Introduction to Macroeconomic Analysis Through Financial Programming

Focus on External and Fiscal Accounts

Bryce Quillin

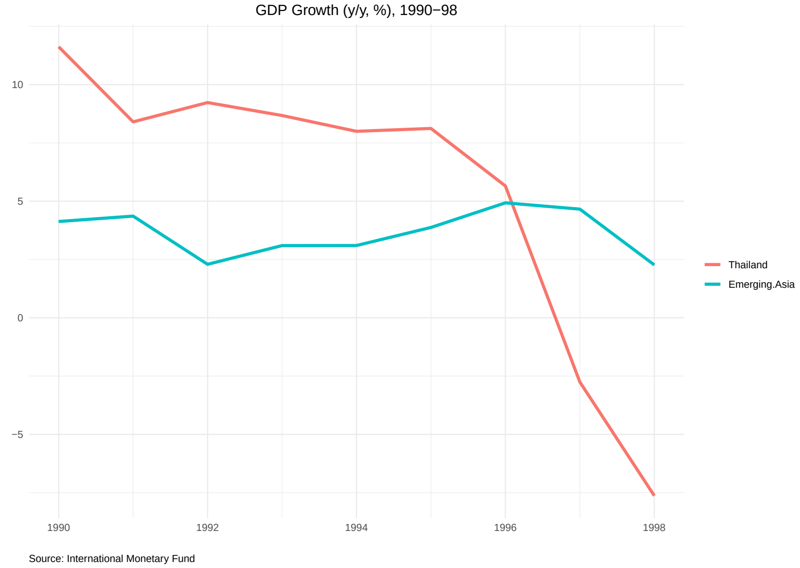
https://github.com/bquillin12/lecture_external_accounts.git

General framework

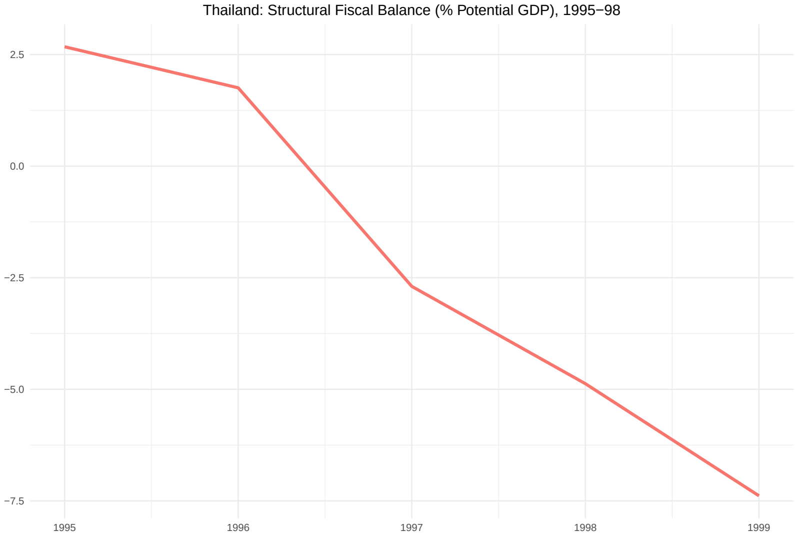
- Real economy (output, price level, exchange rates)
- *Government sector (fiscal revenues and expenditures)*
- Monetary and financial sector
- *External sector (BoP and IIP)*

