

International Finance

The Balance of Payments I

Current account


2014-2015

☞ **Global risk assessment starts with the Balance of payments!**

1. Inflation and exchange rate variations
2. $C > S$ = Structural or short-term deficits?
3. Trade flows and competitiveness
 4. External financing flows
 5. Capital flight
6. Liquidity or solvency problems?
 7. Debt crisis!




MH BOUCHET/SKEMA (c) 2014



Balance of payments

Accounting framework and statistical record of all economic and financial flows that take place over a specified time period between residents of the reporting country and the rest of the world

The time period itself is arbitrary: common practice to supply BOP data on a monthly, quarterly and yearly basis (IMF)

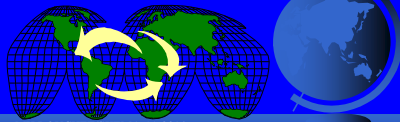


MH BOUCHET/SKEMA (c) 2014

☞ **Double bookkeeping:** Summary statement that records as a credit (+) any transaction resulting in a **receipt** from the rest of the world and as a debit (-) any transaction resulting in a payment

☞ BOP transactions (inflows/outflows) lead to changes in supply and demand for foreign exchange, hence an impact on exchange rates, reserve assets and on FX markets


☞ Accumulation of **flows** leads to asset or debt **stock** variations



MH BOUCHET/SKEMA (c) 2014


Residents? = Government, households, individuals, NGOs & private non-profit entities, and firms.

- MNCs are by definition resident in more than one country. The MNC's subsidiaries are treated as resident in the country in which they are located even if their shares are actually owned by foreign residents.
- IFIs are always foreign residents
- Tourists are foreign residents if they stay in the reporting country < 1 year




MH BOUCHET/SKEMA (c) 2014

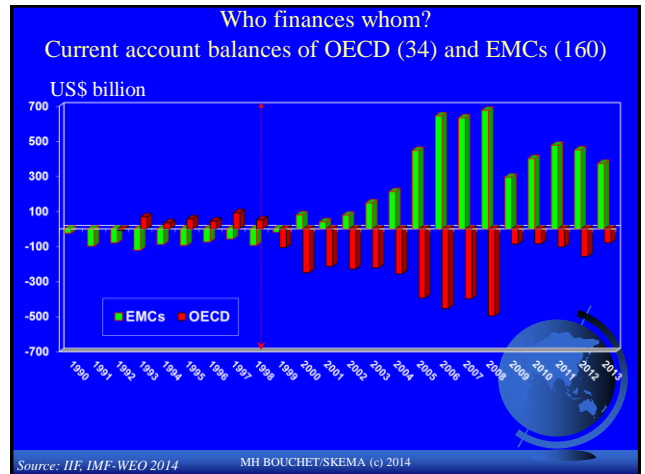
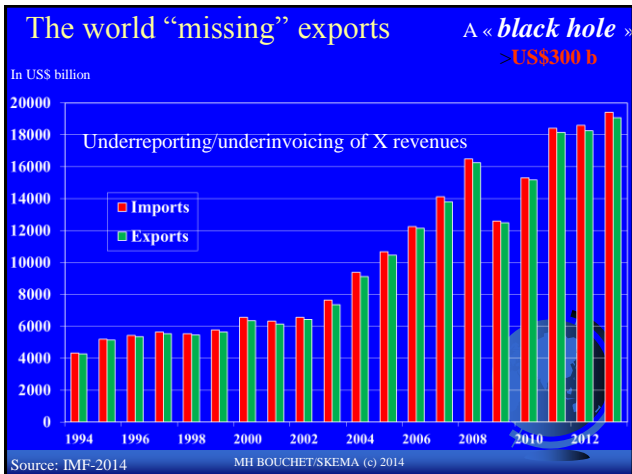
Balance of payments accuracy ?



- ☞ Data collection and methodological errors
- ☞ Inconsistencies in the time of recording and valuation of the corresponding debit and credit entries
- ☞ Undercoverage (overinvoicing/underinvoicing)
- ☞ Revisions policy
- ☞ Use of sample surveys rather than complete enumeration
- ☞ Trade-off between accuracy and timeliness!



MH BOUCHET/SKEMA (c) 2014



Balance of Payments: Current & Capital Accounts

1. **Balance of trade** = Exports of merchandise – Imports
2. **Balance of services** (“invisible”)
 - = freight, insurance, shipping, banking, tourism, interest and dividend payments (i.e. services of capital!)
3. **Unilateral transfers**
 - = **CURRENT ACCOUNT**

☞ *A deficit in the current account must be financed by a surplus in the capital account!*
Otherwise, reserves will drop or arrears will show up!



MH BOUCHET/SKEMA (c) 2014

Interpreting the balance of payments

The different accounts in the balance of payments make it possible to see whether or not a country lives “beyond its means”

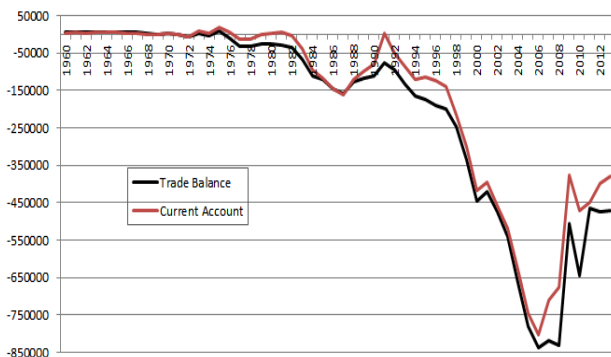
Merchandise exports or imports can be broken down by product and by market source and destination (incompressible imports or volatile exports!)

