows the years of high current account deficits and surpluses for various countries between 1880 and 1913.

Current Account Reversals

We now turn to an analysis of the impact of current account reversals on short-run economic growth. Our preferred measure of a reversal is similar to that used in Edwards (2004). We define a reversal as occurring if, in a given year, the current account relative to GDP increases by more than 4 percentage points, and in the previous year the country was in deficit.

Table 3.7 shows the incidence of these "4-percent reversals." Financial centers have *no* reversals in the period between 1880 and 1913. Tabulations show that the core countries, excluding the financial centers, had twelve reversals accounting for 3.92 percent of the country-year observations for this group. The periphery nations had 21 reversals, or 3.86 percent of the country-year observations within this group. So it would appear that outside of the financial centers such as Britain, France, Germany, and the Netherlands, there is little difference between the raw frequency of reversals in the core or periphery nations. In rich countries, excluding the financial centers, the frequency of reversals is double that which take place in the poor countries. In 5.6 percent of the country-years, there is a reversal in the rich countries, while the number is 2.3 percent in poor countries. Together with the previous findings, this result suggests that the distribution of reversals in rich countries might have been highly uneven.

Table 3.8 shows the average levels of the current account balance relative to GDP in each of the three years before a reversal, the year of the

Table 3.5
Current Account Adjustment and its Determinants

Regressors	(1)
Current Account $t-1$	–2.26 [0.72]**
Change in the Current Account $t-1$	–0.12 [0.09]
Current Account × Gold Standard $t-1$	–0.20 [0.10]
Current Account × ln(Real GDP per capita) $t-1$	0.27 [0.09]**
Current Account × Exports/GDP $t-1$	0.00 [0.00]
Current Account × Currency Mismatch $t-1$	0.04 [0.04]
Gold Standard	–1.23 [1.89]
ln (Real GDP per capita)	–0.91 [0.41]*
Exports/GDP	–0.12 [0.03]**
Currency Mismatch	0.19 [0.08]*
Change in log of the real exchange rate	–3.67 [2.73]
Constant	11.75 [14.90]
Number of observations	516
R-squared	0.24

Notes: Dependent variable is change in the ratio of the current account to GDP. The regression includes country fixed effects and year dummies. Robust clustered standard errors are in parentheses. See the text for precise definitions of variables.
* p-value < 0.1; ** p-value < 0.05; *** p-value < 0.01

Table 3.6
Years of "High" Deficit and "High" Surplus

Country	High Deficit Years
(a) Years of "High" Deficit	
Australia	1881–1892
Belgium	1904–1913
Chile	1884–1890 and 1909–1913
Finland	1895–1900
Greece	1880–1889 and 1891–1906
Switzerland	1886–1911
Country	High Surplus Years
(b) Years of "High" Surplus	
Brazil	1900–1911
Egypt	1886–1897
Netherlands	1884–1895
New Zealand	1893–1903
United Kingdom	1905–1913
Uruguay	1900–1904

reversal, and the three following years. We obtain these coefficients from a regression of the ratio of the current account to GDP on three leads of the reversal indicator, the contemporaneous reversal indicator, and three lags. Figure 3.19 shows how the average values of four different groups evolved over the cycle of reversal and recovery. The behavior of core and offshoot countries seems different than the periphery nations' experience. The core countries run higher deficits than other types of countries. Absent this, there seems to be little significant difference between the various types of breakdowns we use.

We also checked more carefully whether if once a reversal had occurred, it was sustained. The answer is yes, for the most part. We say a reversal is sustained if three or five years after the reversal occurred, the current account surplus is still higher than the year immediately before the reversal. Out of 31 reversals, 27 exhibited a sustained turnaround in this

Table 3.7
Countries and Years of Current Account Reversals

Country	Years of 4-Percent Reversals
Argentina	1885, 1891, 1912
Australia	1887, 1891, 1893, 1899, 1904, 1905
Belgium	1881, 1889, 1908
Brazil	1886
Chile	1888, 1898
Denmark	1886
Egypt	1909
Finland	1893, 1901
Greece	1883, 1885, 1893, 1897, 1904, 1906,
Japan	1891, 1895, 1906
New Zealand	1883, 1909
Spain	1905
Uruguay	1908, 1913

Notes: See the text for the definition of a 4-percent reversal.

manner three years after the event. After five years, four of the 29 country-year observations had witnessed a relapse. These statistics reveal that current account reversals were, if anything, more likely to be sustained in the past than in the last 30 years. Edwards (2004) found that between 68 and 83 percent of reversal episodes were sustained, which is slightly lower than our findings.

Another interesting question concerns the relationship between financial crises and current account reversals. Edwards (2004) found that countries experiencing a current account reversal had a significantly greater probability of suffering a large change in the exchange rate (meaning a currency crisis) than countries that did not have a reversal. The idea that currency crises or sharp changes in the exchange rate could be associated with current account reversals is intuitive. In a reversal, all else remaining the same, the price at which domestic goods are exchanged for foreign goods typically must fall with the associated expenditure switching and reduction. If a reversal is associated with a sudden stop of capital inflows

Table 3.8
Average Current Account Levels Before and After a Reversal

Regressors	Pooled (1)	Core Excluding Fin. Ctrs. and Offshoots (2)	Offshoots (3)	Periphery (4)	Gold Std. Ctry.-Years (5)	Non-Gold Ctry.-Years (6)
Current Account Reversal $t+3$	–4.79	–8.10	–6.27	–4.24	–4.27	–5.83
	[1.33]**	[3.45]*	[2.57]*	[1.75]*	[1.32]**	[2.85]*
Current Account Reversal $t+2$	–5.75	–7.48	–6.91	–5.21	–5.38	–6.30
	[1.34]**	[2.65]**	[2.46]**	[1.82]**	[1.28]**	[2.85]*
Current Account Reversal $t+1$	–7.88	–12.77	–7.58	–7.19	–8.17	–7.21
	[1.19]**	[6.11]*	[1.84]**	[1.28]**	[1.46]**	[1.93]**
Current Account Reversal	–1.39	–3.24	–1.28	–1.31	–1.13	–1.83
	[1.05]	[2.57]	[1.81]	[1.44]	[0.96]	[2.38]
Current Account Reversal $t-1$	–2.55	–7.52	–1.33	–2.50	–1.45	–3.81
	[1.33]	[4.02]	[2.12]	[1.73]	[1.65]	[2.15]
Current Account Reversal $t-2$	–3.72	–7.52	–1.80	–3.80	–3.65	–4.00
	[1.08]**	[2.16]**	[1.57]	[1.41]**	[1.07]**	[2.08]
Current Account Reversal $t-3$	–2.40	–3.43	0.45	–3.38	–1.56	–3.34
	[1.14]*	[0.24]**	[1.49]	[1.63]*	[0.83]	[2.13]
Number of observations	728	138	112	366	521	207
R-squared	0.17	0.17	0.30	0.20	0.13	0.32

Notes: Dependent variable is the level of the current account. All regressions include country fixed effects. Robust clustered standard errors are in parentheses. See the text for precise definitions of variables.
* p-value < 0.1; ** p-value < 0.05; *** p-value < 0.01

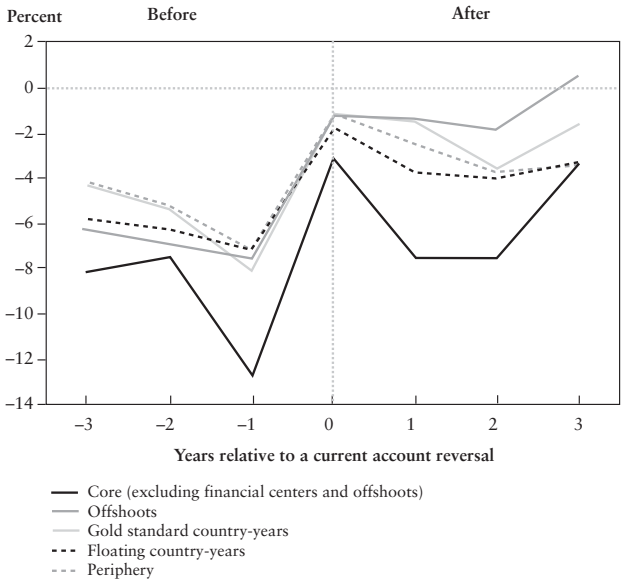

Figure 3.19
Current Account Balances as a Percent of GDP Before and After a Reversal (Averages for Various Groups)
Source: Authors' calculations based on various sources (see the section on Data and Methodology, this chapter).

and reserves are depleted, then the nominal exchange rate could also fall for the reasons contemporary models of the exchange rate suggest. On the other hand, real depreciation via deflation might be a possibility, especially in the gold standard period when many countries had fixed exchange rates under the gold standard. Bordo (2005) discusses how the price-specie flow mechanism operated and suggests that adjustment was often smooth in this period.

In the rosiest of adjustment scenarios, originally analyzed by Feis (1930) and later Fishlow (1986), current account reversals are relatively smooth. Early investments give rise to higher incomes, which allow for increased savings. These adjustment periods are also times in which earlier investments made using imported capital begin to pay off. Dividends reaped by the capital exporters from earlier investments are used to fund

purchases of goods and services from yesterday's capital importers. These proceeds are used to pay interest and principal on earlier debts incurred and the cycle repeats itself. The historical literature suggests that adjustment may have been more difficult in debtor countries that used external funding for "revenue" purposes than in regions that put funds toward further development of the economy and marketable exports.

In our data over the 1880 to 1913 period, the majority of current account reversals are *not* associated with currency crises and banking crises.[20] For the handful of debt crises in our period, there are few reversals surrounding such events. There are no debt crises concurrent with a reversal. Greece had a reversal in the year before its 1894 debt default. Tabulations show that only three of the 33 reversals in our data set are associated with currency crises in the same year. These three are Argentina in 1885, Chile in 1898, and Greece in 1885. The banking crises that have concurrent reversals are Australia in 1893, Chile in 1898, and Uruguay in 1913.

There is a possibility that this result is sensitive to the window of observation. So we created a five-year window for each type of crisis. This indicator equals one if there was a currency, banking, or debt crisis in the current year or within the previous two or next two years. Measured this way, seven out of the 33 reversals are associated with the five-year currency crisis window. Ten out of 33 reversals are associated with the five-year banking crisis window. As it happens, only two of the 33 reversals are associated with our five-year window for debt crises.

There does not seem to be overwhelming evidence of an association between currency crises and exchange rate reversals in this period. This is particularly so for the richer countries that adhered credibly to the gold standard. Reversals such as those which took place in Australia (1891), Belgium (1881), Denmark (1886), Finland (1893), and New Zealand (1893), to name a few, had no currency crisis associated with them. Most of these countries managed to hold on to their gold-based exchange rates despite suffering reversals and even banking crises. In this period, periphery countries that financed deficits with external borrowing and had mismanaged currencies seem more susceptible to being served up crises along with reversals. This begs the question of what the connection is between the real exchange rate and movements in the current account.