Modeling requires these four sectors to be consistent with one another

A case study: Thailand in 1997

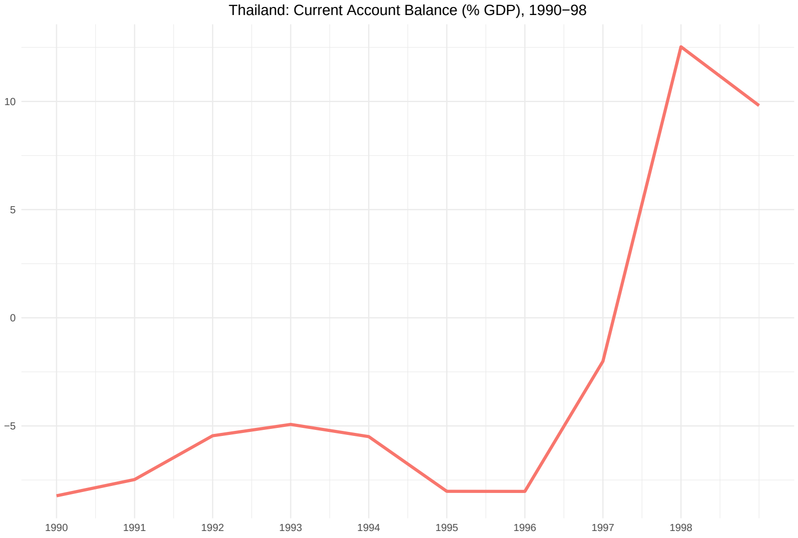


The fiscal deficit deteriorated



Source: International Monetary Fund

The current account improved as demand collapsed

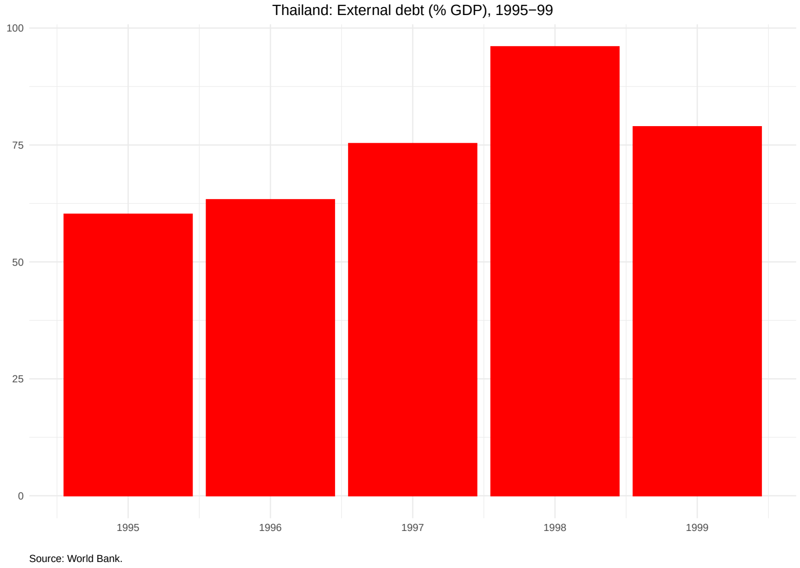


Source: International Monetary Fund

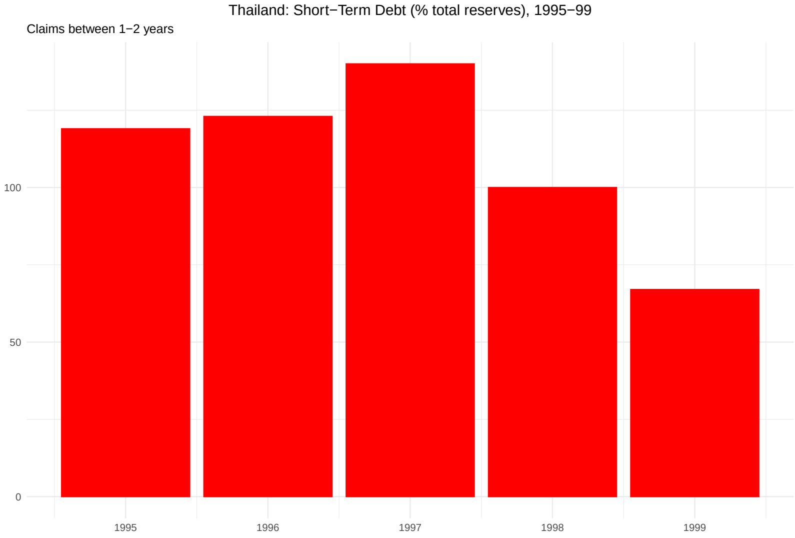
Reserves disappeared fast

Source: International Monetary Fund

External debt stocks exploded



A large stock of debt was on short maturities



Source: World Bank.

External sector

- Free trade a rare area of consensus among economists
- International trade allows global production to be organized more efficiently: international division of labor
- Breaks the identity that domestic consumption and investment = domestic production
- Spending in excess of domestic production can be financed by accumulating external liabilities
- Excess of production over spending results in accumulation of external wealth

External sector and international political economy

- External imbalance tell you a lot about a country
- Its stage of development
- The adquacy of its policies (macroeconomic as well as structural)
- A major source of economic and financial crises, perhaps with politic origins ans always with political consequences
- Cross-national external imbalances a source of international conflict
- Debates about excessive surpluses or deficits
- Long standing debate on “who adjusts?”
- Involves the contribution of international institutions (e.g., IMF)

Balance of payments - some basics

- Records transactions of goods, services, and assets between residents and foreign residents in two separate accounts:
  - Current account
  - Capital and financial account
- Transactions recorded in a major international currency, normally USD
- Complied on accrual accounting basis
- Constructed with double entry accounting system: $+$ is a credit and - a debit.

