

## CONFERENCE PROCEEDINGS

### **Current Account Sustainability in Major Advanced Economies**

This conference, held at the University of Wisconsin on 28 and 29 of April 2006, presented research on theoretical and empirical aspects of the determinants of major economies to sustain large current account deficits over prolonged periods. The conference is sponsored by the Center for World Affairs and the Global Economy, along with the Robert M. La Follette School of Public Affairs, the Economics Department, and the European Union Center of Excellence. The meeting brought about thirty participants from policy institutions and universities.

#### **Explaining the Global Pattern of Current Account Imbalances**

*Joseph Gruber (Federal Reserve Board) and Steve Kamin (Federal Reserve Board)*

**Abstract:** This paper assesses some of the explanations that have been put forward for the global pattern of current account imbalances that has emerged in recent years: in particular, the large U.S. current account deficit and the large surpluses of the Asian developing economies. Based on the approach developed by Chinn and Prasad (2003), we use data for 61 countries during 1982-2003 to estimate panel regression models for the ratio of the current account balance to GDP. We find that a model that includes as its explanatory variables the standard determinants of current accounts proposed in the literature -- per capita income, relative growth rates, the fiscal balance, demographic variables, and economic openness -- can account for neither the large U.S. deficit nor large Asian surpluses of the 1997-2003 period. However, when we include a variable representing financial crises, which might be expected to restrain domestic demand and boost the current account balance, the model explains much of developing Asia's swing into surplus since 1997. Even so, the model cannot explain why the capital outflows associated with Asia's current account surpluses were channeled primarily into the U.S. economy. Observers have pointed to strong growth performance and a favorable institutional environment as elements attracting foreign investment into the United States, and we found strong evidence that good performance in these areas significantly reduces the current account balance. While a model incorporating these factors still fails to predict the large U.S. current account deficit (and, in fact, predicts a slight surplus), it does predict a U.S. current account balance that is relatively weaker than the aggregate balance of developing Asia.

#### **Discussant's comments:**

*Mark Taylor (University of Warwick)*

Crises may affect current account balances through several channels including reflecting or triggering a cutoff in international credit, which forces a reduction in spending; domestic credit crunch and reduced domestic demand; and domestic balance sheet problems which leads to reduced domestic demand. Gruber and Kamin (2006) use regression model to explain multi-year averages of current account/GDP ratios. They extend time sample through 2003 and add some new explanatory variables (financial crises and government institutions). There are other “standard” explanations for current pattern of global external imbalances. The model can be used to shed light on some, but not all, of the proposed explanations for the global pattern of external imbalances. Choice of explanatory variables is governed by theoretical studies as well as policy analysis. This is not a test of theory per se, but an attempt to weave evidence into a plausible story. Questions remained are: what’s the long run solution, are there non-linearities, and are there omitted variables. Oil exporters’ deficit is not investigated in the current model, but since much of oil exporter’s surplus was recycled to the US bond market, perhaps an oil dummy should be included in the panel. Models with financial crisis and government institution variables can explain the recent large Asian surpluses. However, they do not explain the U.S. deficit. It is interesting data based investigation, and a valuable step in building a plausible explanation of the global imbalances.

### **General Discussion:**

Kamin: Data is averaged over 5-year period, because we want to focus on the fundamental causes. Oil data is more complicated but can be done.

Tille: Why the interaction of crisis and openness coefficient

Kamin: Just to capture some non-linearity, not to propose any intuition.

Lane: China has a role of emerging market, might want to look at components of financial crisis.

Corsetti: Should financial crisis be considered as a fundamental cause?

Milesi-Ferretti: After crisis, Asian countries intentionally attract investment. Is it appropriate to still consider China and Malaysia as in crisis in 2002? Might need a time dummy.

Kamin: It takes many years for banking system to rebuild.

Fratzscher: China’s story is different from other Asian countries. Using country fixed effect might be better than using time fixed effect.

Kamin: Trend would be different across countries.

Menzie: The paper does not ascribe a large role to fiscal policy in driving movements in the current account balance. Using exports and imports for measurement of openness may not be very informative.

### **Three Current Account Balances: A “Semi-Structuralist” Interpretation**

*Menzie Chinn (University of Wisconsin) and Jaewoo Lee (International Monetary Fund)*

Abstract: Three large current account imbalances -- one deficit (the United States) and two surpluses (Japan and the Euro area) -- are subjected to a minimalist structural interpretation. Though simple, this interpretation enables us to assess how much of each of the imbalances require a real exchange rate adjustment. According to the estimates, a large part of the U.S. current account deficit (nearly 2 percentage points of the 2004 deficit of 5.5 percent of GDP) will undergo an adjustment process that involves real depreciation in its exchange rate. For Japan, a little more than 1 percentage point (of GDP) of the current account surplus is found to require an exchange rate movement (real appreciation) as the surpluses adjust down. For the Euro area, less than half a percentage point of its current account surplus is found to require an adjustment via real appreciation.