Obstfeld and Rogoff (2004) suggest that today a real effective depreciation of the U.S. dollar of over 30 percent would have to arise to allow for enough expenditure switching to rebalance recent U.S. trade deficits. Their model is an endowment economy and does not appear to allow for factors affecting economic growth. This conclusion would seem to bias the result in favor of large exchange rate swings.

The historical literature is not conclusive on the subject. New research by Catão and Solomou (2005) argues that the elasticity of the trade balance (defined as the difference of the log of exports and the log of imports) with respect to the real effective exchange rate was roughly 1. Their sample is for a group of 15 countries between 1870 and 1913. We examine this question slightly differently by presenting regressions of the change in the logarithm of the real exchange rate (where the nominal exchange rate is local currency units per pound sterling) on the contemporary reversal indicator, three lags of the reversal indicator, and country fixed effects. The regression equation takes the following form:

$$\Delta RER_{it} = \sum_{j=1}^{j=3} \gamma_k CA\_REV_{it+j} + \sum_{k=0}^{k=3} \gamma_k CA\_REV_{it-k} + \mu_i + \varepsilon_{it},$$

where *CA_REV* equals 1 when there is a current account reversal. Table 3.9 shows the short-run coefficients for six different specifications. Column 1 pools the data while columns 2, 3, and 4 split the sample by core excluding the financial centers, offshoots nations, and periphery countries. Columns 5 and 6 compare the experience of country-year observations for those nations on the gold standard and for those nations off the gold standard. Figure 3.20 plots these coefficients. Figure 3.21 plots the actual sample average and median change in the real exchange rate from three years before to three years after a current account reversal.

Overall there is some support consistent with the classical price-specie adjustment process. This is most easily seen in the plot of the median real exchange rates. Here we see mild appreciation in the run up to a reversal and mild depreciation after the reversal.

Table 3.9 and our plots reveal that countries see real appreciation in the years that precede a current account reversal. The cumulative sum of all post-reversal coefficients is usually positive, implying that *mild* depreciations on the order of 2 to 8 percent are associated with the years fol-

Table 3.9
Changes in Real Exchange Rates Before and After Current Account Reversals

Regressors	Pooled (1)	Core Excluding Fin. Ctrs. and Offshoots (2)	Offshoots (3)	Periphery (4)	Gold Std. Ctry.-Years (5)	Non-Gold Ctry.-Years (6)
Current Account Reversal $t+3$	–0.01	0.03	–0.01	–0.02	–0.02	0.01
	[0.01]	[0.02]	[0.01]	[0.02]	[0.01]	[0.02]
Current Account Reversal $t+2$	0.01	–0.05	–0.01	0.03	–0.02	0.08
	[0.02]	[0.01]**	[0.01]	[0.03]	[0.02]	[0.04]
Current Account Reversal $t+1$	–0.02	–0.01	0.01	–0.04	0	–0.07
	[0.01]	[0.01]	[0.02]	[0.02]*	[0.01]	[0.04]
Current Account Reversal	–0.02	–0.01	0	–0.04	0.01	–0.09
	[0.01]	[0.01]	[0.01]	[0.02]	[0.01]	[0.03]**
Current Account Reversal $t-1$	0	–0.01	0.02	–0.01	0.01	–0.01
	[0.01]	[0.02]	[0.01]*	[0.02]	[0.01]	[0.03]
Current Account Reversal $t-2$	0	0.01	–0.01	0	0	0
	[0.02]	[0.01]	[0.02]	[0.03]	[0.01]	[0.04]
Current Account Reversal $t-3$	0.03	0.02	–0.01	0.05	0	0.07
	[0.01]*	[0.02]	[0.01]	[0.02]*	[0.01]	[0.02]**
Number of observations	689	140	112	353	495	194
F-Statistic	1.11	3.60***	1.77*	1.77*	0.83	3.03***
R-squared	0.02	0.09	0.06	0.04	0.01	0.11

Notes: Dependent variable is the change in the real exchange rate. Robust clustered standard errors are in parentheses. See the text for precise definitions of variables.
* p-value < 0.1; ** p-value < 0.05; *** p-value < 0.01

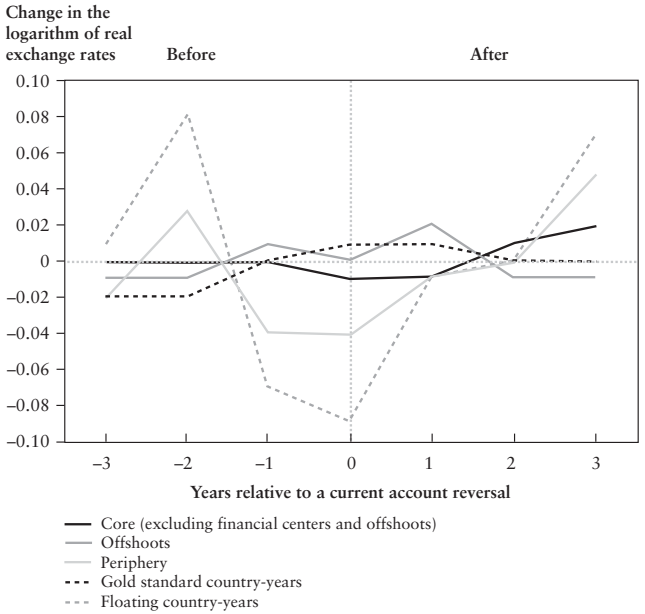

Figure 3.20
Real Exchange Rates Before and After Current Account Reversals (Averages for Various Groups)
Source: Authors' calculations based on various sources (see the section on Data and Methodology, this chapter).

lowing reversals. There is an appreciable difference between countries on the gold standard and countries that are not. Reversals in the non-gold countries exhibit larger real depreciations after a few years. Deficits are associated with large appreciations that continue into the year of reversal. In gold standard countries, the concomitant depreciation seems much smoother and smaller over the years encompassing the reversal and following the reversal. This result contrasts with findings by Freund and Warnock (2007), who looked at similar data between 1980 and 2003. They argued that the movement of the real exchange rate did not depend on whether the deficit was large or small. Our findings suggest that the offshoot countries, which ran the most persistent and highest deficits on average, had significantly smaller depreciations in the reversal period than did the periphery and the floating countries.

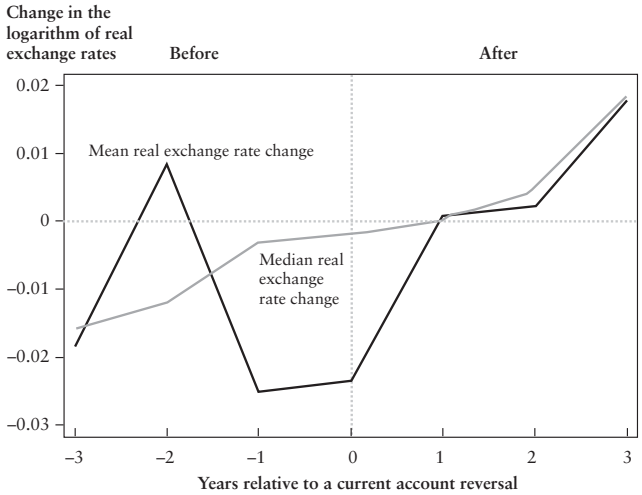

Figure 3.21
Changes in Real Exchange Rates Before and After a Current Account Reversal
Source: Authors' calculations based on various sources (see the section on Data and Methodology, this chapter).

There are few coefficients on the reversal indicators that are individually statistically significant. However, tests of the hypothesis show that the four coefficients are jointly significant and show that the current and lagged values are together statistically significantly different from zero in most specifications, except for the pooled sample and for the gold standard country-years. Our conclusion is that the process of adjustment associated with a reversal entailed a mild depreciation in both the core and periphery countries, and in gold versus non-gold countries. Many possible explanations for such a pattern exist that contrast with current findings. Stabilizing capital flows, rather than destabilizing speculative flows, and more extensive price flexibility may have allowed for smoother adjustment and fewer panics, conditions that resemble the first generation variety of currency crises. Finally, rising incomes associated with these large investment flows also seem to have helped ease the burden of adjustment, so that aggregate demand changes were not associated with large price swings. This explanation vindicates somewhat an Ohlinian view of the conventional transfer problem.

Patterns of Reversals

In this section we analyze the adjustment process in detail. Mechanically, current account adjustments must be associated with a rise in national savings relative to total investment. The route by which countries get to adjustment, however, can vary quite significantly. Countries with fiscal deficits could be forced to eliminate such deficits in the face of capital flow reversals. This situation could lead to sharp falls in output as consumption and investment decline. But not all current account deficits emanate from government deficits and often these deficits reflect high investment in productive enterprises in excess of domestic savings. In such countries, a burst of exports based on earlier investments could facilitate exchange rate adjustment, sometimes even offsetting the required reduction in consumption for consumers and government alike. This can occur as incomes expand and finance the additional savings needed to improve the balance. Nevertheless, Edwards (2004), Adalet and Eichengreeen (2007), and Freund and Warnock (2007) suggest that reversals have been associated with growth slowdowns. These samples are either entirely from the post–1970 period or heavily weighted to describe events post–1913. Given what we have found and our reading of the historical literature, there is reason to believe that prior to 1913 the growth impact of reversals might not have been so pernicious.

In the discussion that follows, we attempt to see whether the various types of countries, which had very different reasons for their current account imbalances, had different adjustment paths. We have data for 15 countries on investment and savings, but the sample is larger when we look at the government surplus, and expands appreciably more when we analyze the growth impact of reversals.

Table 3.10 shows how changes in the ratio of private savings to GDP are associated with changes in the current account balance. We regress the savings ratios on the contemporaneous and lagged changes in the current account. We also include the lagged level of the dependent variable, the average growth rate of the world's economies, the lagged growth rate of per capita income, and country fixed effects.[21] For comparisons we include standardized beta coefficients for the contemporaneous changes in the current account. These coefficients are equal to the estimated coefficient multiplied by the ratio of the standard deviation of the change in

Table 3.10
Dynamics of the Ratio of Savings to GDP

Regressors	Pooled (1)	Core Excluding Fin. Ctrs. and Offshoots (2)	Offshoots (3)	Periphery (4)
S/GDP $t-1$	–0.23	–0.02	–0.17	–0.21
	[0.05]**	[0.02]	[0.06]	[0.03]**
Change in Ratio of Current Account to GDP	0.78/0.49	0.71/0.73	0.85/0.56	0.83/0.54
	[0.09]**	[0.01]**	[0.17]*	[0.22]*
Lagged Change in Ratio of Current Account to GDP	–0.13	0.04	–0.15	–0.04
	[0.07]	[0.06]	[0.06]	[0.09]
Average Growth Rate of GDP All Countries	–0.01	0.09	0.07	–0.04
	[0.09]	[0.01]*	[0.10]	[0.11]
Lagged Growth in per capita GDP	–0.03	–0.03	–0.02	–0.06
	[0.04]	[0.03]	[0.10]	[0.05]
Constant	3.10	0.37	2.06	2.27
	[0.78]**	[0.26]	[0.86]	[0.24]**
Number of observations	471	96	96	151
R-squared	0.41	0.55	0.44	0.45

Notes: Dependent variable is the change in the ratio of domestic savings to GDP. All regressions include country fixed effects. Robust clustered standard errors are in parentheses. See the text for precise definitions of variables.
Absolute values of standardized beta coefficients are listed in row 2 after the estimated coefficients.
* p-value < 0.1: ** p-value < 0.05; *** p-value < 0.01

the current account in the sample to the standard deviation of the dependent variable.