Useful for determining how a country’s balance of payments and overall economic performance will react to different situations (elasticities, exchange rate adjustment, domestic absorption, trade barriers, deflation...)



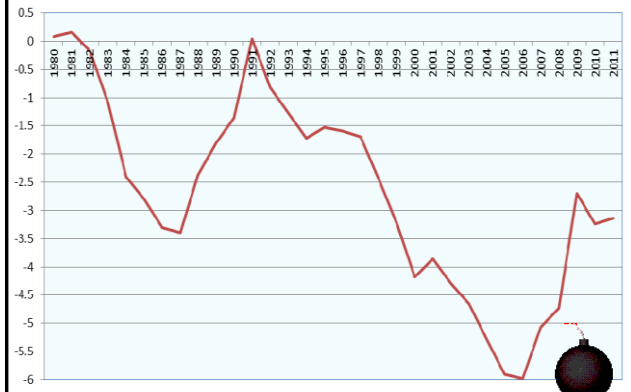
MH BOUCHET/SKEMA (c) 2014

US STRUCTURAL TRADE AND CURRENT ACCOUNT DEFICIT 1960-2014

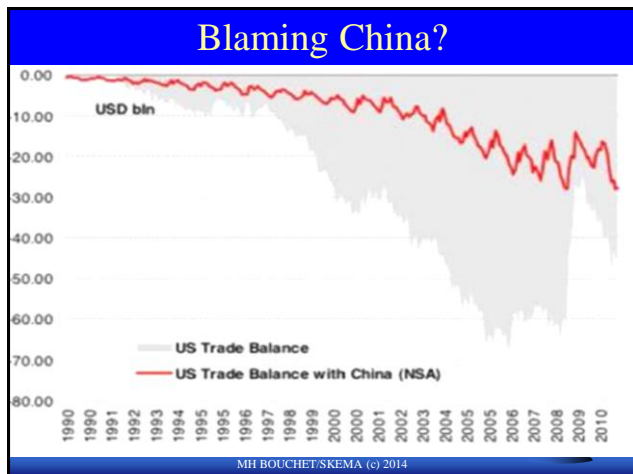


MH BOUCHET/SKEMA (c) 2014

US current account deficit as a share of GDP



MH BOUCHET/SKEMA (c) 2014



- ### Interpreting the balance of payments
- current account balance = saving - domestic investment spending.
 - A country that saves > it invests at home sends its surplus abroad to purchase foreign assets
 - One that saves < it invests finances the shortfall by issuing liabilities to foreign investors = Δ debt!
 - The accumulated history of current account surpluses or deficits, along with capital gains and losses on past investments, determines a country's **net international investment position**.
- MH BOUCHET/SKEMA (c) 2014

National Income Identity

- **Y = National Income**
- **C = Domestic Consumption**
- **I = Domestic Investment**
- **G = Government expenses**
- **T = Taxes & Government revenues**
- **X = Exports**
- **M = Imports**
- **S = Domestic Savings (excess of income over consumption)**

MH BOUCHET/SKEMA (c) 2014

Domestic and External Financial Equilibrium

What is disposable income?

Y = gross income minus imports & taxation

$$Y = C + I + G + X - M - T + (KM - K \text{ flight})$$

Savings = Y - C

$$(S - I) + (T - G) = (X - M) + (KM - K \text{ flight})$$

Net savings
Fiscal balance
Trade balance
Net capital inflows

MH BOUCHET/SKEMA (c) 2014

Boosting savings to finance investment without external deficit

if $S > I \Rightarrow X > M$

- ☞ a trade imbalance is always rooted in low savings and excessive domestic spending (absorption)
- ☞ It requires macroeconomic correction (interest rate hike, devaluation, ↑ taxation, credit reduction, ↑ reserve requirements...)



MH BOUCHET/SKEMA (c) 2014

Two principal sub-accounts

1. **current account** plays a role similar to a private company's income statement= country's economic performance vis-à-vis the rest of the world.
2. **capital account** shows how this economic activity gets financed.

The basic balance draws the line under 'other long-term capital' to emphasize the role of economic performance and stable long-term financing. Another presentation is the **Table of Uses & Sources**



MH BOUCHET/SKEMA (c) 2014

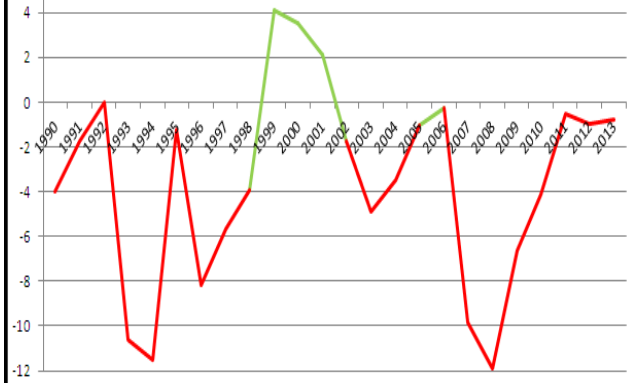
The current account of the balance of payments

| | | |
|---|-----------------------------------|--|
| | Export of goods f.o.b. | |
| - | Imports of goods f.o.b. | From less liquid items toward more liquid items! |
| = | Trade balance | |
| + | Exports of non-financial services | |
| - | Imports of non-financial services | |
| + | Investment income (credit) | |
| - | Investment expenditures (debit) | |
| + | (-) Private unrequited transfers | |
| + | (-) Official unrequited transfers | |
| = | Current account balance | |



