

Chapter 2 : The Balance of Payments

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I. Introduction

- ▶ Concepts of balance of payments (BoP) & current account frequently used in newspapers
- ▶ Ex. Impact of **exchange rate fluctuations** on **current account**
- ▶ BoP is often said to be in excedent/deficit
- ▶ Export performance, current account excedent/deficit receives a lot of attention
- ▶ **What you can read is sometimes wrong !**
 - ⇒ BoP cannot be in excedent or deficit, but the current account can be
 - ⇒ Having a current account surplus is not a sign that the economy is doing well

Objectives of the course

- ▶ What is the balance of payments (BoP)?
- ▶ How is the BoP composed, and what can we learn?
- ▶ How to measure price-competitiveness?
- ▶ The basics of international macroeconomics and current account adjustments
- ▶ What is the “Good level” for the nominal exchange rate in the long run?

Definition

- ▶ The balance of payment is a document that records any transaction between individual countries and the rest of the world
- ▶ Economic exchanges between “*residents*” and “*non-residents*”
- ▶ Operations are registered in flows, not stocks
 - ⇒ Does not tell anything about the amount of debt of a country
 - ⇒ Reports information about the variation of debt during the past year
- ▶ For Euro Area countries, the European Central Bank is in charge of its construction since 1999.
 - ⇒ Though, national central banks of the European System of Central Banks (ESCB) are still responsible for the construction of National BoP's

II. Balance of Payments : general principles

- ▶ Each flow is associated with two operations in the BOP (double part accounting)
- ▶ **Credit** : any transaction resulting in a receipt from foreigners.
- ▶ **Debit** : any transaction resulting in payment to foreigners.
- ▶ The **balance** = *credit* – *debit* for each category of operation

Example 1 : Merchandize trade

- ▶ Physical operations are registered in the **current account**
- ▶ Exports are associated with a decrease in the stock of merchandize (**credit**)
- ▶ Imports are associated with an increase in the stock of merchandize (**debit**)
- ▶ **Credit - Debit** gives the trade balance (surplus or deficit)
- ▶ Financial counterpart in the financial account (**variation of reserves**)

<u>Credit</u>	<u>Debit</u>	Net position
CURRENT ACCOUNT		
<ul style="list-style-type: none"> ● Exports of goods ● Exports of services ● Revenues received ● Current Transf. rec. 	<ul style="list-style-type: none"> ● Imports of goods ● Imports of services ● Revenues paid ● Current Transf. paid 	<p style="color: red;">Trade balance</p> <p style="color: red;">Goods and services balance</p> <p style="color: red;">Current account balance</p>
CAPITAL ACCOUNT		
<ul style="list-style-type: none"> ● Capital Transf. rec. ● Patents sold 	<ul style="list-style-type: none"> ● Capital Transf. paid ● Patents bought 	
FINANCIAL ACCOUNT		
<ul style="list-style-type: none"> ● Incoming FDI ● Incoming port. inv. ● Incoming oth. inv. ● ↓ reserves 	<ul style="list-style-type: none"> ● Outgoing FDI ● Outgoing port. inv. ● Outgoing oth. inv. ● ↑ reserves 	<p style="color: red;">Global balance</p>

Fundamental identity of the balance of payments :

Current account + Capital account + Financial Account $\simeq 0$

- ▶ Current account : goods, services, revenues (revenues of investments abroad), unilateral transfers (development aid, supra-national payments, foreign workers transfers).
- ▶ Capital account (small) : non-market asset transfers, transfers in capital (debt, capital transfers), non financial assets (patents).
- ▶ Financial Account : financial flows (foreign direct investment, portfolio investment, other financial products), official reserve transactions (gold, foreign reserves held by Central bank and IMF position).

Variation of reserves : a negative sign corresponds to an increase of reserves!!!

