

Saving and Investment in the Open Economy

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1 Balance of Payments Accounting

- The balance of payments tracks payments to and from foreigners.
- Transactions resulting in a payment *to a foreigner* enter as a *debit* (-)
(imports of goods, services, assets)
 - A US firm imports bananas from Mexico - transaction resulting in a payment to foreigners, so a debit
- Transactions resulting in a payment *from a foreigner* enter as a *credit* (+)
(exports of goods services, assets)

- The US firm pays for the bananas by writing a check on a US bank. Mexico receives the check and must do something with it. Let's say it deposits it into a US bank. Therefore, the US bank has sold an asset - the demand deposit - to Mexico. The sale of the asset results in the need for a payment from a foreigner (the check) and enters as a credit (+).
- Double-entry book-keeping - each transaction enter twice - import bananas and pay for them by exporting a bank deposit
- Accounts in the balance of payments
 - Current account = net exports of goods and services (NX) + net income from abroad (NFP) + unilateral transfers

- * to understand unilateral transfers - country exports an asset (perhaps dollars in a bank account) and doesn't really import anything
 - create the item unilateral transfer to indicate the offsetting import transaction

- Capital and financial account
 - * Capital account is non-market transfers - very small and unimportant for US

 - * Financial account is net exports of assets and is large and important

 - * Official settlements balance is a subset of the financial account and measures net exports official reserve assets - a central bank can export reserves to help pay for a current account deficit

- Current Account + Capital and Financial Account = 0

$$CA + KFA = 0$$

- If we have net imports of goods must have net exports of assets to pay for them.
- Continued current account deficits imply continued capital and financial account surpluses as we export our assets to foreigners
- BEA estimates net foreign debt at about 20.7% of US GDP (\$2,484.2 billion at end of 2004).
- Yet, net foreign income from assets is positive

2 Saving and Investment in a Small Open Economy

- Income in an open economy includes net factor payments - goods market equilibrium

$$Y + NFP = C^d + I^d + G + NX + NFP = C + I + G + CA$$

- Saving = Investment + Current Account

$$S^d = (Y + NFP - T - C^d) + (T - G) = I^d + CA$$

- Saving can increase capital stock through investment
- Saving can increase net foreign assets through a current account surplus

- Interest rate in a small open economy is determined in world markets, not in the small open economy
- Graph - horizontal excess of savings over investment at the world interest rate is the current account surplus
 - Shocks which change desired investment
 - Shocks which change desired savings
- National Wealth = Capital + Net Foreign Assets (NFA)

3 Sovereign Debt Crises

- A country can borrow on international markets so that $S^d - I^d = CA$ only if international creditors are confident that the country can repay the debt it is incurring.
- Government intertemporal budget constraint with outstanding debt (B): must plan to raise taxes not only to finance current and future spending, but to pay off initial debt

$$B + G + \frac{G^f}{1 + r} = T + \frac{T^f}{1 + r}$$

- Future debt will grow (shrink) as taxes fall short of (exceed) finance gov-

ernment spending and interest payments on debt

$$B^f - B = G + rB - T.$$

- Assume that the economy goes into a recession today such that government spending rises and taxes fall as policy responds to the needs of the recession. This implies that the government will increase its debt. Suppose additionally that the government has no credible means by which it can promise to cut future spending or raise future taxes.
 - Response of international creditors?
 - Response of domestic government?
- Alternatively, assume that world interest rates rise

- Sovereign Debt crises of the 1980's
 - Countries had high debt, partly due to oil price shocks of 1970's
 - Partly borrowing to finance investment in excess of saving along a growth path (next chapter)
 - US monetary policy to reduce inflation increased world interest rates and induced world wide recession, reducing LDC exports and thereby reducing incomes and tax revenues
 - Countries were required to pay interest and maturing debt
 - As long as countries have debt they cannot even service (interest + maturing debt), cannot borrow on international markets

- Mexico 1994

- Mexico had large CA deficits as $I^d > S^d$
- Large I meant rapid growth and ability to repay
- Government had made recent reforms to reduce budget deficits and inflation
- NAFTA fuelled expectations of growth
- Crisis trigger - political instability caused investors to question whether government could maintain reforms - could government really deliver on low G^f and high T^f to enable it to pay off its debt?
 - * Foreign creditors suddenly withdrew funds

- * Since could not borrow, forced contractionary policies which caused recession.
- Lesson: can have a current account deficit with $I > S$ only if creditors are confident that repayment is likely

4 Saving and Investment in a Large Open Economy

Assume that the world has two countries, a domestic country and a foreign country. These “countries” are relatively similar in size, maybe the US and Europe.

- World goods market equilibrium determines the world interest rate.

$$S^d + S_{FOR}^d = I^d + I_{FOR}^d$$

- Graphically - determine world interest rate and current account balance for each country. Note the world current account balance must be zero.

- Effect of a policy which reduces US saving
- 1970's - large increase in OPEC savings due to high oil revenues
- early 1980's large reduction in US saving

5 Fiscal Policy and the Current Account

What is the effect of a current tax cut on the current account?

- The tax cut cannot occur alone as it would violate the government's budget constraint.
- We do not know what will adjust in the future to assure that the budget constraint holds. Or in some cases we cannot be sure that the government will not end up failing to adjust future policy and defaulting on debt. For now, assume the government is sure to repay.
- Let the tax cut be offset by a future tax increase.

- Since consumption depends on the present value of taxes and there is no change in the present value of taxes, there is no change in consumption.
 - There is no effect on either saving or the current account.
 - There is an increase in the current budget deficit to be offset in the future by a budget surplus.
 - If agents were liquidity constrained then the tax cut might increase consumption and we would have a budget deficit and a current account deficit, “twin deficits.”
- Let the tax cut be offset by a future government spending reduction.
 - The present-value of taxes has fallen, so consumption rises.

- We have a current account deficit and a budget deficit, “twin deficits”.
- Next period when government spending falls, we will have a current account surplus and a budget surplus “twin surpluses”.