MH BOUCHET/SKEMA (c) 2014

Vietnam-Current Account/GDP% 1990-2013



Source: IMF 2012

MH BOUCHET/SKEMA (c) 2014

1. The trade balance comprises



- Merchandise exports:** all movable goods such as equipment, cars, textile, appliances, etc.
- Imports are recorded “free on board” (f.o.b.):** services (freight, insurance, shipping and handling performed on goods up to the customs frontier of the economy from which the goods are exported), are **not** included in the trade balance.



MH BOUCHET/SKEMA (c) 2014

Example: A transatlantic merchandise export

Suppose a French company A sells merchandise to a Canadian retailer B for €90 000 . It costs €10 000 (paid by the Canadian) to ship them to the airport from where they will be flown to Canada.

cif. price of the merchandise = 90 000 + 10 000 = €100 000

Consider that the spot (if it’s not a forward trade) exchange rate is CAD/€ = 4. The Canadian customer pays C\$25000 for his merchandise.




MH BOUCHET/SKEMA (c) 2014

This transaction will implies:

A credit of €100 000 in the French balance of payments in terms of exports cif.

A debit of 25000 \$CAD of the Canadian balance of payments in terms of imports


The balance of payments accounting is based on a double entry system which depends on how the merchandise will be financed by the Canadian customer (cash, credit, trade line...)



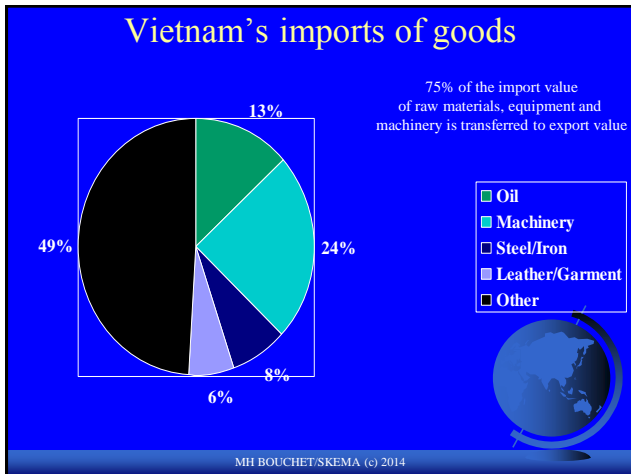
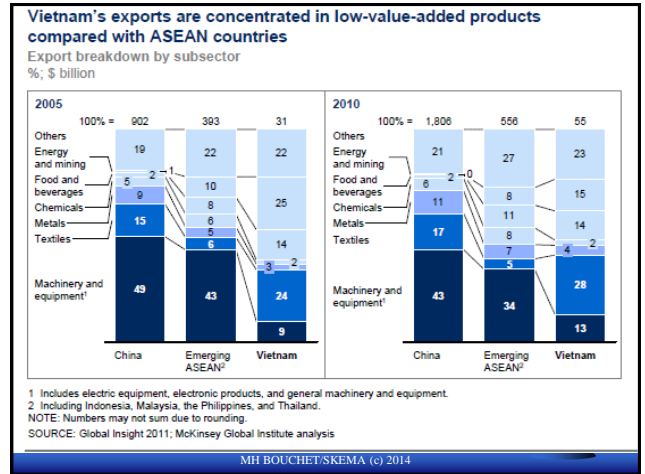
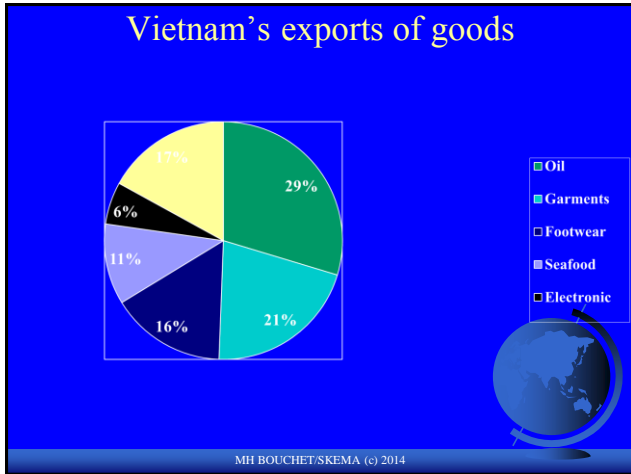
MH BOUCHET/SKEMA (c) 2014

If the Canadian importer is allowed to pay for the merchandise in 60 days, the registration in both balances of payments will be:

| | | |
|-------------|------------|------------------------|
| For France | Exports | Short-term claims |
| | 100 000 | 100 000 |
| For Canada: | Imports | Short-term liabilities |
| | C\$ 25 000 | C\$ 25 000 |



MH BOUCHET/SKEMA (c) 2014



2. Non-financial services

Freight, insurance, passenger services and travel.