Unsurprisingly there is a positive relationship between the savings ratio and current account reversals in all types of countries. However, there is also a difference between the core countries and the other groups. In the core nations, the savings ratio is more sensitive to changes in the current account measured by its beta coefficient than in the offshoots and the periphery. In the offshoot and periphery countries, there is no discernible difference between the impact of changes in the current account on the savings rate.

Table 3.11 shows the association of the investment to GDP ratio with the current account. The estimating equation follows a parallel specification for the savings equation. Investment declines as the current account strengthens, but there are very significant differences between our various groups of countries. In the core and the periphery, investment clearly falls and makes up in the adjustment process what the rise in savings did not. In the offshoot countries, the coefficient on contemporaneous investment is statistically indistinguishable from zero. Nevertheless the sensitivity of investment to changes in the current account in the following year is nearly the same as in the periphery in the contemporaneous year. While the lag structure is slightly different, the coarseness of the data should be taken into account, and it is likely that investment moved in a similar way both in the offshoots and the periphery. The conventional wisdom is that savings, possibly out of higher incomes, prevented adjustment from being too choppy in the burgeoning offshoots. The data back this up and suggest that the rise in savings makes up for the majority of the compression in the current account, with investment declines accounting for about half as much of the compression.

Changes in public savings make up for the rest of the adjustment, as Table 3.12 demonstrates. Here the dependent variable is the ratio of government surplus to GDP. The point estimates suggest significant differences between our three groups of countries. In the periphery, where borrowing was frequently undertaken to plug fiscal gaps during the 1880–1913 period, we see that reversals would tend to be associated with a rise in the government surplus. In the core, and in the offshoots, the point estimates on the contemporaneous current account terms are both negative and statistically indistinguishable from zero.

Table 3.11
Dynamics of the Ratio of Investment to GDP

Regressors	Pooled (1)	Core Excluding Fin. Ctrs. and Offshoots (2)	Offshoots (3)	Periphery (4)
I/GDP $t-1$	–0.23	–0.10	–0.17	–0.30
	[0.06]**	[0.04]	[0.11]	[0.06]**
Change in Ratio of Current Account to GDP	–0.17/0.18	–0.27/0.38	–0.07/0.06	–0.24/0.26
	[0.06]*	[0.00]**	[0.17]	[0.08]*
Lagged Change in Ratio of Current Account to GDP	–0.18	0.01	–0.25	–0.19
	[0.04]**	[0.06]	[0.05]*	[0.11]
Average Growth Rate of GDP All Countries	0.08	0.11	0.05	0.10
	[0.05]	[0.01]**	[0.14]	[0.06]
Lagged Growth in per capita GDP	0.01	–0.01	–0.03	0.03
	[0.05]	[0.03]	[0.09]	[0.09]
Constant	3.25	1.43	3.00	3.65
	[0.89]**	[0.68]	[2.30]	[0.83]*
Number of observations	471	96	96	151
R-squared	0.17	0.23	0.12	0.24

Notes: Dependent variable is the change in the ratio of investment to GDP. All regressions include country fixed effects. Robust clustered standard errors are in parentheses. See the text for precise definitions of variables.
Absolute values of standardized beta coefficients are listed in row 2 after the estimated coefficients.
* p-value < 0.1; ** p-value < 0.05; *** p-value < 0.01

Table 3.12
Dynamics of the Government Surplus Divided by GDP, 1880–1913

Regressors	Pooled (1)	Core Excluding Fin. Ctrs. and Offshoots (2)	Offshoots (3)	Periphery (4)
Govt. Surplus/GDP $t-1$	−0.77 [0.11]**	−0.71 [0.19]*	-0.31 [0.08]*	−0.83 [0.12]**
Change in Ratio of Current Account to GDP	0.05/0.05 [0.03]	−0.02/0.04 [0.04]	−0.02/0.06 [0.03]	0.10/0.08 [0.05]*
Lagged Change in Ratio of Current Account to GDP	−0.02 [0.07]	−0.08 [0.04]	0.06 [0.03]	−0.04 [0.11]
Average Growth Rate of GDP All Countries	−0.06 [0.04]	−0.02 [0.01]	0.06 [0.08]	−0.18 [0.09]
Lagged Growth in per capita GDP	0.08 [0.02]**	0.04 [0.01]	0.02 [0.02]	0.12 [0.03]**
Constant	−0.85 [0.12]**	−0.26 [0.06]*	−1.37 [0.45]	0.07 [0.11]
Number of observations	619	123	119	268
R-squared	0.41	0.36	0.23	0.46

Notes: Dependent variable is the change in the ratio of the government surplus to GDP. All regressions include country fixed effects. Robust clustered standard errors are in parentheses. See the text for precise definitions of variables.
Absolute value of standardized beta coefficients are listed in row 2 after the estimated coefficients.
* p-value < 0.1; ** p-value < 0.05; *** p-value < 0.01

Together these tables point out that in the distant past century, the major part of the adjustment process came through increased savings. At this research stage we are unable to say whether these increases came out of higher incomes generated by previous investments in plant and infrastructure, or whether these savings are a result of a decline in aggregate demand. Based on the historical literature, we suspect that in the periphery countries it is more likely that we would see declines in aggregate output in the wake of current account reversals. This is because much of the borrowing was not spent on productive enterprises. Even when it was productive, it was invested in development of single commodity export industries that were vulnerable to large price shocks, like guano or coffee. The fact that government deficit financing played a larger role in the periphery countries would tend to damage output growth as well. First, because much of the government expenditure went to pay for current outlays rather than investments, and second, because this type of deficit borrowing is susceptible to crises of confidence, which precipitate relatively large exchange rate swings (as we have seen for the floating periphery in Figure 3.20). These conditions add up to balance sheet crises, as described in Bordo and Meissner (2007).

Tables 3.13 and 3.14 show the impact on per capita output growth of current account reversals. Adalet and Eichengreen (2007) argue that reversals have been associated with lower growth in per capita income and Edwards found a similar result for the post–1970 period. Comparing our results directly to Adalet and Eichengreen is difficult because they pool the data between 1880 and 1997. They do not report separate coefficients for each period and follow a slightly different specification by using the average value of growth in the three years after a reversal as the dependent variable.

In Table 3.13 we follow the specifications from Tables 3.10 through 3.12 and use the growth rate of income per capita as the dependent variable. We also include contemporaneous and lagged changes in the current account balance, the change in world GDP, lagged domestic growth, and country-level fixed effects. We find little evidence that changes in the current account are associated with changes in the conditional growth rates of per capita output. This is true for the pooled sample as it is in each of the subsamples. This result suggests that current account

Table 3.13
Growth Dynamics Versus the Current Account, 1880–1913

Regressors	Pooled (1)	Core Excluding Fin. Ctrs. and Offshoots (2)	Offshoots (3)	Periphery (4)
Change in Ratio of Current Account to GDP	0.09	0.11	−0.03	0.17
	[0.10]	[0.07]	[0.14]	[0.13]
Lagged Change in Ratio of Current Account to GDP	−0.02	0.06	0.29	−0.07
	[0.06]	[0.04]	[0.31]	[0.07]
Average Growth Rate of GDP All Countries	0.40	0.11	1.16	0.17
	[0.13]**	[0.06]	[0.48]	[0.17]
Lagged Growth in per capita GDP	−0.24	−0.07	−0.22	−0.25
	[0.04]**	[0.09]	[0.09]	[0.07]**
Constant	1.13	1.44	0.14	1.41
	[0.20]**	[0.10]**	[0.71]	[0.28]**
Number of observations	756	155	128	345
R-squared	0.09	0.04	0.21	0.10

Notes: Dependent variable is the growth rate of GDP per capita. All regressions include country fixed effects. Robust clustered standard errors are in parentheses. See the text for precise definitions of variables.
* p-value < 0.1; ** p-value < 0.05; *** p-value < 0.01

reversals were not, on average, costly in terms of lost output during the first era of globalization.

The virtuous cycle of investments, growing local capacity, and import absorption in the surplus countries seems to be a stylized fact backed up by a broad statistical analysis of all available data. Moreover, as we have seen, only about one-third of the current account reversals were associated with financial crises. As it happens, even these events do not seem to have been important enough in the overall sample to conclude that these reversals are associated with output losses.

In Table 3.14 we check the robustness of these results by using indicators for our 4-percent reversals rather than the changes in the current account as the key regressors. Here again we find no overwhelming evidence of slower growth during reversal episodes. In the pooled sample, none of the coefficients on reversals are individually statistically different from zero, and jointly they are also statistically insignificant.

Looking at the point estimates, we find the following results. In the core countries, growth is above average in the year of a current account reversal. In the offshoot countries, growth is lower by about 2 percentage points two years after a reversal, but there is no difference in growth rates in the year of and one year after a reversal. In the periphery, growth appears to be lower one year after a reversal. Again the coefficient is only statistically significant at a generous 90 percent level of confidence. The results here again contrast with those of Freund and Warnock (2007). In the last 30 years they found that larger exchange rate movements led to lower output losses. Since we know the core and the offshoot countries clung to the gold standard while the periphery typically floated, it appears that, if anything, on average the gold standard countries with rigid exchange rates had higher growth rates than the periphery countries.[22] Taking the cumulative sum of the point estimates suggests that the wealthier offshoot countries do have a larger dip in output in the wake of reversals than do the rest of the periphery countries. This result is almost surely driven by the severe economic crisis in Australia in the 1890s that was analyzed most recently in Adalet and Eichengreen (2007).