- ▶ ↑ reserves registered in credit
- ▶ ↓ reserves registered in debit

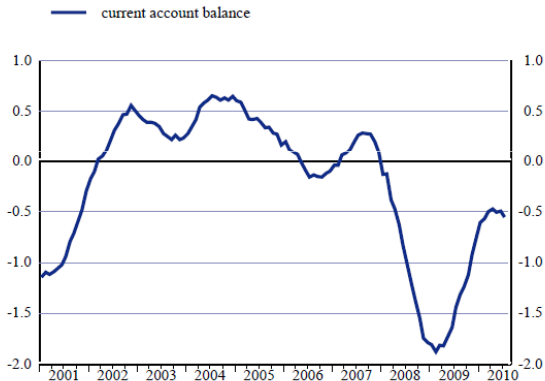
Errors and omissions in the BoP

- ▶ The size of errors is rising over time
- ▶ Accounting errors
- ▶ Some transactions are difficult to register, e.g. services transactions (by internet)
- ▶ Fiscal evasion, corruption, illegal transactions...

Balance of payments, Eurozone

C30 Euro area b.o.p.: current account

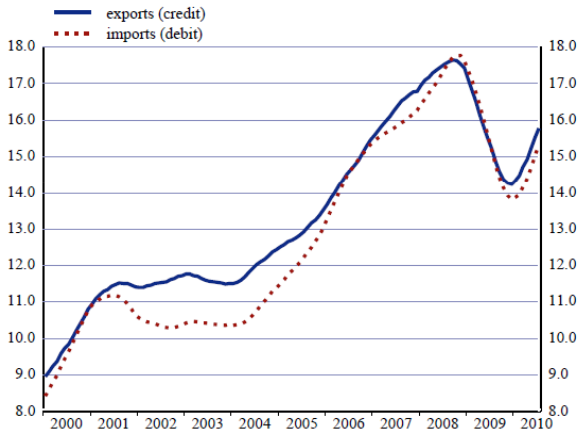
(seasonally adjusted; 12-month cumulated transactions as a percentage of GDP)



Balance of payments, Eurozone

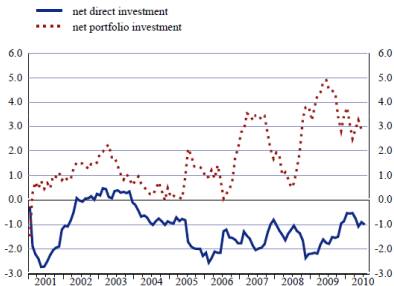
C32 Euro area b.o.p.: goods

(seasonally adjusted; 12-month cumulated transactions as a percentage of GDP)



Balance of payments, Eurozone

C31 Euro area b.o.p.: direct and portfolio investment
(12-month cumulated transactions as a percentage of GDP)



Balance of payments, France

(en milliards d'euros)