**Discussant's comments:**

*Kenneth West (University of Wisconsin)*

It is a nice idea to give the global current account imbalance a minimalist structural interpretation. This is first implemented in Lee and Chinn (2006) and is nicely executed. The setup might be too simple though. After all, do the results tell a story consistent with what we think we know about open economies? In addition, inclusion of post-2001 data for the U.S. produces results inconsistent with other countries and samples. Some questions left to be answered: what is the long run forecast for  $q$ , what happens if  $q$  is borderline stationary? Temporary shock is taken as monetary policy shock in the current context. Does historical decomposition support that? Is there any corroborating evidence that preference shifts (or government spending shocks) have been important, relative to productivity? Can one tell a story about the time series of permanent shocks?

**General Discussion:**

Lane: There are all kinds of preference shocks that the model is unable to distinguish. Monetary shock is not necessarily a policy shock.

Rogers: Adding one more variable will make a big difference. Investment might serve as the third variable.

Kamin: This is pure econometric work. Are the results consistent with other theoretical work?

Erceg: GE models say monetary shocks have small effects on current account. With just VAR, we cannot address the issue of sustainability.

Taylor: Current account is assumed to be stationary in the paper, but the data looks more like a unit root series. It would be nice to add saving, investment variables to structure it up.

**Trade Adjustment and the Composition of Trade**

*Christopher Erceg (Federal Reserve Board), Luca Guerrieri (Federal Reserve Board), and Christopher Gust (Federal Reserve Board)*

Abstract: A striking feature of U.S. trade is that both imports and exports are heavily concentrated in capital goods and consumer durables. However, most open economy general equilibrium models ignore the marked divergence between the composition of trade flows and the sectoral composition of U.S. expenditure, and simply posit import and exports as depending on an aggregate measure of real activity (such as domestic absorption). In this paper, we use a SDGE model (SIGMA) to show that taking account of the expenditure composition of U.S. trade in an empirically-realistic way yields implications for the responses of trade to shocks that are markedly different from those of a "standard" framework that abstracts from such compositional differences. Overall, our analysis suggests that investment shocks, originating from either foreign or domestic sources, may serve as an important catalyst for trade adjustment, while implying a minimal depreciation of the real exchange rate.

**Discussant's comments:**

*Nelson Mark (University of Notre Dame)*

International Trade Literature suggests it makes sense to treat investment differently because distance is important for trade (gravity equations); there is regional specialization of capital exports; and distance matters within blocs. But in the SIGMA model, there are a lot of frictions including Calvo rule for firms and for households, capital adjustment costs, exogenous risk premium, liquidity constrained consumers, habit persistence, and import adjustment cost. What does each achieve? Also it is important to show whether the model matches volatility in the data, and whether it capture business cycle properties of the data, especially for the current account and real exchange rate.

**General Discussion:**

Erceg: NOEM models incorporate insights from the business cycle literature, while policy analysis is data driven. Some features in the current model are not crucial in delivering the key results, but are justified in the original SIGMA model.

Engel: Fully optimized models may not be appropriate to address current account sustainability issue.

**Twin Deficits: Squaring Theory, Evidence and Common Sense**

*Giancarlo Corsetti (European University Institute) and Gernot Muller (Goethe University Frankfurt)*

Abstract: Appealing to the twin deficit hypothesis, according to which shocks to the government budget move the current account in the same direction, many

observers call for fiscal consolidation in the US as a necessary measure to reduce the large external imbalance of this country. We reconsider the international transmission mechanism in a standard two-country two-good business cycle model, and find that fiscal expansions have no effect on the trade balance and thus on the current account i) if the economy is not very open to trade and ii) if fiscal shocks are not too persistent. Under these conditions, the crowding out effect of fiscal shocks on private investment is stronger than conventionally believed. We take this insight to the data and investigate the transmission of fiscal shocks in a VAR model estimated for Australia, Canada, the UK and the US. For the US and Australia, which are less open to trade than Canada and the UK, we find that the external impact of shocks to either government spending or budget deficits is limited, while private investment responds significantly -- in line with our theoretical prediction. The reverse is true for Canada and the UK. These results suggest that a fiscal retrenchment in the US may have a limited impact on its current external deficit. However, our results do not weaken the case for fiscal consolidation: by crowding in investment, a fiscal correction will strengthen the ability of the US to generate resources required to service future external liabilities.