In columns 6 through 8 of Table 3.14, we test whether openness to trade, the level of GDP per capita, and currency mismatches affected output losses in the face of a current account reversal. We do so by sepa-

Table 3.14
Growth Dynamics and Current Account Reversals, 1880–1913

Regressors	Pooled (1)	Core Excluding Fin. Ctrs. and Offshoots (2)	Offshoots (3)	Periphery (5)	Openness (6)	Wealth (7)	Mismatch (8)
Current Account Reversal *t*	−0.52 [0.88]	1.09 [0.21]**	−1.14 [2.82]	−0.67 [1.30]	−2.72 [2.82]	−3.49 [7.24]	−1.12 [1.14]
Current Account Reversal *t* − 1	−0.60 [0.99]	0.27 [0.15]	0.02 [4.04]	−0.95 [0.53]*	—	—	—
Current Account Reversal *t* − 2	−0.13 [0.84]	−0.75 [0.60]	−2.71 [0.90]*	1.20 [0.91]	—	—	—
Current Account Reversal *t* − 3	0.85 [1.14]	−0.30 [0.54]	−0.27 [2.55]	2.34 [1.80]	—	—	—
Current Account Reversal *t* × Exports/GDP	—	—	—	—	0.08 [0.10]	—	—
Current Account Reversal *t* × Lagged GDP per Capita	—	—	—	—	—	0.38 [0.97]	—
Current Account Reversal *t* × Currency Mismatch	—	—	—	—	—	—	0.77 [1.03]
Exports/GDP	—	—	—	—	0.01 [0.02]	—	—
Lagged GDP per Capita	—	—	—	—	—	−3.32 [0.97]**	—
Mismatch	—	—	—	—	—	—	−0.15 [0.14]
Average Growth Rate of GDP per capita all countries	0.44 [0.13]**	0.10 [0.05]	1.26 [0.51]	0.25 [0.16]	0.44 [0.13]**	0.46 [0.13]**	0.55 [0.16]**
Constant	0.75 [0.20]**	1.31 [0.09]**	0.05 [0.68]	0.84 [0.28]*	0.57 [0.43]	26.23 [7.44]**	0.75 [0.23]**
Number of observations	730	150	124	332	787	787	582
R-squared	0.03	0.02	0.18	0.02	0.03	0.04	0.06

Notes: Dependent variable is the growth rate of GDP per capita. All regressions include country fixed effects. Robust clustered standard errors are in parentheses. See the text for precise definitions of variables.
* p-value < 0.1; ** p-value < 0.05; *** p-value < 0.01

rately interacting each of these controls with the contemporaneous reversal indicator. Edwards (2004) argued that more open economies were less likely to suffer growth slowdowns after a reversal. In theory a larger currency mismatch could make it so that a larger primary surplus would be needed to maintain fiscal sustainability in the face of a currency depreciation. An interaction between per capita output and the reversal indicator is an ad hoc comparison, but asks the data whether stronger institutions and better financial development allowed for easier adjustment. In column 6 we find that the interaction term with export openness is positive, but the marginal effect of a reversal at any level of openness is not highly statistically significant. Columns 7 and 8 are equally inconclusive. The impact of reversals does not appear to depend on the level of real output per capita nor on the level of the currency mismatch.

Tables 3.13 and 3.14 suggest that in the first golden age of financial globalization, current account reversals were not unambiguously associated with growth disasters. On the whole, the weight of evidence is for a benign view of current account reversals. If savings were rising and moving more than investment fell during reversals, then this would suggest that a vast majority of reversals were accompanied by enough expenditure shifting (meaning increases in net exports) so as to allow for continued trend growth. This evidence therefore suggests that prior to 1913, current account reversals were just part of a series of mostly amicable games of marbles *à la* Rueff.

Summary: Smooth or Choppy Adjustment?

Our overall assessment about current account reversals arises from a period that witnessed profound international integration in trade and capital markets. This global economic integration had the industrial powerhouse of Western Europe behind it, promoting capital imports in the periphery to further enhance domestic economic growth. The lending cycles often discussed in the literature are prevalent and emblematic of this largely symbiotic relationship. Current account reversals did occur and roughly one-third of these adjustments were accompanied by large swings in exchange rates in the years preceding or following these reversals. However, capital markets were much more stabilizing in the past. These financial markets reacted to local events rather than to global events, and hence crises were less contagious (cf. Mauro, Sussman, and Yafeh 2006). That being the case, current account imbalances persisted especially where markets had the confidence that due care was being taken to ensure that profitable investment returns would eventually result.

When reversals did come in this earlier period, these were mostly accompanied by mild exchange rate fluctuations on the order of 2 to 8 percent over the adjustment phase—nowhere near the 30 percent effective fluctuations that are envisaged by contemporary predictions of adjustment for the current U.S. imbalances. In this earlier era, growth in exports and higher productive capacity overcame the compression in government expenditure and investment that accompanied reversals and created reversal episodes that were not the growth mishaps that seem to be occurring more frequently these days. Why are the effects so different from era to era? Current account deficits and financial globalization in developing countries these days has often been associated with fiscal excess and misguided development attempts in places where supporting fundamentals such as human and social capital were weak and institutions were unpropitious. This description most resembles what happened in the nineteenth century in the peripheral regions. But recently greater contagion and capital market spillovers have also contributed to international capital markets that seize up and lose liquidity even for good risks. Because of the maturity mismatch problem that afflicts countries, many projects go underfunded during the downswing of the cycle. Looking forward after having looked backward, we believe the key determinant of whether current account reversals in the present day will be smooth or not will depend on continued confidence in the international capital markets, and continued efforts to improve future productive capacity in debtor nations. In this case, the eventual and inevitable reversal will more likely be smooth and gentle rather than abrupt and abrasive.

Conclusions

In this paper we have used a comparative economic history approach to study two hotly debated aspects of the current global imbalances: privilege and adjustment.

We find that the special and privileged position of the United States in the global economy of the late twentieth century appears to be on the wane. We make comparisons with the last imperial and hegemonic power, Britain in the late nineteenth century, and find some parallels with the U.S. situation today. Although Britain was a net creditor, its ability to extract privilege appears to have been a phenomenon largely resulting from its status as a global financial pioneer in the 1860s and 1870s. After that period, yield differentials between home and foreign assets closed, and total returns differentials between home and foreign assets fluctuated above and below zero from decade to decade.

For the United States today, as compared to the 1960s, yield privilege appears to be draining away, falling from almost 3 percent to less than 1 percent, despite the rise of riskier foreign investment portfolios. The only reason that privilege has grown as a fraction of GDP is that the leverage has massively increased, with the United States, like many other countries, vastly expanding its external balance sheet through large gross flows since the 1980s. Naïve trend extrapolation is always unwise, but it is especially unwise for considering privilege as a fraction of GDP, because the underlying trends are countervailing, and cannot be expected to carry on forever in the same way. The only offsetting factor is that U.S. capital gains on external wealth appear to be very strong in recent years, but the origin of these is a mystery and their extrapolation even more subject to doubt. If privilege continues to disappear as it has in the past, then, all else equal, an even larger adjustment will be needed.

What can history teach us about adjustment of current account imbalances? We have examined the experience of a large sample of countries and compared their adjustment experiences with those from the recent past. There are striking differences between the results from the recent period and those from the past. Most notably current account deficits were often highly persistent while the adjustment process was not always as fraught with the economic distress economists typically predict today.

Part of this suggests that persistent current account deficits backed by sound investments will pay dividends, and expenditure switching and reduction will not have to be as abrupt as is commonly implied. The large and liquid capital market of London channeled local funds to emerging markets via fixed income investments, and it managed to discriminate between good and bad borrowers. This led to differences in the willingness with which future deficits could be funded. It followed that the deficits in the fast-growing but capital-poor countries were sustainable and these nations had rather smooth adjustments. This is to say that if history is any guide, the extent to which a hard landing will follow today's current imbalances could hinge importantly on the confidence of the capital markets, which is ultimately likely to be driven by the fundamentals.

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Notes

1. See Jacques Rueff, "The Gold-Exchange Standard: A Danger to the West," *The Times* (London), June 27–29, 1961 (translated from the original article published in *Le Monde*, Paris, on the same dates).

2. For Warsh on Wolf, see http://www.economicprincipals.com/issues/05.04.10.html. For the Wolf forum, see www.ft.com/forumwolf. For up to the minute discussions, see http://www.rgemonitor.com/blog/setser/. For a recent overview, see Eichengreen (2006).

3. Due to data restrictions, as a first approximation we shall sometimes treat net labor income from abroad (NLIA) as zero, in which case net property income from abroad (NPIA) equals total net factor income from abroad (NFIA); this treatment is necessary when using contemporary IMF International Financial Statistics data (which do not present separate data on labor income remittances).

4. This method assumes the income balance data are reliable, although there are two concerns that for the United States these data may be biased by artificially high receipts (due to tax shifting to overseas affiliates) and artificially low payments (due to underreporting of income on foreign direct investment in

the United States). The first point need not be an issue for adjustment if this is achieved via transfer pricing, since there is then an offsetting item in the trade balance, as noted by Philip Lane and others; the second point may be an issue, since the U.S. income position is likely being misreported, as noted by Daniel Gros and others (see http://www.rgemonitor.com/blog/setser/). Admittedly there may be other biases in the income balance. Globally, IMF International Financial Statistics data for 2003 show the world has a deficit on trade of 1.6 percent of reported imports (if this is underreporting on the import side it is likely trade tax evasion), but the deficit on the income balance is 6.8 percent of reported credits, suggesting a bigger problem with underreported foreign income. If such a bias applied to the United States in 2004, it would add about $25 billion to U.S. NFIA, a rough doubling.

5. As with the previous method, this method assumes the income flow data are correct. But it also requires that the position data be correct, and here there is even greater controversy. Since NIIP data are usually built up from survey reports, the accuracy and consistency of the reporting is open to question. As we shall see later in this section, there are large changes in NIIP data from year to year that are simply not accounted for by financial flows, exchange rate changes, and price changes.

6. Of the four methods, method 4, recently proposed by Hausmann and Sturzenegger (2006), has probably attracted the most controversy. Opinions are divided on the so-called dark matter hypothesis. It is uncontroversial that the adjusted NFA positions are nothing more than a different way of looking at yield privilege (as the formulae show, there is a direct mapping from yield differentials and gross positions to NFA*). What is still disputed is whether these differentials are an expression of unmeasured exports such as liquidity services, insurance services, or know-how (see, e.g., Buiter 2006 or Brad Setser's blog). Hausmann and Sturzenegger (2006) do find a strong correlation between their dark matter measure (the gap between NFA* and NFA) and foreign direct investment, which is consistent with other research identifying foreign direct investment as the main source of yield differentials (Cline 2005; Higgins, Klitgaarde, and Tille 2005; Kitchen 2006). Disaggregation can illuminate the sources of differentials and how these change over time, but in this paper we look only at aggregate yield differentials and use the adjusted NFA positions solely for that purpose.