	2012			2013		
	Rapport annuel 2013	Rapport annuel 2014	Écarts	Rapport annuel 2013	Rapport annuel 2014	Écarts
Compte de transactions courantes	- 31,8	- 24,9	6,9	- 30,3	- 17,0	13,2
Biens	- 54,6	- 54,2	0,5	- 42,5	- 43,0	- 0,4
Services	24,7	24,9	0,2	18,3	22,4	4,1
<i>Transports</i>	<i>- 0,3</i>	<i>0,2</i>	<i>0,5</i>	<i>- 1,7</i>	<i>- 1,3</i>	<i>0,5</i>
<i>Voyages</i>	<i>10,7</i>	<i>10,6</i>	<i>- 0,1</i>	<i>10,4</i>	<i>10,2</i>	<i>- 0,1</i>
Revenus primaires	40,7	47,3	6,6	39,3	47,9	8,7
<i>Rémunérations des salariés</i>	<i>15,7</i>	<i>16,1</i>	<i>0,5</i>	<i>15,9</i>	<i>16,8</i>	<i>0,9</i>
<i>Revenus des investissements</i>	<i>16,7</i>	<i>22,8</i>	<i>6,1</i>	<i>14,1</i>	<i>21,5</i>	<i>7,4</i>
Investissements directs	39,1	38,1	- 1,0	34,2	37,2	3,0
Investissements de portefeuille	- 18,7	- 16,0	2,7	- 17,2	- 16,1	1,1
Autres investissements	- 4,1	0,3	4,4	- 3,3	- 0,1	3,3
Avoirs de réserve	0,4	0,4	0,0	0,5	0,5	0,0
<i>Autres revenus primaires</i>	<i>8,4</i>	<i>8,4</i>	<i>0,0</i>	<i>9,3</i>	<i>9,7</i>	<i>0,4</i>
Revenus secondaires	- 42,6	- 43,0	- 0,4	- 45,3	- 44,4	0,9
Compte de capital	0,5	0,5	0,0	1,8	1,9	0,1
Compte financier	- 21,0	- 41,0	- 20,0	- 14,2	- 17,8	- 3,6
Investissements directs	14,1	11,4	- 2,7	- 5,1	- 13,5	- 8,3
Français à l'étranger	26,4	24,6	- 1,8	7,5	18,8	11,3
<i>dont : capital social</i>	<i>34,8</i>	<i>40,5</i>	<i>5,8</i>	<i>- 1,5</i>	<i>3,0</i>	<i>4,5</i>
<i>bénéfices réinvestis</i>	<i>11,1</i>	<i>10,9</i>	<i>- 0,2</i>	<i>10,6</i>	<i>8,1</i>	<i>- 2,5</i>
<i>autres opérations (prêts intragroupe)</i>	<i>- 19,5</i>	<i>- 26,8</i>	<i>- 7,3</i>	<i>- 1,6</i>	<i>7,8</i>	<i>9,3</i>
Étrangers en France	12,3	13,2	0,9	12,7	32,3	19,6
<i>dont : capital social</i>	<i>8,8</i>	<i>8,6</i>	<i>- 0,2</i>	<i>13,4</i>	<i>18,1</i>	<i>4,7</i>
<i>bénéfices réinvestis</i>	<i>3,5</i>	<i>6,1</i>	<i>2,6</i>	<i>4,1</i>	<i>7,8</i>	<i>3,7</i>
<i>autres opérations (prêts intragroupe)</i>	<i>0,0</i>	<i>- 1,5</i>	<i>- 1,5</i>	<i>- 4,9</i>	<i>6,4</i>	<i>11,2</i>
Investissements de portefeuille	- 26,5	- 39,4	- 12,8	- 69,8	- 60,6	9,2
Avoirs (résidents sur titres émis par les non-résidents)	- 1,6	- 18,3	- 16,7	66,3	44,7	- 21,6
Actions et titres d'OPC	54,3	41,0	- 13,3	48,8	33,5	- 15,4
Titres de créance à long terme	- 79,6	- 82,6	- 3,0	36,3	30,2	- 6,2
Titres de créance à court terme	23,7	23,3	- 0,4	- 18,8	- 18,9	0,0
Engagements (non-résidents sur titres émis par les résidents)	24,9	21,0	- 3,9	136,1	105,3	- 30,8
Actions et titres d'OPC	25,4	28,8	3,4	26,1	27,2	1,2
Titres de créance à long terme	36,5	29,8	- 6,6	82,0	51,6	- 30,4
Titres de créance à court terme	- 36,9	- 37,6	- 0,7	28,0	26,5	- 1,5
Instruments financiers dérivés	- 14,3	- 14,3	0,0	- 16,8	- 16,8	0,0
Autres investissements	2,0	- 2,8	- 4,8	79,0	74,5	- 4,5
Avoirs	- 46,0	- 48,9	- 2,9	- 4,4	- 3,0	1,4
<i>dont : institutions financières monétaires</i>	<i>- 112,6</i>	<i>- 112,6</i>	<i>0,0</i>	<i>22,5</i>	<i>22,5</i>	<i>0,0</i>
Engagements	- 48,0	- 46,1	1,9	- 83,4	- 77,5	5,9
<i>dont : institutions financières monétaires</i>	<i>- 66,4</i>	<i>- 66,4</i>	<i>0,0</i>	<i>- 8,0</i>	<i>- 8,0</i>	<i>0,0</i>
Avoirs de réserve	4,0	4,0	0,0	- 1,5	- 1,5	0,0
Erreurs et omissions nettes	10,3	- 16,6	- 26,9	14,3	- 2,7	- 17,0

Note : Les investissements directs sont présentés en principe directionnel étendu.

Source : Banque de France.