**Discussant's comments:**

*Frank Warnock (Darden School, University of Virginia)*

This is an interesting, well-executed paper. We have known that there isn't a direct link between trade and budget deficits, but Corsetti and Müller teach us about the roles of openness and fiscal persistence. They show that fiscal expansions have no effect on trade balance if either the economy is not open to trade, or fiscal shocks are not too persistent. With home bias, fiscal shocks drive wedges between returns on domestic and foreign investment  $r$  and  $r^*$ . The wedges impact investment decisions and eventually the trade balance. The mechanism is through price changes, which then impact quantities. In the relatively open countries (UK and CA), the evidences on quantities are consistent with the model. Fiscal loosening results in a trade deficit but has little impact on investment. In the relatively closed US, fiscal loosening has no impact on trade balance and results in a decline in investment. But in the moderately closed AU, the evidences are less consistent with the model. Fiscal loosening has no impact on trade balance or investment. In addition, theory stresses the role of prices in this paper, but empirical evidence on prices is not supportive. Responses of inflation and interest rates are positive or negative depending on the horizon. Terms of trade generally tend to depreciate. Thus further analysis is needed to understand the response of inflation, the interest rate, and the terms of trade.

**General Discussion:**

Lane: Are the results sensitive to the specification of home bias preference versus the existence of both tradable and nontradable goods?

Tille: The evidence for Australia does not look quite right.

Erceg: Kim and Rubini paper find that fiscal expansion cause real exchange rate to depreciate.

Rogers: Better include more countries. Two-step analysis.

Engel: Infinite horizon model, timing of shocks doesn't matter.

### **Could Capital Gains Smooth a Current Account Rebalancing?**

*Michele Cavallo (Federal Reserve Bank of San Francisco) and Cedric Tille (Federal Reserve Bank of New York)*

**Abstract:** A narrowing of the U.S. current account deficit through exchange rate movements is likely to entail a substantial depreciation of the dollar, as stressed in the widely-cited contribution by Obstfeld and Rogoff (2005). We assess how the adjustment is affected by the high degree of international financial integration in the world economy. A growing body of research stresses the increasing leverage in international financial positions, with industrialized economies holding substantial and growing financial claims on each other. Exchange rate movements then leads to valuation effects as the currency compositions of a country's assets and liabilities are not matched. In particular, dollar depreciation generates valuation gains for the U.S. by boosting the dollar value of the large amount of its foreign-currency denominated assets. We consider an adjustment scenario in which the U.S. net external debt is held constant. The key finding is that while the current account moves into balance, the pace of adjustment is smooth. Intuitively, the valuation gains stemming from the depreciation of the dollar allow the U.S. to finance ongoing, albeit shrinking, current account deficits. We find that the smooth pattern of adjustment is robust to alternative scenarios, although the ultimate movements in exchange rates are affected.

#### **Discussant's comments:**

*Akito Matsumoto (International Monetary Fund)*

Valuation effect is important. This paper provides nice analysis for policy circle. They focus on valuation effect from the (real) exchange rate movement. The current portfolio is used for initial condition, which is more realistic than mirror image model. But more analysis on portfolio choice is needed, in particular, the justification of Asia investing on US liabilities which pay a smaller return than other assets. Possible explanations include: there might be risk and return trade-off; or US assets are safe; or there is the need to hold US dollar as a vehicle currency. In addition, return on each asset group (bond, stock) was higher in the US than in Japan and Europe for the last 15 years, but is it realistic for next ten years? If "exorbitant privilege" is true among developed country, it is probably asset compositions rather than return

discount. We probably need endogenous portfolio allocation with exogenous  $r$ . Dynamic adjustment scenario would be more realistic.

### **General Discussion:**

Cavallo: That US liabilities pay a smaller return than other assets is obtained from the payment data. Asian investors buy low-return bond for reasons like policy objectives.

Erceg: The elasticity of substitution would be changing across time.

Kamin: With GDP growing, debt would be growing, thus can sustain current account deficit. Therefore less adjustment is needed than the model suggests.

Once expectation begins, exchange rate depreciation will last awhile.

Warnock: It is not returns per se that attracts investment.

Engel: Obstfeld and Rogoff (2005) propose an explanation of what got us into global imbalance. That's the key point of their work. It would be more interesting to provide a story about how we got into the imbalance and how we can get out of it, rather than the exogenous-to-endogenous exercise.

### **The External Wealth of Nations Mark II: Revised and Extended Estimates of Foreign Assets and Liabilities, 1970-2004**

*Philip R. Lane (Trinity College Dublin) and Gian Maria Milesi-Ferretti (International Monetary Fund)*

Abstract: We construct estimates of external assets and liabilities for 145 countries for the period 1970-2004. We describe our estimation methods and present key features of the data at the country and the global level. We focus on trends in net and gross external positions, and the composition of international portfolios, distinguishing between foreign direct investment, portfolio equity investment, official reserves, and external debt. We document the increasing importance of equity financing and the improvement in the external position for emerging markets, and the differing pace of financial integration between advanced and developing economies. We also show the existence of a global discrepancy between estimated foreign assets and liabilities, and identify the asset categories that account for this discrepancy.