7. The existence of such a privilege for the United Kingdom was recently noted by Nickell (2006).

8. The missing category, within two standard deviations of the diagonal, is the neutral zone.

9. For example, when Hausmann and Sturzenegger (2006) find that the U.S. path for NFA* is level while the path for NFA plunges precipitously, they are merely restating in a different metric what Gourinchas and Rey (2007) called the "famous observation that the large increase in U.S. net liabilities to the rest of the world has not been accompanied by a commensurate increase in net income payments;" that is to say, investment income balances have not lined up with the net asset position, so the privilege intercept is positive in (1), as in Figure 3.1.

10. As explained in Davis and Huttenback (1986, p. 84), these measures do not include capital gains, so in this context they are termed rates of yield, in contrast to rates of total return that include capital gains.

11. Another way of looking at this is to note that at the end of the period the nominal yield on assets was 4 percent, and that on liabilities 3 percent, which matches the ratio of 1.3 computed by Gourinchas and Rey (2007); but back in the 1960s, a time of comparable low inflation, the figures were about 3 percent and 6 percent, a ratio of 2.

12. We use the IMF IFS for investment income data proxied by NFIA, and Lane and Milesi-Ferretti (2004) for data on external positions.

13. There may be other countries outside the G7 that have enjoyed a yield privilege in recent times. For example, in an analysis of uncovered interest parity, Switzerland appears to have had a systematic negative risk premium with respect to OECD countries (Kugler and Weder 2005).

14. For the purposes of the counterfactual, we attribute 50 percent of the difference in the yield differential to the yield on assets, and 50 percent to the yield on liabilities.

15. One possible source of these mysterious gains is simply mismeasurement. For example, the statistical discrepancy in the balance of payments is often quite large. As an accounting principle, it appears routine to fold this discrepancy into financial accounts (see e.g. Lane and Milesi-Ferretti 2004, Nickell 2006). This accounting implicitly treats the current account side as the fully reliable measure. In practice, this distribution of the error is unlikely to be correct. Since valuation effects are simply the difference between reported external wealth changes and (minus) the financial account, falsely attributing a part of the statistical discrepancy to the financial account will bias the measure of capital gains.

16. For all other countries, zero is within the 95-percent confidence interval, and mean total return differential range between at most +25 bps (United Kingdom) and –62 bps (Germany).

17. This is presumably driven by those "other" capital gains identified by Kitchen (2006), who found a very similar 210 bps differential.

18. These are found by calculating the upper and lower quartiles. Call them p75 and p25. The interquartile range iqr is then p75 - p25. The adjacent values are the highest value not greater than p75 + 3/2 iqr and the lowest value not less than p25 - 3/2 iqr.

19. However, Britain had a persistent trade surplus with India.

20. We use crisis dates from Bordo, Eichengreen, Klingebiel, and Martínez Peria (2001) that were slightly updated in Bordo and Meissner (2007).

21. Since T is large (34) for most countries in our panel, the Hurwicz-Nickell bias from including fixed effects and the lagged dependent variable is small, so we eschew generalized method of moments (GMM) and other esoteric methods.

22. This assertion holds up to more formal testing. When we interact the reversal indicator with the change in the real exchange rate, the marginal effect is not statistically different from zero.

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Appendix: Data Sources and Notes for our Current Account Econometric Study

The sample of countries in our current account study are: Argentina (SI), Australia (SI), Austria-Hungary, Belgium, Brazil, Canada (SI), Denmark (SI), Egypt, Finland (SI), France (SI), Germany (SI), Greece, India, Italy (SI), Japan (SI), Netherlands (SI), New Zealand, Norway (SI), Portugal, Russia, Spain (SI), Sweden (SI), Switzerland, United Kingdom (SI), United States (SI), and Uruguay.

Not all countries appear in each of the 34 years which we analyze. (SI) indicates the subset of 15 countries that are included in the regressions with the savings and investment ratios.

Current Accounts: Current accounts for Australia, Canada, Denmark, Finland, France, Germany, Italy, Japan, Norway, Russia, Sweden, the United Kingdom, and the United States are taken from Jones and Obstfeld, *Saving, Investment, and Gold: A Reassessment of Historical Current Account Data,* available at http://www.nber.org/databases/jones-obstfeld/.

For the Netherlands, the source is Smits, Horlings, and van Zanden (2000) at http://nationalaccounts.niwi.knaw.nl/start.htm. The current account is calculated as GNP–GDP + Net exports of merchandise and services.

For Chile, the current account statistics come from Braun, Briones Díaz, Lüders, and Wagner (2000), while GDP statistics are obtained from Obstfeld and Taylor (2003).

For all other countries we used the trade balance as a proxy for the current account balance.

GDP and GDP per capita: Data underlying Obstfeld and Taylor (2003)

Real Exchange Rates: Data underlying Bordo et al. (2001).

Savings and Investment Ratios: Taylor (2003)

Government Surplus: Data underlying Bordo et al. (2001).

Exports GDP: Data underlying Obstfeld and Taylor (2003)

Currency Mismatch: Data underlying Bordo and Meissner (2007).

Comments on "Losing Our Marbles in the New Century? The Great Rebalancing in Historical Perspective" by Christopher M. Meissner and Alan M. Taylor

Suzanne Berger

In August 1914 the first great wave of globalization crashed to an abrupt and totally unexpected end, as the outbreak of war suspended trading in all major markets. A financial journalist on the scene recalled a year later:

> It came upon us like a thunderbolt from a clear sky. At the end of July, 1914, any citizen of London who was asked what a moratorium meant would probably have answered that there was not such a word. Possibly he might have said that it was a large extinct woolly beast with big tusks. If he was exceptionally well-informed in matters of finance he would have replied that it was some sort of device used in economically backward countries for blurring the distinction between *meum* and *tuum*. On the second of August we had a moratorium on bills of exchange. On the sixth of August we had a general moratorium.…The machinery of credit broke down in both hemispheres, and London, as its centre, had to be given time to arrange matters under the new conditions. After all, you cannot have credit without civilization, and at the beginning of last August civilization went into the hands of a Receiver, the God of Battles, who will, in due course, bring forth his scheme of reconstruction. (Withers 1915, 1–3)

How the international economy's current account imbalances during the first globalization—with surpluses of nearly 9 percent of GDP in Britain, and very large ones as well in France, Germany, and Netherlands (Bordo 2005)—would have been resolved in the absence of World War I is a question that can never be answered definitively. Even once the God of Battles had settled scores, national barriers to the flow of capital, labor, goods, and services across borders did not come down for another 70 years. The general lesson of this tragedy is one that sheds doubt on any notion about the irreversibility of globalization or the triumph of economic interests over politics. But within the confines of the globaliza-

tion story as it played out before the First World War, there are lessons to be learned from observing the processes of economic and political strain and adjustment. A return to the earlier period suggests, too, that today there are lessons to be learned from the debates among economists then and from considering, in retrospect, whether or not their contemporary analyses and quarrels ultimately identified the most important dangers to the openness and stability of the international economy.

Current debates over the international flows of capital, goods, and services center around the puzzle of privilege—the possibility for some countries to enjoy "an excess return on assets relative to liabilities allowing them to sustain larger trade deficits in equilibrium"—as Christopher Meissner and Alan Taylor define privilege in their contribution to this conference. Why do foreigners, at apparently such low rates of return, continue to invest so heavily in the United States? Why do American investments abroad apparently earn higher returns than investors from other nations derive operating in the same countries? How sustainable is a state of affairs in which the U.S. current account deficit in 2007 was 5.3 percent of GDP, resulting in a debt that over time will place a large share of the country's capital stock in foreign hands? Absent any agreement on the basic mechanisms and relationships underlying the present situation, and absent even any agreement on the existence or not of a serious problem for public policy, scenarios of readjustment in the early twenty-first century diverge widely.

During the first globalization that took place between 1870 and 1914, the mystery at the heart of economists' debates over capital flows was the reverse image of today's situation. A century ago the puzzle was why investors from advanced economies poured capital into peripheral and underdeveloped economies like Tsarist Russia, the Ottoman Empire, Argentina, and Paraguay, even when their savings might have earned about the same returns at home in less risky environments that were better insulated against dramatic reversals of fortune. Even though the British were far better positioned to do well overseas than were investors from other countries, at least in the prewar years after 1900, the British "savvy investor" abroad would not have done better than his more conservative compatriot who kept his money home (Eichengreen 2006). As Edelstein (1982) and Davis and Huttenback (1986) show, rates of return

on British investments at home and abroad in the period 1870–1913 varied considerably over time and even from decade to decade; ultimately the rates of yield for investments made domestically, across the British Empire, and in other foreign locations converged.[1]

For France, which was second only to Britain in the magnitude of the capital it sent abroad during the first globalization, there is the same puzzle of why so much domestic savings was invested overseas; this question stirred up rancorous divisions among economists that spilled over into political debates about whether to institute capital controls (see Cameron 1961 and Berger 2003). For many liberal French economists at the time, there was no debatable issue at all: people invested abroad because the returns on foreign investments were higher than those earned on domestic issues (see Testis 1907, Théry 1908, Brion 1912). But even the mainstream economists of the day, who saw nothing more at work than the expected differences between investing in an old economy with a stagnant demography and investing in large emerging dynamic economies like Russia, calculated that the differences between returns at home and abroad were small. In 1905 Paul Leroy-Beaulieu, a celebrity economist of the era, made the case for buying foreign securities by reasoning that it was just too risky for anyone but experts and the very rich to invest in domestic industries. As for portfolio investment, though the rate of return on foreign issues was only a half point higher than on domestic securities, "disdain for a half percent is turning your nose up at wealth" (Leroy-Beaulieu, 1905, 107–108). Returns varied widely by period. Calculations on the rates of return of French investment abroad show some of the same patterns as those for British foreign investment: those investors who seized overseas opportunities early often did a lot better than latecomers. But as the advice of Leroy-Beaulieu to the neophyte investor implied, over the four decades before the First World War, the gap between the rates of return over any number of years was not so great in either direction that individuals could readily figure out whether their best investments would be made at home or abroad. Indeed, by some estimates, the French would have done better investing in France. Harry Dexter White (1933) calculated 1899 yields on French foreign and domestic securities relative to the price of issue, and found that at 4.28 percent, the yield on domestic securities was higher than on foreign ones,

which earned 3.85 percent. Similar conclusions for the period emerge in Lévy-Leboyer (1977) and Lévy-Leboyer and Bourguignon (1985).[2]

If massive French capital exports were not simply the response to clearly advantageous rates of return, what does explain this phenomenon? As the economists and politicians who challenged the liberal view saw it, the basic error of the liberal proponents was thinking of the world as one in which individuals choose from an array of rates of return. Eugene Letailleur, under the pseudonym Lysis, published a series of articles starting in 1906 that launched the great debate over the outflow of French capital.[3] He argued that it was the institutions of French capitalism that shaped the choices and responses of investors. Far from reflecting the absence of good investment opportunities in France, he contended that bank-led export of capital was one of the principal *causes* of France's slow growth and industrial stagnation. Commercial banks channeled individual savings into foreign investment (because, unlike German banks, French banks had only weakly developed links to domestic industry), earned large commissions from the sale of foreign securities, and manipulated the margins between the rates at which they negotiated foreign loans and the prices at which they sold them to customers. Between 1897 and 1903, for example, a third of Credit Lyonnais's profits came from the sale of Russian securities. From this institutional perspective, individual investors choose only among the investment options they find already in place. So the real reasons behind the massive capital flows from France were the structures of French capitalism and the institutions of French commercial banking.