III. National accounting and external position

National accounting gives a clear information about the net external position of countries

Equilibrium on goods market :

$$Y + M = C + I + G + X \quad (1)$$

- ▶ Y = domestic production
- ▶ M = imports
- ▶ C = domestic consumption
- ▶ I = investment
- ▶ G = public expenses
- ▶ X = exports

Use of national income :

$$Y = C + T + S \quad (2)$$

- ▶ $T =$ taxes
- ▶ $S =$ savings

(1) and (2) combined gives (3) :

$$T + S = I + G + (X - M) \quad (3)$$

$$\Rightarrow X - M = (S - I) + (T - G) \quad (4)$$

Current Account =
Private Financing Capacity + Public Financing Capacity.

Ex. 1 : if $(T - G) = 0$, then $(X - M) = (S - I)$

Current account simply reflects the private financing capacity or need. Indeed, $(S - I) < 0$ if :

- ▶ S weak \Leftrightarrow excessive consumption (USA recently, France in 1981-1982).
- ▶ I strong \Leftrightarrow large investments (frequent in emerging economies).

If $(X - M) < 0$, the country spends more than it sells abroad :
requires extra-financing from the rest of world
 \Rightarrow Debt increases

Ex.2 : if $(S - I) = 0$, then $(X - M) = (T - G)$

Current account simply reflects the financing capacity or need of the government.

- ▶ You then are faced with **twin deficits** : USA (1980 and since 2001), France (1981-1982, and since 2003-4).

Is a current account deficit a sign of a bad economic health ?

Current account deficit requires to borrow from foreign countries... and be able to repay in future years

- ▶ Deficit can be good or bad according to the allocation of resources within the country
- ▶ #1 Investments in productive sectors / innovation raises productivity and future revenue per capita
 - ⇒ Developing economies trying to catch-up with foreign technologies
 - ⇒ Rich countries & innovation in new technologies
- ▶ #2 Investments in non-productive sectors is more problematic
 - ⇒ House bubble/inflation without increase of productivity and future revenue per capita
 - ⇒ Greece or Spain recently

A remark on North-South relationships

Trade deficit in rich countries has to be compensated by capital inflows from countries having a current account excedent

- ▶ Requires net entry of capital in the North
- ▶ Purchases of US Treasury bonds (by Bank of China or other central banks)
- ▶ Purchases of financial assets (portfolio investments)
- ▶ North-South FDI. Famous/polemic examples in France are Marionnaud (FDI from China) & Arcelor (acquisition by Mittal, India)

In rich countries :

- ▶ “ **Global imbalances**” & “sustainability” debate among economists and policy makers (Read Borio & Disyatat (26 July 2011, VOX)
- ▶ Fears regarding the increasing importance of foreign multinationals from developing countries

In emerging economies :

- ▶ Issue of the currency denomination of the foreign reserves by developing/emerging countries
⇒ US dollar or basket of currencies?

IV. Current account adjustment

Is current account deficit sustainable ?

Recall the identity from National accounts :

$$X - M = (S - I) + (T - G)$$

- ▶ If $X - M < 0$: requires that foreign residents' savings finance domestic consumption
- ▶ If domestic and foreign savings contract, or if foreign financial resources is not directed towards investments at home
 1. Domestic demand addressed to foreign goods has to decrease
 2. Exports have to increase

Real exchange rates and competitiveness

Adjustment of current account requires a **“real depreciation” of the exchange rate** :

⇒ The adjustment of the current account comes from a variation of relative prices

1. ↓ imports due to an increase in the price of foreign varieties
2. ↑ exports due to a decrease in the price of domestic varieties, once expressed in the foreign currency

Real exchange rates = **adjustment mechanism** of foreign trade imbalances of the country.

- ▶ Nominal exchange rate
- ▶ Depends on the exchange rate regime : fixed or flexible
- ▶ Domestic prices in domestic currency
- ▶ Foreign prices in foreign currency

⇒ Approach focusing on the *top* of the BoP : trade in goods and services are causing the imbalances to be corrected.

$$\text{Real exchange rate} = \text{RER} = E \frac{P}{P^*}.$$

E = nominal exchange rate = *units of foreign currency needed to obtain one unit of the domestic currency.*

P is the domestic price, expressed in the domestic currency

P^* is the foreign price, expressed in the foreign currency

For instance, 29/09/2016, 1 EUR = 1.1218 USD

$$E = 1.0578$$

↑ E = appreciation of domestic currency

Warning : different convention is possible !

⇒ With “uncertain” convention, the foreign currency is expressed in units of domestic currency

⇒ 1 USD = .8915 EUR

RER = comparison of prices once expressed in the same currency (domestic one).