### **Discussant's comments:**

*Manuela Goretti (Warwick University)*

Lane and Milesi-Ferretti (2006) construct a global dataset with rigorous methodology. There are some limits though on data availability. There are still few observations for several countries, and it would make a big improvement if data can be available at a quarterly frequency for IC group. Greater data availability on financial derivatives and transactions via offshore centers, insight on portfolio composition as well as returns differentials across asset categories and countries, and details on components of changes in the country

international investment position are also important. This paper provides an essential resource for empirical applications and in general for a better understanding of international markets. There is scope for further extensions and updates as new data becomes available

### **General Discussion:**

Milesi-Ferretti: Only a few countries provide quarterly data. Besides, high frequency data is not appropriate for stock prices, because they are too volatile.

Warnock: Security level asset surveys should be conducted. That way we won't "make up" flows simply from initial levels and ending levels.

Rebucci: There is timing issue for global imbalances and financial integration. Financial integration isn't driven by global imbalance.

### **Productivity Shocks, Budget Deficits and the Current Account**

*Matthieu Bussiere (European Central Bank), Marcel Fratzscher (European Central Bank), and Gernot Muller (Goethe University Frankfurt)*

Abstract: Currently the U.S. is experiencing record budget and current account deficits, a phenomenon familiar from the "Twin Deficits" discussion of the 1980s. In contrast, during the 1990s productivity growth has been identified as the primary cause of the US current account deficit. We suggest a theoretical framework, which allows us to evaluate empirically the relative importance of budget deficits and productivity shocks for the determination of the current account. Using a sample of 21 OECD countries and time series data from 1960 to 2003 we find little evidence for a contemporaneous effect of budget deficits on the current account, while country-specific productivity shocks appear to play a key role.

### **Discussant's comments:**

*John Rogers (Federal Reserve Board)*

BFM (2006) find no evidence for Twin Deficits story for CA determination. It might help though to examine time-variation in estimates and to relate more to the existing literature. In particular, an alternative approach would be to follow Gregory and Head (JME, 1999), and decompose current account into four components: world-wide component, country-specific productivity, investment fluctuations, and residual associated with fluctuations in neither productivity nor investment. Other alternatives include Chinn-Prasad (JIE, 2003) and Nason-Rogers (JMCB, 2002).

### **General Discussion:**

Lee: It would be better to be more serious about the component of country specific shocks.

Milesi-Ferretti: Fiscal deficit is not the whole story about current account deficit.

Lane: It's not plausible that all countries respond the same way to the global productivity shock. But it may be hard to implement the asymmetry empirically.

Taylor: Including linear/nonlinear time trends to the specification may increase the fit.

### **The Valuation Channel of External Adjustment**

*Fabio Ghironi (Boston College), Jaewoo Lee (International Monetary Fund) and Alessandro Rebucci (International Monetary Fund)*

Abstract: Ongoing financial integration across countries has greatly increased two-way foreign asset holdings, enhancing the scope for a "valuation channel" of external adjustment (i.e., the changes in a country's net foreign asset position due to exchange rate and asset price changes). We examine this channel of adjustment in a dynamic stochastic general equilibrium model with international equity trading. We find that two-way foreign asset holdings are necessary for the emergence of a valuation channel. Its quantitative importance depends on features of the international transmission mechanism such as the size of financial frictions, substitutability across goods, and the persistence of shocks. We also find that the model can replicate key moments of changes in the U.S. net foreign asset position.

#### **Discussant's comments:**

*Philip Lane (Trinity College Dublin)*

The authors develop a natural baseline model featuring with convex financial intermediation costs of holding foreign equity. Alternatives: would be transaction costs in financial flows, tax on foreign dividend income. In the model, only capital income risk can be shared, but returns to capital and labor are perfectly correlated. Might consider adding other frictions like home bias in consumption, trade costs in goods markets interacted with asset market frictions, sticky prices, or extensive margin. High correlation in equity returns limits the role for valuation channel, and in the model, valuation gains are counter-cyclical, but in the data, valuation gains are procyclical. Financial globalization also reduces relative importance of valuation channel. It would be interesting to look at how the adjustment in financial globalization (symmetric or asymmetric) would impact valuation and current account in the transition, also the case with differential returns to capital and labor.

#### **General Discussion:**

Rebucci: It's important to include a variable component of the financial intermediation cost, rather than simply focusing on the fixed cost.

Corsetti: The international portfolio structure and the intermediation cost structure seem to be just arbitrary.

Engel: Valuation change is only second-order important. It doesn't necessarily matter to real economic terms.