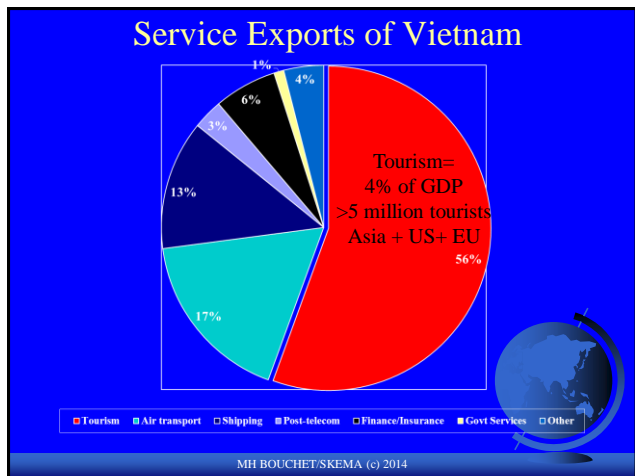
The transportation of persons represents the largest component of passenger services.

Tourism earnings: Cuba, Morocco, Tunisia, Vietnam, Thailand, Spain, France...

Freight refers mainly to the carriage or transport of goods between national economies.

Insurance comprises insurance on movable goods during the course of shipment between economies as well as insurance on the carriers and other types of insurance such as life insurance.

MH BOUCHET/SKEMA (c) 2014



3. Financial services:

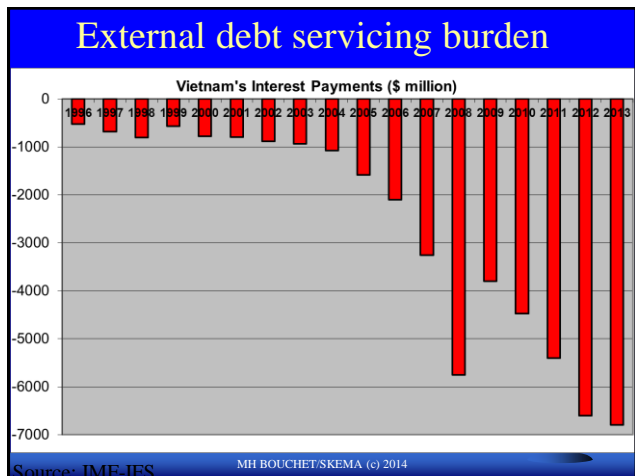
Investment income and interest payments

Investment income covers income derived from the ownership of foreign financial assets (interest and dividends for portfolio investment + non-distributed earnings of incorporated enterprises)

Distinction between portfolio investment and direct investment revolves around the investor's intentions concerning the foreign company.

Investment debits= **interest payments** on foreign liabilities

MH BOUCHET/SKEMA (c) 2014

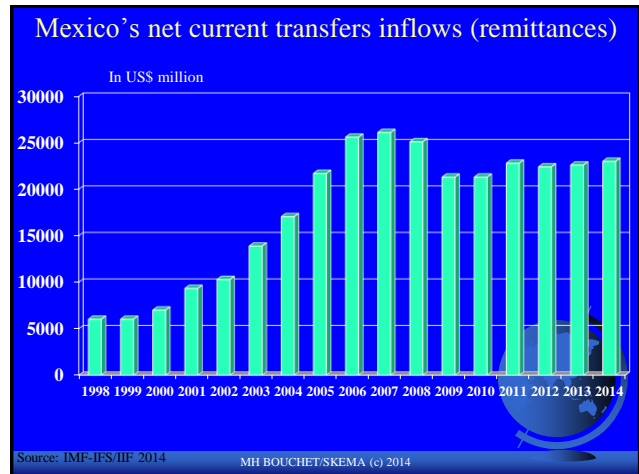
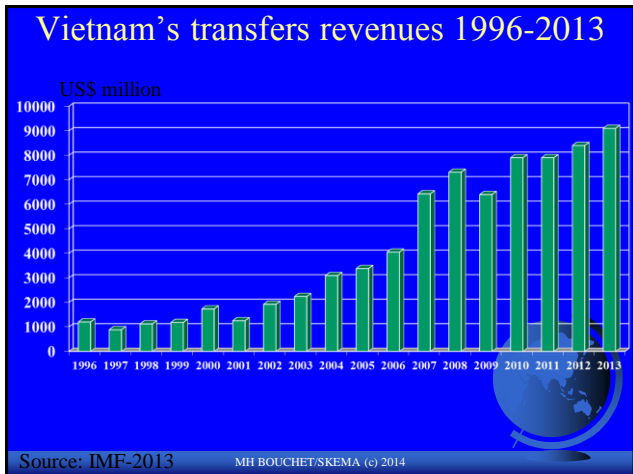


4. Private and official unrequited transfers

Private unrequited transfers refer mainly to immigrant workers' remittances to their country of origin as well as gifts, inheritances, prizes, charitable contributions, etc.: Morocco, Mexico, Algeria, Tunisia, India, Pakistan...