- ▶ **RER reveals the price competitiveness of a nation.**
- ▶ **Demand side mechanism**
- ▶ If prices of domestic goods expressed in foreign currency decrease, exports should increase
- ▶ If the prices of foreign goods increase, once expressed in the domestic currency, the demand addressed to foreign goods should decrease
- ▶ **A real depreciation, i.e. a decrease of the price of domestic goods relative to the price of foreign goods expressed in the same currency, enables current account adjustment**

Adjustments of CA through RER movements depend on the exchange rate regime

Flexible exchange rates :

- ▶ Depreciation is possible in addition to variations of prices
- ▶ ex : EUR/USD exchange rate affects trade balance between eurozone and the US

Fixed exchange rates :

- ▶ Can be *de jure* :Argentina before 2001, South Asia before 1997, European Currencies along the lines of the EMS before 1992 (with small margins of fluctuation)
- ▶ ... or *de facto* : DM and Austrian Schilling before 1992, USD/Yuan today...
- ▶ *a priori* no adjustment is possible through the exchange rate (E is fixed)... but devaluation is possible for large enough CA deficits
⇒ Currency crises (1st generation)
- ▶ If there is no devaluation, all adjustment channels through the relative prices

Ex : freezing of wages in German industry recently

⇒ Inflation is lower than in other eurozone countries

⇒ “Real” depreciation channels only through the relative prices

Given that each country exchanges with many trade partners, evaluating the effect of exchange rate on aggregate exports requires to make use of **Effective Exchange Rate**

Real or Nominal effective exchange rates at the bilateral (country-pair) level are aggregated using the weight of each trade partner in total exports/imports.

What is the effect of devaluations ?

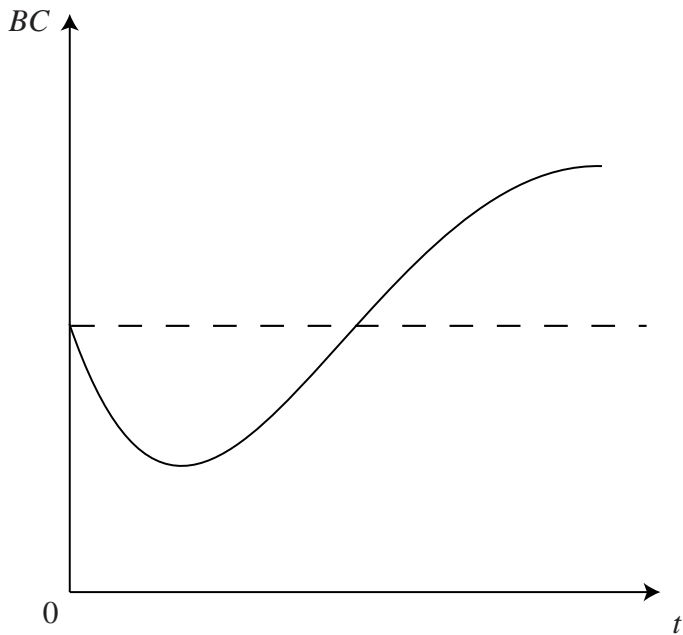
Again : contrary to “*depreciations*”, “*devaluations*” require that countries suppress the fixed nominal exchange rate parity with an other currency, or a basket of foreign currencies

Devaluations have two effects :

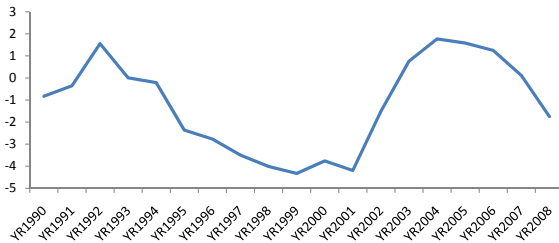
1. On prices
2. on quantities

- ▶ In the short run : price effect
 - ⇒ **Deterioration of the trade balance** : import prices \uparrow and the price of exports remains constant in the national currency
 - ⇒ Terms of trade deteriorate.
- ▶ In the medium run : substitution between domestic and foreign goods
 - ⇒ \uparrow demand for domestic goods abroad
 - ⇒ \downarrow demand for foreign goods at home
- ▶ In the long run : inflation can be imported through intermediates
 - ⇒ increase of production costs + increase of wages = \uparrow RER