In the debate over capital exports, another camp argued that money flowed out of France because the government used foreign investment as a lever to increase its power in international politics. As one economist, Maurice Brion, explained, capital exports were a kind of substitute for French weaknesses overall—for the country's sluggish economy and for its inadequate military capabilities. These exports of capital were "the latest form of French influence in the world" (Brion 1912). Take the case of Russia, which absorbed a quarter of all French overseas investment—after the 1870 Franco-Prussian war, French diplomacy was preoccupied with trying to build alliances that would break France's international isolation. French governments of every political stripe saw loans to Russia and foreign direct investment in that country as ways of advancing the cause of a Franco-Russian alliance (Kennan 1984). So French politicians and bureaucrats did whatever they could to promote these flows, and officials even collaborated with Tsarist agents in France to bribe financial journalists to write glowing accounts of the prospects of the Russian economy, even at such unpropitious moments as during the 1905 revolution (Raffalovitch 1931). As loan followed loan and French politicians and senior civil servants began to grasp the disastrous condition of Russian state finances, they also realized that French holdings of Russian assets had become so large that the ruin of the debtor would be a disaster for the creditor (see Girault 1973)—a dilemma still quite familiar to us today. Whatever the enthusiasm of the French state for foreign investments as an instrument of influence abroad, the role of government as a determinant of capital outflows seems a weak explanation because governments had extremely limited powers in this domain. The French government could veto the listing of foreign issues on the Paris exchange, but private investors found this obstacle easy enough to circumvent by going to the stock exchanges in Brussels or even Berlin. And as for positive inducements for investing at home or abroad, the French government basically had no levers at its command to influence such decisions.

Over the decade before the outbreak of war, as the French economists' debates over the determinants of capital outflows continued—were these due to market forces, institutions, or government policy?—these controversies fed into party politics and into a set of legislative proposals for capital controls. As nationalist passions heated up, it seemed that refusing to allow German securities to list on the Paris stock exchange was not enough; laws were introduced to require any foreign borrower of French funds to commit to buying goods from France (or to buy more goods or particular goods from France rather than from Germany—this latter proposal was provoked by Argentina's use of a French loan to buy armaments from Thyssen). Such protectionist legislative proposals were repeatedly defeated. Both with respect to the decisions of private investors and with respect to the use of French monetary reserves to support the gold standard, France before World War I kept its borders open to international trade.

Against a rising tide of nationalism, the political defense of French openness turned out to depend on two improbable allies: the economic liberals, for obvious reasons, and the French Socialist Left. The Left's

commitment to free trade, to open borders for immigration, and to capital mobility is difficult to understand on any purely interest-based rationale. Unlike Britain, where food prices depended significantly on imports, French workers still ate French bread. French workers found themselves competing with immigrants for jobs in sectors like construction and mining. As the Left clearly understood, the heavy flow of capital abroad weakened job creation at home, and also created the prospect of new competitors in the future. Yet in the debates and parliamentary votes on openness, the Left rejected the implementation of market controls. Even when the Socialist leader Jean Jaurès opposed new loans to Russia in 1907, during a period of particularly harsh Tsarist repression, he insisted that Socialists had no principled objection to investing capital abroad: "It would be impossible, and not at all desirable, to forbid French capital to participate in this [cross-border] movement, at a time when the whole world is caught up in this process of economic growth and transformation."[4]

What sustained the Left's commitment to France's role as a provider of capital in the international economy was first, the belief that the gold standard and open borders were necessary foundations of a capitalist economic order. As Polanyi expressed it, "where Marx and Ricardo were at one, the nineteenth century knew not doubt" (Polanyi 1957, 25). Equally important, the Left's support for open frontiers for capital mobility derived from its internationalist ideology: the basic idea that nationalist autarchy was antithetical to a program of uniting workers across borders, and assuring a decent life for people around the world. These socialist convictions meant that the brotherhood of workers should be extended to include even Italian and Polish immigrants, whose presence in the French job market might drive down wages, and even to Russian workers, whose jobs in a French-owned factory in Russia replaced jobs that might have been created at home. In fact, the Socialist Left voted against increasing trade protection, against immigration restrictions, and against capital controls. These internationalist convictions were anchored by the alliances that the Socialists had made with Republicans and economic liberals in the violent French political battles at the turn of the century (the Church-State conflict, the Dreyfus Affair) against right-wing nationalists.

The Left's internationalism was one of the earliest and permanent casualties of World War I. By the end of the war in France, across the political spectrum, nationalism had conquered the field.[5] When issues involving the use of French reserves to support the gold standard, or capital mobility, or trade, or immigration returned to the political agenda in the 1920s, the political alliances that had sustained openness in the first era of globalization could not be recreated. In contrast to the prewar situation, when only 5 percent of France's overseas holdings were invested in French territories, after the war nationalist economic policies prompted a retreat of French foreign investment in order to take advantage of the protective economic barriers erected around French colonies. Coupled with a political backlash against foreign economic interests, these nationalist forces made the prewar economists' debates over capital accounts seem very distant and irrelevant. With the collapse of the political alliances that had once sustained open-market economic policies, in the interwar period the French were never again politically able to engineer the necessary domestic adjustments that would have allowed their reserves to be systematically mobilized to support a gold exchange standard (Bordo 2005).

In 1919 John Maynard Keynes described the illusions about the relationship between politics and economics that the experience of the war had demolished. Before the war, the British had regarded internationalization of their economy as:

> normal, certain, and permanent, except in the direction of further improvement, and any deviation from it as aberrant, scandalous, and avoidable. The projects and politics of militarism and imperialism, of racial and cultural rivalries, of monopolies, restrictions, and exclusion, which were to play the serpent to this paradise, were little more than the amusements of [the Englishman's]daily newspaper, and appeared to exercise almost no influence at all on the ordinary course of social and economic life, the internationalisation of which was nearly complete in practice. (Keynes 1919, chapter 2)

But after the First World War an altogether different understanding of national borders emerged. Protectionism came to seem an essential component of national defense against Germany's economic resurgence. The notion that Britain would inevitably flourish in an international trade regime with free flows of capital, goods, and services seemed suddenly revealed as outdated and illusory wishful thinking.[6] Many of the French

who had participated in the prewar debates and had advocated an unfettered regime of free capital flows also looked back on their earlier positions as naïve, and on the nationalists whom they had once held in contempt as having been, at the end of the day, the true realists.

Just as the political alliance between the economic liberals and the internationalists before the First World War had underpinned the French commitment to open borders for capital flows, in the United States today the political balances preserving economic openness depend on compromises among unlikely allies. But these alliances are fragile and under increasing strain. The reservations voiced by the Democratic candidates in the 2008 presidential primary campaigns about the Doha round negotiations and about the North and Central American Free Trade Agreements are responses to a rising tide of protectionist sentiment. The American public's concern and anger over outsourcing, offshoring, and possible foreign takeovers of U.S. assets (China National Offshore Oil Corporation, Dubai Ports World) have escalated dramatically. The entry of sovereign wealth funds into the capital of large banks and investment firms has fueled anxieties about the penetration of foreign state-controlled actors into positions of influence and control in the American economy. Foreign influence seems to threaten U.S. economic autonomy at the same time as a flood of poisoned toothpaste, pet food, heparin, and lead-painted toys harms American consumers. China is the focus of much of this political agitation, and Congressional leaders from both parties are threatening retaliatory measures against Chinese imports unless China revalues its currency. As Stephen S. Roach, Morgan Stanley Chief Economist, summed up the political atmosphere after testifying before Congressional committees in May 2007, "the protectionist train has left the station" (Roach 2007).

The realistic basis for much of this public anxiety may be thin. Why the agitation about the 1000 percent plus rise in imports of Chinese bras after the end of textile quotas, when bras are no longer manufactured in the United States? Why the political backlash over the offshoring of jobs when the Bureau of Labor Statistics finds very few U.S. jobs that have been terminated because of transfer overseas?[7] Or over the outsourcing of some research and development to China and India when, even setting aside the prominent cases of fraud and theft of intellectual property, reports from the field shows that the capabilities in these dynamic

emerging economies for producing innovative research are still embryonic (OECD 2007, Wilsdon and Keeley 2007)? But the fact is that in the United States public concerns about outsourcing and offshoring have now taken on a political life of their own, with little direct or immediate connection to the underlying economic realities. As Figure 3.22 shows, the rise and fall of media attention to the shifts of capital and employment across borders now has little relation (at least in the short term) to the fall of domestic job creation or to the rise in layoffs. In a climate of economic recession and anxieties over employment, these sentiments are very likely to expand into greater pressure for protection.

If a great political backlash against globalization, with China as its focal point, is in the making in the United States, what if anything can be done about this situation? A return to the lessons of the first globalization suggests two lines of reflection. First, one might wonder about the impact of real exchange rate readjustments and the value of the dollar (which in some of the scenarios envisaged in current debates about global imbalances are extreme) producing pressure for expansion of the U.S. tradeable goods and services industries. If, as Meissner and Taylor suggest, the smoothness of an eventual capital account reversal depends in large measure on building productive capacity in debtor countries, we need to examine the prospects for this taking place in the United States. Would creating more U.S. manufacturing jobs vent some of the protectionist steam that has built up along with the expansion of the balance of trade deficit? Will it actually be possible to restore manufacturing sector jobs that have been lost? Or have the industries that once provided such employment now become so uncompetitive or broken up by the fragmentation of production and the relocation of production around the world that these jobs cannot be recreated in the United States? If the expansion of the trade sector of the U.S. economy is not to take place in manufacturing but in services, how much room is there for the type of growth that will substantially reduce the current account deficit? And which groups of workers in the American population are likely to be able to qualify for such services-sector jobs? The record of success for programs designed to retrain workers is so dismal that most of the new workers for any new jobs in tradeable services would almost surely be new entrants to the job market (coming out of somehow-improved U.S. secondary and tertiary educational institutions.) If the adjustment strategies to rebalance the