Official unrequited transfers include grants, subsidies, military aid, voluntary debt cancellation, contributions to international organizations, indemnities imposed under peace treaties, technical assistance, etc. : Large inflows for most HIPC-eligible countries

MH BOUCHET/SKEMA (c) 2014



Remittances between Latin America and the US?

- ☞ = Migrant worker's earnings sent back from the country of employment to the country of origin
- ☞ What linkages between remittance flows to Latin America and the U.S. business cycle? All of the evidence suggests that remittance flows are relatively **insensitive** to fluctuations in the U.S. cycle, underlining their role as a stable source of external financing... until the 2008-09 global financial crisis!

Source: IMF Working Paper, 12-2013 - <http://www.imf.org/external/pubs/ft/wp/2013/wp1311.pdf>
MH BOUCHET/SKEMA (c) 2014

Policy tools to fight a BOP deficit?

- ☞ Reducing absorption and boosting income with:
 1. Tight monetary policy (increase in interest rates and reserve requirements, exchange rate adjustment)
 2. Tight fiscal policy (taxes and spending cuts)
 3. Cooling down the overheated economy by reducing private consumption and shrinking public expenditures: killing growth?

MH BOUCHET/SKEMA (c) 2014

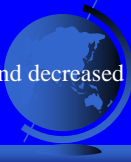
Factors affecting Current Account

1. **National income variation: economic overheating**

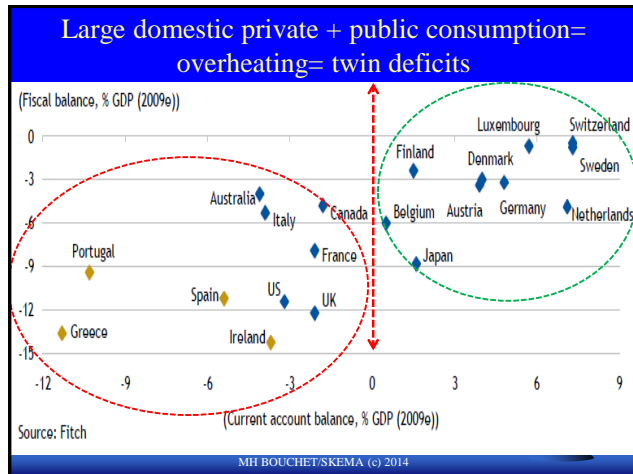
- growth/contraction relative to other countries
 - ◆ current account surplus decreases (deficit increases)
 - ◆ greater wealth implies greater demand of foreign goods (e.g. US economic growth)

2. **Inflation and its impact on trade competitiveness: “CPI differentials”...**

- ◆ Higher CPI leads to increased imports and decreased exports due to eroded competitiveness





MH BOUCHET/SKEMA (c) 2014



Factors affecting Current Account

3. **Government restrictions**

- Import tariff (tax on imported goods)
 - ◆ increases prices & lowers demand on imported goods
 - ◆ increases current account of the country
 - ◆ US tariffs on apparel and farm products
 - ◆ “banana war”: exports from European former colonies (Africa-Caribbean-Pacific): USA entitled to impose US\$191 million sanctions on Europe
- Non-tariff barriers (health norms and regulations) and quotas:
- Export and loan Subsidies

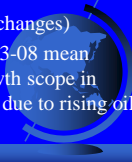



MH BOUCHET/SKEMA (c) 2014

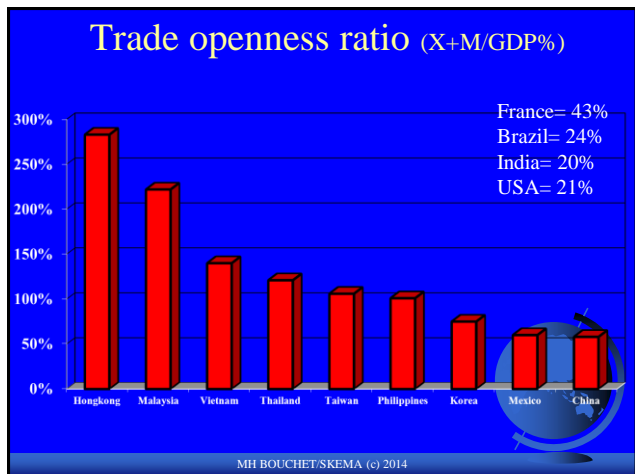
Factors affecting Current Account

4. **Exchange rates**

- = currency valued in terms of another currency
- = stronger exchange rate (overvaluation) might lead to lower exports, decrease in current account surplus, or rising deficit
 - ◆ exported goods would cost more, thus decreasing demand for the good
 - ◆ assumes price-elastic goods (sensitive to price changes)
 - ◆ Stronger Euro and weaker US\$ throughout 2003-08 meant export-led recovery in the US and gloomy growth scope in Europe! Only advantage: no imported inflation due to rising oil prices



MH BOUCHET/SKEMA (c) 2014



1. Correcting a Trade Deficit?

Impact of domestic currency devaluation

- prices should increase for imports
 - ◆ foreign exporters may reduce price to maintain market share
- other currencies may also weaken to stay competitive
 - ◆ no net gain from weaker domestic currency
- international trade contracts create a lag effect
 - ◆ 18+ month lag exists in US
- intra-company trade is resistant to currency fluctuations
 - ◆ 50% of all international trade
 - ◆ 60% of European exports are intra-European transactions