BOP - Current account

- Goods - Trade balance = exports - imports of goods
- Services
  - Transporation/travel
  - Government services +Other services
- Income
  - Compensation of employees
  - Investment income
- Current transfers

The CA balance is often short hand for a country's external position

BOP Capital account

- Capital account:
  - Capital transfers
  - Acquisition/disposal of non-produced, nonfinancial assets
- Financial account
  - Direct investment (FDI), net
  - Portfolio investment, net
  - Other investments, net
  - Loans, trade credits
  - Reserve assets - finance imbalances elsewhere in BOP (important to understand)

Determinants of CAB: savings and investment - absorption approach

- CAB = Gross national disposable income (GNDI) - Absorption (A)
- CA deficit occurs when a country spends beyond its means or absorbs more than it produces
- Thus, reducing CA deficit requires an increase in income and/or reduction in absorption
- Increasing output (and hence income):
  - Short-term: requires unused capacity
  - Medium-term: increased production capacity through investment, labor force participation, and structural policies
- Reducing absorption achieved by contracting final consumption or investment

Determinants of CAB: savings and investment - SI approach

- Savings-investment balance approach
  - CAB = Savings - Investment
- In this view, CAB reflects country's use of foreign savings
- Excess of investment over savings must be covered by foreign saving
- CA deficit thus reduced by increasing savings and/or reducing investment

Determiants of CAB: capital flows and reserves

- The CAB identities imply:
  - CAB + Net Capital Inflow (FI) - Change in Reserves (delta RES) = 0
- CA deficit can be maintained only as long as capital inflows persist and/or net official international reserves decline
- Large and persistent CA deficits and increasing net international indebtedness raise questions over sustainability

Are current account deficits or surpluses bad? (1)

- In principle, deficits and surpluses are normal and may be related to stages of development
- Lower income countries might run CA deficits as part of economic development: there are profitable domestic investment opportunities but insufficient finance (capital should flow "downhill")
- CA deficits may be optimal response to temporary negative shock
- Aging economies may run CA surpluses as foreign assets are accumulated to fund retirement consumption
- CA surpluses may reflect attempt to "insure" against financial crises or cyclical downturns in commodities prices

Are current account deficits or surpluses bad? (2)

- On the other hand, CA surpluses or deficits may reflect broader problems in macroeconomic or structural policies
- For example, excessive domestic demand pressures may result from loose fiscal policy, translating into higher imports with no corresponding increase in exports
- Or expectations for excessively tight monetary policy or weak labor markets may encourage high household savings rates and surpress demand for imported goods

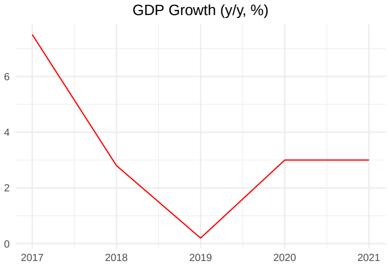
Indicators of external vulnerability

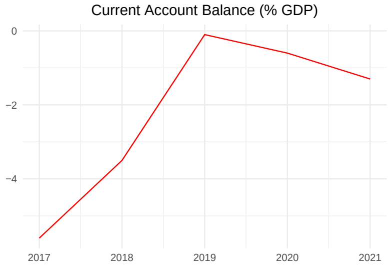
- In countries without or limited capital markets access, CA deficits are financed through changes in gross foreign reserves. A risk indicator for these countries is the stock of international reserves to monthly import bill. The standard is normally that three months is sufficient
- For those with capital markets access, CA deficits can be financed through foreign borrowing, portfolio inflows, or FDI. The composition of financing matters, some specific metrics include:
- Ratio of short term debt to reserves
- Exchange rate behavior
- Interest rate spreads against a benchmark, such as U.S. government bonds
- Is country vulnerable to financing disruptions

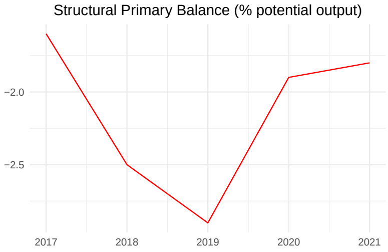
Current account and the real exchange rate

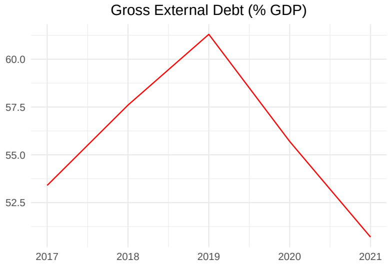
- CA position closely linked to the level of the real exchange rate (= price of domestic consumption basket vs. foreign consumption basket)
- A real exchange rate appreciation occurs when domestically produced goods become more expensive than goods produced abroad
- As labor is the largest component in most sectors, labor costs are a big determinant of domestic inflation and unit labor costs are another basis to measure the real exchange rate
- Normally a real exchange rate appreciation will lead to a deterioration in the CA

Now let's look at another case study, Turkey, where growth has slowed..









Source: International Monetary Fund.