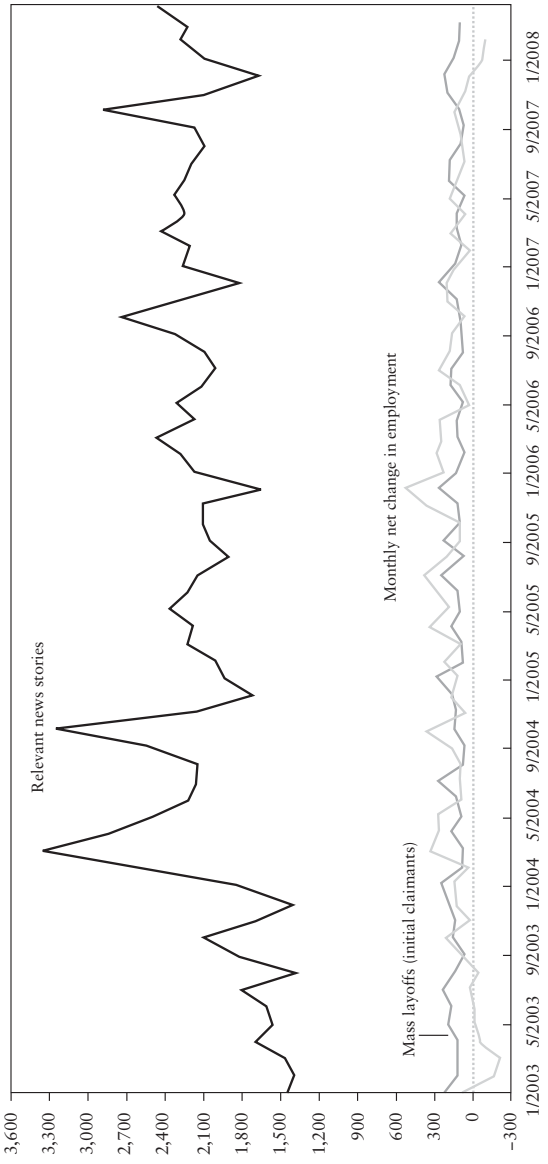

Figure 3.22
Media Attention to Shifts of Capital and Employment Across Borders

United States' current account deficits and trade deficits are supposed to generate more public support for the forces of globalization, there still remain quite a few problems to be addressed and solved.

Second, if the debates among today's economists over the sources of the current global imbalances and the scenarios and strategies of readjustment run the risk of focusing on the economic fundamentals and missing the political clamor rising outside in the streets—exactly what their predecessors did in the great debates over capital flows in the first globalization—what *should* economists now be focusing on to try and forestall the worse political outcomes? Here, my modest proposal would be to consider the public policies that might serve to bolster the U.S. economic system against surges of protectionist sentiment and come up with concrete strategies that would allow us to pay for these policies. Today in the United States anxieties about globalization are exacerbated by the fact that losing one's job usually means losing healthcare for one's family, often retirement benefits, and—over the past few years—the likelihood of having to settle for a new job that pays less than the old one. There are already a large number of proposals on the table, like wage insurance, for dealing with these issues. But implementation has been very weak. For example, the 2002 Alternative Trade Adjustment Assistance (ATAA) program that provides wage subsidies to workers over age 50 who lose jobs because of open trade policy, and are rehired at jobs paying lower wages, covered only 3,864 individuals during the period 2003–2005 (Rosen 2008, 3). What it would take to move ahead on these fronts undoubtedly belongs to a different subfield in the economics discipline than the one in which debates on global balances focus on whether Hausmann-Sturzenegger dark matter explains the apparent positive net income account in the U.S. balance of payments. But there are certainly few intellectual or political challenges as important as figuring out how to design and accommodate policies that could consolidate broad American public support for economic openness within a federal budget that needs to be brought out of deep deficit.

Notes

1. Meissner and Taylor display the Davis and Huttenback calculations in Figure 3.6 in their paper, and the Edelstein calculations on slide 14.

2. For Germany, Richard Tilly (1991) calculated that over the period 1874–1914, the annual rate of return on Prussian government issues (consols) was 4.3 percent; on domestic industrial shares, 9.35 percent; and on foreign securities traded on the Berlin exchange, 6.7 percent. For Germany as for Britain and France, these averages reflect great fluctuations over different years during this 40-year period.

3. The articles were collected in Lysis (1912), *Contre l'Oligarchie Financière en France*.

4. Jean Jaurès, speech to the Chamber of Deputies, February 8, 1907, *Journal Officiel*, p. 338.

5. For the Communist Left, of course, internationalism became synonymous with the defense of the Soviet Union.

6. See also Frank Trentmann, *Free Trade Nation* (2008), chapter 6, on the massive disillusionment about free trade in Britain after the First World War.

7. Bureau of Labor Statistics, U.S. Department of Labor, "Extended Mass Layoffs Associated with Domestic and Overseas Relocations, First Quarter 2004," June 10, 2004, http://www.bls.gov/news.release/reloc.nr0.htm.

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Comments on "Losing Our Marbles in the New Century? The Great Rebalancing in Historical Perspective" by Christopher M. Meissner and Alan M. Taylor

John F. Helliwell

For someone of a certain age, losing one's marbles is about things other than the gross domestic product (GDP) or the balance of payments, so when I first saw the title of the Meissner and Taylor paper I thought they were going to be impolite about the current state of debate and policy relating to the U.S. current account and the exchange rate for the dollar. I was quite mistaken. Instead, this urbane and creative paper adds greatly to the range and quality of comparative data and analysis of current account reversals over the past 120 years.

For decades the use of metaphors in international finance has been so rampant as to deserve inspection by *The New Yorker's* team of metaphor blockers. There was Machlup's wardrobe theory of the demand for foreign exchange reserves, and in the current literature so ably synthesized and extended by Meissner and Taylor, there is even an appeal to "dark matter," which turns out to refer to cosmology rather than witchcraft, although some commentators (for instance, Buiter 2006) on the dark matter approach would think the witchcraft interpretation to be more appropriate.

When Meissner and Taylor talk of having marbles, they are referring to the advantages of being a country with reserve-currency status. This marbles metaphor was inspired by 1961 article in *Le Monde* by the French economist Jacques Rueff, who was in the first instance worried about the long-term implications of balance of payments deficits by the issuers of reserve currencies—especially under the then-operating gold-exchange standard.[1] While Rueff concentrated most on what he saw as the inevitable collapse of such a system, he was also concerned about both the moral hazard and the excess returns to the core country in the

effectively dollar-based Bretton Woods system. The moral hazard worry was that U.S. dollar reserves would be built up by European and other central banks (their winnings in a mercantilist game of marbles), after which the United States would eventually devalue their increasing dollar debts through the U.S. dollar inflation and/or dollar devaluations that would eventually be forced upon dollar-holding countries at the periphery of the Bretton Woods system. And as long as the system remained in place, the United States would benefit from the super-seigniorage accruing to the core country in a fixed exchange-rate system. Under the marbles metaphor, the pressure required to support the system was one part moral suasion on the part of the anchor country (for other central banks to insist on gold settlement would destroy the system), but a decade after Rueff's complaint came more heavy-handed measures. These included the so-called Nixon Shock of August 15, 1971, which imposed import surcharges that were to remain in place until exchange rates were realigned to U.S. preferences.[2]

Meissner and Taylor ask whether, in the forthcoming "great rebalancing," this time the United States will lose its marbles. Answering this question requires that the notion of the game being played be recast, including its rules and whatever new extralegal twists might be devised to get or keep marbles as the rebalancing progresses. This time, compared to the end of the Bretton Woods system in the early 1970s, there is little reference to the United States devaluing the foreign-held marbles.[3] Why the change in emphasis? First, because anyone who now holds U.S. dollar assets does so of their own free will, and not because the rules demand that they do so. Second, almost everyone now expects that the U.S. dollar will in fact fall further in the course of the great rebalancing, so there should be no surprises there. Third, and perhaps most important, there is still widespread belief (in contrast to the 1960s and 1970s) that the United States will do whatever is required to keep domestic inflation rates modest. Thus current holders of U.S. dollar assets think that they will avoid any serious erosion of their real claims on goods and services, at least on goods and services sold in the United States.

If the Bretton Woods-era metaphor does not apply to the current situation of imbalances, then what marbles are at stake, and how can these be retained or lost by the United States in the new century? In the current

rebalancing game, I assume the potential U.S. marble losses will take one of two forms: either through losing the current capacity to generate much higher earnings on U.S. investments abroad than are paid on U.S. liabilities to foreigners, or through experiencing some sort of abrupt hard landing involving nasty macroeconomic consequences.

Meissner and Taylor's paper considers both of these possible forms of losses, and so shall I in these comments upon it. The first form is more in keeping with the zero-sum nature of a game of marbles. The second form, a sudden hard adjustment, may involve losses for all interested parties, a scenario reminiscent of any schoolyard game gone sour, with bad tempers and a possible punch-up. The two forms are linked, and if the proponents of dark matter are correct, then very large U.S. current account deficits are possibly sustainable for far longer than most analysts forecast. This outcome would lessen the likelihood of large and immediate changes in U.S. domestic demand and output, or in the external value of the dollar. Conversely, if the excess return privilege were to evaporate suddenly, then the required adjustment would be that much larger, and correspondingly harder to achieve in a smooth manner.

One of the chief innovations of Meissner and Taylor's paper is to consider both issues in historical context. Their primary reference for the excess rate of return (or "privilege") calculations is the United Kingdom in the late nineteenth and early twentieth centuries, but they also calculate contemporary privilege estimates for the other G8 countries. Based on their analysis of privilege, Meissner and Taylor find no grounds for thinking that today's levels of U.S. current account imbalances are sustainable in the long run. There are several key reasons for this opinion. First, they argue that the currently high rate-of-return differential favoring U.S. assets over U.S. liabilities is a blip in a generally downward trend. Second, a century ago U.K. net foreign income from investments was driven predominantly by positive current accounts and by large and growing net foreign asset positions (reaching 200 percent of GDP by 1913). By contrast, the comparably measured U.S. net foreign asset position is by now well into net liability territory. Third, as long as the U.S. current account remains in significant deficit, the rate of return differential favouring U.S. assets abroad has to be continually increasing, but the trend they find is in the other direction.

Meissner and Taylor agree with Gourchinas and Rey (2005) that some part of the recent increase in U.S. privilege is due to the country's increasingly leveraged position, which is effectively a change from banker to merchant banker, or a situation even further out on the high-risk end of the spectrum. Some analysts have noted that there is quite a lot of leverage inherent in much of U.S. direct investment abroad, with acquisitions and even greenfield projects being largely financed by local banks.