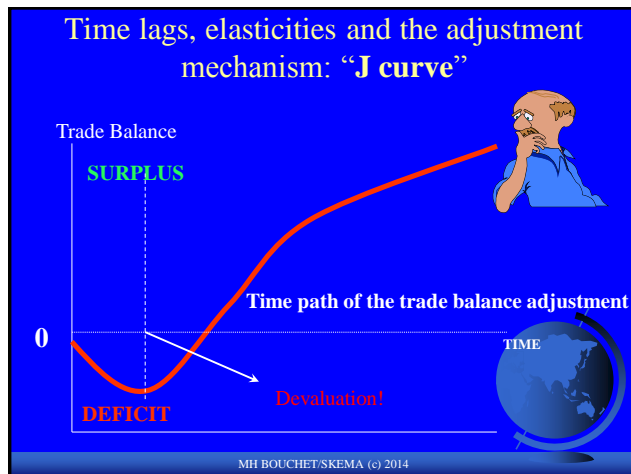
MH BOUCHET/SKEMA (c) 2014

How to shrink a trade deficit?

☞ **Boosting Exports?** depends on the price elasticity of foreign demand but also on the supply elasticity of exported products at home

☞ **Reducing Imports?** depends on relative share of “incompressible” imports (foodstuffs, energy resources, capital goods, machinery, any import for re-export...), but also on the price elasticity of domestic demand

MH BOUCHET/SKEMA (c) 2014



Reducing the trade deficit?

- ☞ Import elasticity of domestic economic growth

$\Delta M / \Delta Y$ = Income elasticity of demand for imports: percentage of (induced) change in imports divided by the percentage of change in income: if M double while Y is growing 50%, the value of income elasticity = 2.



MH BOUCHET/SKEMA (c) 2014


Trade elasticities

What about the price effects of exchange rate changes on the BOP?

- ☞ **Import demand elasticity** to prices = $\Delta MD / \Delta P\$ < 0$
- ☞ **Export elasticity** to exchange rate change = $\Delta X / \Delta P\$ > 0$
- ☞ **Supply elasticity** to increased export demand = $\Delta S / \Delta XD > 0$?

This elasticity depends on the availability of finance, equipment, (imported) inputs, labor...

- ☞ **Terms of trade** (deterioration post devaluation): it takes more units of Exports to buy x units of imports



MH BOUCHET/SKEMA (c) 2014

Devaluation: the day after

key role of elasticities = ratio of two variations


Supply elasticities ↑

☞ $\frac{\Delta + \text{Domestic production}}{\Delta + \text{Foreign demand}}$

Demand elasticities ↓

☞ $\frac{\Delta \text{ Domestic consumption}}{\Delta + \text{ Import prices}}$

$\frac{\Delta \text{ Foreign demand}}{\Delta - \text{ export prices}}$ ↑




MH BOUCHET/SKEMA (c) 2014

Time lags, elasticities and the adjustment mechanism

The J-Curve and **Marshall-Lerner** conditions:

- ☞ A devaluation will improve the trade balance if the **sum** of price elasticities of imports and exports is > 1

- ☞ In the long-term, if goods exported are elastic to price, export revenue will increase if foreign export demand increases proportionately more than the decrease in price. If goods imported are elastic, total import expenditure will decrease. Both will improve the trade balance!



MH BOUCHET/SKEMA (c) 2014

2. Cutting inflation and slowing down overheating economy with exchange rate appreciation?

☞ Principle:

- ☞ 1. A currency appreciation would cut the cost of imported goods and services, as well as import commodities (gasoline, machinery, production materials), hence helping to reduce the CPI.
- ☞ 2. Lowering imported costs will make them cheaper and more competitive, forcing local producers to lower prices to maintain their market share.

MH BOUCHET/SKEMA (c) 2014

2. Cutting inflation and slowing down overheating economy with exchange rate appreciation?

- ☞ 3. Improbable trio: a central bank cannot stabilize the exchange rate and liberalize the capital account while implementing an independent monetary policy to control inflation. Floating rate frees the central bank from the need to buy foreign exchange and to increase the money supply.
- ☞ 4. Appreciating exchange rate leads people to wish to hold the currency and to own assets priced in this currency, hence reducing the demand pressure and the CPI.
- ☞ All in all, appreciation of the local currency can help control inflation? This much depends on the composition of imports and the « pass through » between importers and consumers!

MH BOUCHET/SKEMA (c) 2014

US current account, import prices and dollar exchange rate

- ☞ Key: Rate of exchange rate « **pass through** » = degree to which a change in the value of a country's currency induces a change in the price of the country's imports and exports
- ☞ Pass-through is always incomplete: in the OCDE countries import prices have become progressively less responsive to changes in exchange rates over the past decade or so
- ☞ The dollar's depreciation has had little impact on import prices and on the reduction of the US current account deficit (about 50% of the cumulative change in the \$ has been transmitted to higher US import prices over 2002-05)

Source: Fed RBNY Current Issues 09/2006 and June 2007

MH BOUCHET/SKEMA (c) 2014

US current account, import prices and dollar exchange rate

Weaker \$ = Lower US demand?

- ☞ The European exporter must decide what share of the dollar depreciation to absorb in his profit margin and what share to pass on to US consumers

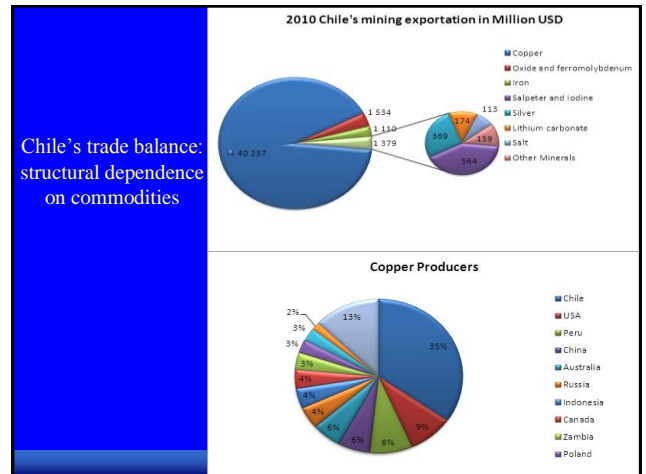
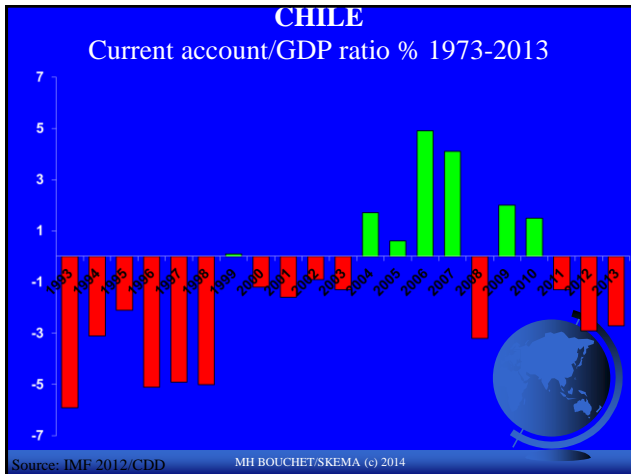
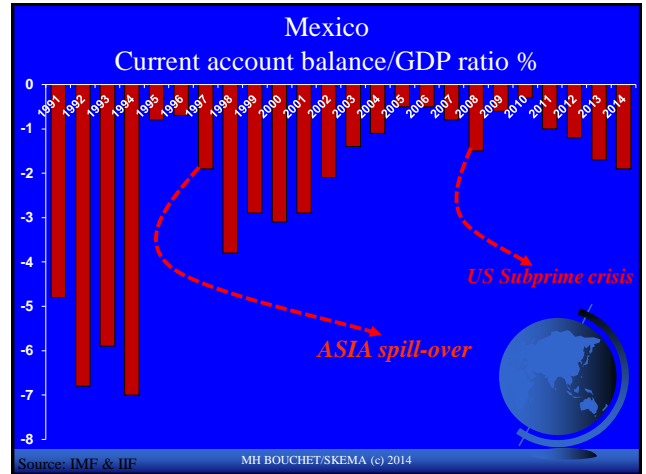
MH BOUCHET/SKEMA (c) 2014

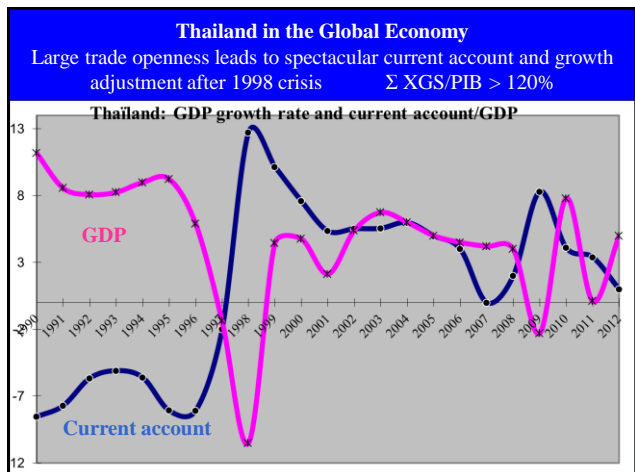
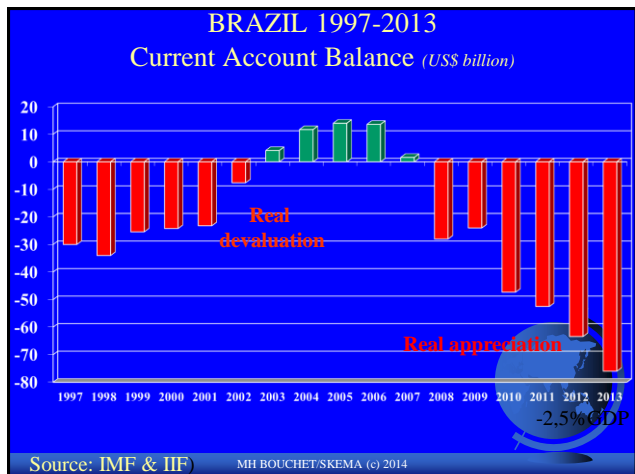
US current account, import prices and dollar exchange rate

Why will a weaker \$ boost foreign demand for US exports but with little impact on lower US imports, hence is unlikely to close the US trade deficit?