The possibility of generating good ideas for Americans to produce foreign profits while requiring little by way of net capital inflow from the United States lies behind the optimism of those like Hausmann and Sturzenegger (2006). Proponents of this view see this sort of leverage as underpinning the continuing U.S. net investment income from abroad. Like any leveraged position, the situation can turn vicious if and when the profits are not high enough to service the debt. It has long been thought that much of the measured privilege of the United States relative to Canada—Meissner and Taylor report (in their Table 3.1) that the United States has a yield differential (assets versus liabilities) of +1.7 percent, while Canada has one of -1.4 percent— is due to U.S. investments in Canadian branch plants, since Canada has long had the highest share of its business capital stock controlled from outside the country, with the United States as the predominant investor. This privilege of the core versus the periphery underlies much of the Canadian economic historian Harold Innis' staples-based core and periphery theories of North American economic development.[4]

Meissner and Taylor's historical analysis of the macroeconomic consequences of current account rebalancing uses a panel data set, including 33 current account reversals (exceeding 4 percent of GDP) from 13 countries over the period between 1890 and 1913. They find that the more-developed countries and their offshoots were able to run current account deficits more persistently, and had smaller real exchange rate fluctuations and growth reductions in the aftermath of current-account reversals. Meissner and Taylor find no evidence, looking across countries in their historical sample, that increased openness to trade altered the severity of output losses. This makes them more sanguine than are some students of recent data (for instance, see Freund and Warnock 2005) about the possibilities for achieving significant current account reversals without serious macroeconomic consequences.

Which of the earlier historic examples are most relevant today? It is important to distinguish, as do Meissner and Taylor, between the gold standard and the flexible exchange rate cases. Under the gold standard, fewer financial crises were associated with current account recoveries, and real exchange rates have smaller swings, in contrast to the cases taking place under flexible exchange rate regimes. The smaller real exchange rate movements under the gold standard are to be expected, since both then and now real exchange rate shifts are largely driven by changes in nominal exchange rates, which are more volatile than prices of goods and services. Today, flexible exchange rates are the norm, and more real exchange rate volatility is the order of the day, whether or not current account transitions are taking place.

In their interpretation of the historical experience, Meissner and Taylor emphasize that current account reversals occurred most smoothly in those cases where the original deficits were triggered by direct investment, often in natural resources in offshoot economies, and where the current account reversals were fueled by exports, usually resource-based, whose development had been financed by the original investment. When matching imports of goods and capital are part of a foreign direct investment boom, and the subsequent net exports are matched with capital service payments, there is little call for real exchange rate changes.

In these same resource-based offshoot economies, the situation is different in response to changes in the relative prices of the primary products. In such "Dutch disease" cases, terms of trade changes are inevitable, and force real adjustments. In 1950 there was good reason, when agricultural exports from Australia (primarily wool) comprised 90 percent of total exports and 25 percent of GDP, that the Australian dollar moved closely with the price of wool, a situation which foreshadowed the petro-currencies of today (see Helliwell 1984, 1991). I make the parallel between Australia in 1950 and the United States today because in both cases capital was flowing from rich countries to even richer countries. In 1861, real output per capita in Australia was 5 times as high as in Canada, 20 times as high as in Japan, and 40 percent higher than in Great Britain, from

which migrants, goods, and capital were flowing in search of wool and gold (see Helliwell 1984, 1985).

Today there are large movements of migrants, goods, and capital to the United States from many other countries. What is the contemporary parallel with the long-ago lure of the Australian outback? And is this current situation sustainable? Here I combine the consideration of privilege with that of the adjustment process, since I agree with Meissner and Taylor that these two issues are inevitably linked. The primary reason for the linkage is not that any fixed rate of privilege could forever offset the requirements of servicing a growing net debt, because this is impossible. Rather, the link is because any long-run continuing sustainability would require an increasing appetite for investment in the United States. More importantly, because expectations about future international differences in real returns are, in a flexible exchange rate world, what drive the dynamics of the adjustment process, these expectations establish the probabilities of hard and soft landings.

Those analysts who think that the United States' current account deficits are sustainable will be heartened by the Meissner and Taylor finding that richer capital importers in the pre-1913 period had a better chance of sustaining current account deficits for longer periods of time, and of reversing these situations without crisis. What is the current lure of the United States as a global magnet for investment? A decade ago, the mid-1990s high-tech boom was thought to provide the underpinnings for larger net foreign investment in the United States. To some extent, this impetus probably remains the case, although productivity levels and rates of growth in these high-tech industries are notoriously hard to measure. However, the fact that U.S. investments abroad still earn materially more than foreign investments earn in the United States must mean that the hopes of foreign investors for supernormal returns from their U.S. investments are on average not being realized, or at least not yet.

Are there other relevant issues that might have deserved mention in the Meissner and Taylor paper? Given its length and high average value, a general answer must be "no," but it might be worth flagging some items for future consideration. First, one of the important components of the contemporary U.S. balance of payments account is migrants' remittances abroad. These payments have grown very rapidly, especially to Mexico,

and are now about as large, as a share of GDP, as is net U.S. financial income from abroad. Hausmann and Sturzenegger (2006) use a 5 percent rate of return to capitalize a $30 billion net financial income into a net U.S. external financial capital (dark matter) of $600 billion, or 5 percent of GDP. The 2005 U.S. balance of payments account shows net private foreign remittances of $50 billion (see BEA 2008), most of which are workers' remittances (see Congressional Budget Office 2005). A similar calculation for human capital "grey matter," based on remittances, would yield a net foreign human capital debt as great as the net foreign financial asset position calculated by Hausmann and Sturzenegger. This human capital component is embodied mainly in recent migrants, so the net remittances to foreigners might be expected to stop growing as and when the share of foreign-born workers in the United States halts its recent growth. The larger the share of foreign citizens residing in the United States who effectively are guest workers, the larger will be the fraction of their income that is likely to be repatriated.

There is a related issue posed by the growing international trade in services, especially that recent development described as offshoring. In a narrow sense, services obtained offshore count directly as components of imports, and hence toward the current account deficit. In the larger picture, these services may be deemed to be part of an increase in international supply-chain slicing necessary to maintain the growth of average incomes in the world's richest country. As international convergence in per capita incomes becomes applicable to an increasing share of the world's population, terms of trade losses for the richest countries are an inevitable by-product of this process. This is because the countries converging from below inevitably face higher real values for their currencies as part of the adjustment process, although this process may be forestalled during a period (which may be lengthy in the cases of China and India) in which there are still large reserve armies of the unemployed. But throughout most of this adjustment process, factor costs remain higher in the richer nations, and there is continuing pressure to spin off parts of the production process to countries where these tasks can be done more cheaply. If India now represents a cost-effective back office, and by a sufficient margin, then offshoring will be a growing part of the unfolding adjustment process.

If the United States is to remain a magnet for foreign capital inflows, it must be for one of two reasons: either there are key franchise values that exist or can be more easily created there, or else there is no other credible place to store liquid assets. Both of these possibilities lie at the core of the debates about privilege so ably summarized by Meissner and Taylor. In the Bretton Woods era, the pivotal country had a special position, and this unique status provided some basis for continuing privilege. However, the Meissner and Taylor analysis of the pre-1913 returns for Great Britain, which was then at the center of the gold standard and world financial markets, showed modest and declining estimates of privilege. They thereby invite us to conclude that, in today's world of flexible exchange rates and multiple financial centers, the United States is likely to need some fresh sources of franchise value in financial intermediation, as well as in the production of goods and other services. Failing these innovations, then if increasing shares of world portfolios are to be invested in the United States, foreign investors are likely to require higher returns, either currently or in the future, if these present imbalances are to be sustained.

Meissner and Taylor are largely skeptical about there being enough new franchise values in the United States—the Boeings, Coca-Colas, and Microsofts of the twenty-first century—to rationalize continued global net acquisition of claims on the United States. To evaluate the future prospects of this prediction, it would be useful to further unpack recent historical returns, including the mysterious "other" components of the capital gains so critical to the calculation of dark matter. The parallel with Australia a century ago shows that prospects of gold, or other tremendous returns, are enough to get people and investments to flow, and the U.S. economy has had real productivity levels and growth rates to underpin parallel hopes. But the Australian gold boom ended, like all booms do, when there was enough, or more than enough, capital and labor to exploit any high-return investments. When the luster disappears, disappointed investors, especially those following the pack, may flee, just as they did from Asia in 1998.

Meissner and Taylor have done a splendid job of making the history of the last great globalization relevant to the current great rebalancing. In

their admirably understated way, they have argued that there is no credible evidence supporting the status quo, and have shown that the savings and investment patterns that mark today's U.S. current account deficit pose more problems for adjustment than were confronted by Great Britain when the offshoot countries reversed their current account deficits so painlessly a century ago. I agree with Meissner and Taylor on both counts, and have learned much from their evidence and explanations.

In conclusion, is it possible to build on their broad sweep of evidence, and ask if there are systemic implications for the twenty-first century? Thirty-five years ago, Rueff considered fixed exchange rates based on the dollar to be inferior to gold, or some alternative fixed base. Robert Mundell (1973), in his review of Rueff's book, argued that the appropriate alternative was a global currency unit. But in the ensuing decades, the systemic competition has been won by a third option: flexible exchange rates among the major currencies, with peripheral countries choosing from a range of possibilities. Is this arrangement for the better? I think so, for several reasons. First, as I have already noted, the flexible exchange rate system reduces the need for foreign exchange reserves, removes the obligation to accumulate key currencies, and encourages a more symmetric global system. (But, I hear you asking, if this is true, why are so many public and private agents acting as though the Bretton Woods system were still in place? Why do they keep accumulating U.S. marbles? If I knew I'd tell you.)

Second, as global income convergence continues among countries (even if often not within them), substantial increases in the real exchange rates of developing countries are inevitable, and rising external values for flexible exchange currencies may be preferred to domestic inflation as a means of adjustment. Third, for similar reasons, flexible exchange rates may facilitate adjustment for countries subject to terms-of-trade shocks, especially those driven by cyclical movements of energy and other resource prices. Finally, and most relevant to the great rebalancing in prospect, there is more scope for gradual changes in portfolio mixes as different agents change their minds at different times. On this last point there is a reverse possibility, however, as was seen in 1998. If the degree of exposure exceeds the extent of informed opinion, then the possibility

for herding behavior is real. On this score, we'll have to wait and see.[5] But in cases of great uncertainty about appropriate exchange rates, such as that in the early 1970s, there may not be any viable alternative to flexible exchange rates.

Notes

1. "The unending feedback of the dollars and pounds received by the European countries to the overseas countries from which they had come reduced the international monetary system to a mere child's game in which one party had agreed to return the loser's stake after each game of marbles." (Rueff 1961, reprinted in Rueff 1972, 22)

2. Econometric analysis of these measures was the subject of my presentation to the September 1971 conference of the Federal Reserve Bank of Boston on financial relations between the United States and Canada, as described in Helliwell (2005).

3. In 2008, as the United States is trying to deal simultaneously with financial disarray, possible recession, and rising inflation, this possibility is looming larger in public discussions.

4. Innis apparently knew how to work to good effect from the periphery better than most, as he was elected president of the American Economic Association in 1952, the only president in the Association's history who was not a U.S. resident.

5. The rise and post-conference collapse of the U.S. subprime mortgage market can perhaps be added to the list of recent examples.

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