1. Special role of the US\$ in invoicing international trade transactions = insensitivity of import prices to exchange rates
2. Competitive market share concerns of foreign exporters
3. High US marketing and distribution costs that form part of the final consumption prices of imported goods. All these costs reduce the share of the final price that is affected by exchange rates movements.

MH BOUCHET/SKEMA (c) 2014





The History of the U.S. Balance of Payments

Stage I: The U.S. is a *young debtor nation* (1770-1870) -Current account deficit due to the need to import most goods and inability to produce many goods for export. -Capital account surplus due to a great deal of foreign investment in the U.S. in the areas of roads, farming, cattle ranches, railroads, and canals.

Stage II: The U.S. is a *mature debtor nation* (1870-1920) - Current account deficit due to large investment income being paid back to foreign investors based on the investment of stage I. Merchandise account in surplus -- exports > imports.

Stage III: The U.S. is a *young creditor nation* (1920-1945) -Huge surplus in the current account due to large volume of postwar (WWI) exports. -Capital account in deficit due to a great deal of U.S. investment in Europe for postwar reconstruction.

Source: http://www.digitaleconomist.com/bop_4020.html
MH BOUCHET/SKEMA (c) 2014

Stage IV: The U.S. is a *mature creditor nation* (1945-1980) - Merchandise deficit -- *exports < imports* but an investment income surplus with a slight net surplus overall. -Capital account is in deficit largely due to postwar (WW II) reconstruction in Europe and Japan.

Stage V: (1980-) -Large (and growing) deficit in the merchandise accounts (Trade Deficit) and slight surplus in the investment income accounts. -Large surplus in the capital account partially to finance the above merchandise deficit (foreign individuals and banks lending money to individuals in the U.S.) Additionally, since the U.S. has had a low inflation rate since 1982 and consistent economic growth, the U.S. has been a good place to invest relative to the rest of the world. However the current inflow of capital investment could eventually lead to large investment income payments in the near future. The investment income surplus may soon be eroded thus worsening the current account deficit.

MH BOUCHET/SKEMA (c) 2014

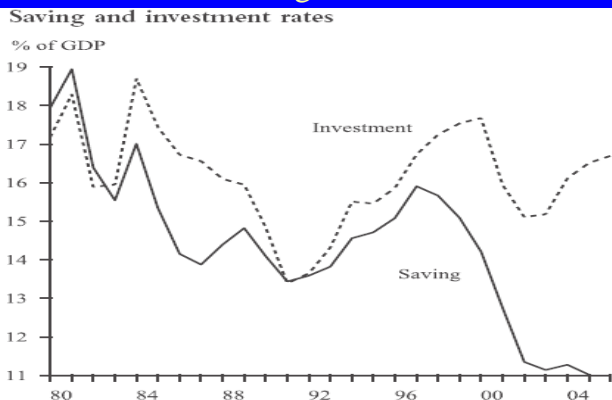
The US current account deficit dilemma

- ☞ Shrinking the deficit requires a weaker \$
- ☞ Financing the deficit requires a strong \$



MH BOUCHET/SKEMA (c) 2014

Investment > Savings = US BOP Deficit



FRBSF March 2007

MH BOUCHET/SKEMA (c) 2014


Financing the US CA Deficit?

- ☞ Record US CA deficit in 2003-2008 >7% of GDP
- ☞ How to finance it? By importing K inflows from outside the US economy: need for high interest rates and/or strong US\$ currency, or pressure on surplus countries (China, Korea, Japan)!
- ☞ Damocles' sword: Japanese investors massively withdraw their investments in US\$ assets and UST bills and repatriate their funds in Japan. Meanwhile, nearly 50% of US securities remain in foreign hands
- ☞ US and Japan compete to lower their exchange rates to gain competitive trade advantage! **\$ Crash Lending?**



MH BOUCHET/SKEMA (c) 2014

Financing the US CAD?




- ☞ Morgan Stanley : Why is the dollar not (yet) crashing?

The runaway CAD against Asian nations is not unduly worrying as long as Asia continues to park its capital surpluses in US assets (**60%** of the CAD is run against Asia and **bulk** of the US external deficit funded by Asian central banks)

« As long as Asia stays in the dollar zone, the dollar cannot **crash**»

- ☞ But mounting risk over the funding of the structural deficit leading to repatriation flows by foreign investors (hence weakening \$/€ to \$1,4 against the € in 10/2008)



MH BOUCHET/SKEMA (c) 2014

* The US CAD dilemma *


CAD= -5% of GDP in 2006-14

Need to shrink the deficit by boosting exports with a **weaker \$**

- ☞ BUT Need to finance the deficit by attracting US\$2,2 billion/day foreign capital inflows **with stronger \$**
- ☞ Capital sources = surplus countries = Germany + China + Japan + Korea
- ☞ Need to maintain positive real interest rates to enhance the **dollar attractiveness and competitiveness**

Engine of world growth?

Engine of crisis?



MH BOUCHET/SKEMA (c) 2014