The "J-curve" : dynamic adjustment of the current account



Brazil - current account in % of GDP



Limits of this form of current account adjustment

1. Adjustment of markups and pricing to market
2. Wages at home have to remained unchanged
3. Flexibility of supply and capacity constraints
4. Foreign currency borrowing
5. Foreign and domestic varieties may not be perfect substitutes

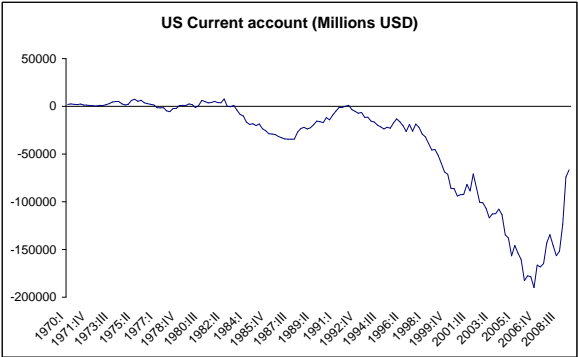
How much the US dollar should depreciate to resorb the US current account deficit ?

IMF World Economic Outlook 2007 (chapter 3) : 2 kind of mechanisms can play

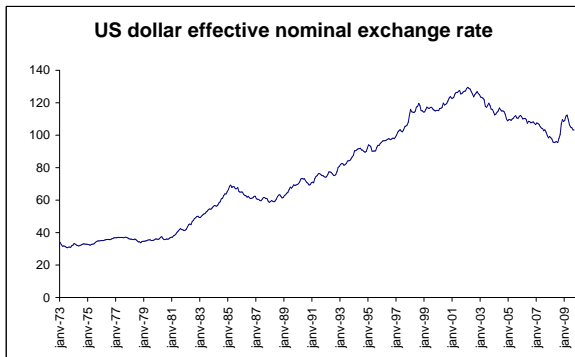
- ▶ The US CA deficit is huge and would require a large depreciation of the US dollar
- ▶ Part of the adjustment may come from an adjustment through consumption/savings, therefore limiting the depreciation of the US dollar

We can provide some evidence now !

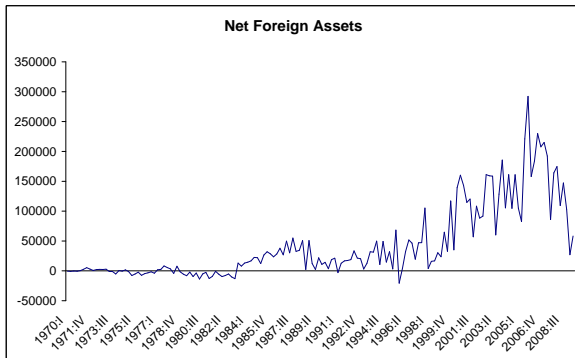
Fact 1 : Brutal narrowing of the US current deficit



Fact 2 : nominal effective exchange rate has depreciated by 12% between January 01 and January 09



Fact 3 : sharp decrease of foreign savings directed to the US, after the start of the crisis



Associated with a global narrowing of the volume of international capital flows after the start of the crisis in 2008

US demand has plummeted after the burst of the house market bubble in 2008

Adjustment of demand, independently of exchange rates adjustments, contribute to ease the current account adjustment when imbalances are huge

Exorbitant Privilege ???

Assume this simple example

- ▶ The US external debt is = 20% GDP
- ▶ Foreign assets owned by the US = 125% GDP
- ▶ US assets owned by foreigners = 145% GDP
- ▶ About 65% of the foreign assets owned by the US are denominated in foreign currency
- ▶ About 95% of the US assets owned by foreigners are denominated dollars

What is the effect of a 10% dollar depreciation ?

Exorbitant Privilege ?

- ▶ The new value of foreign assets owned by the US in foreign currency is $(0.1)(0.65)(1.25) = 8,1\%$
 - ▶ The new value of US asset owned by foreigners in foreign currency is $(0.1)(.05)(1.45) = 0.7\%$
- US debt net value : 7.4%
(See Gourinchas and Rey (2005). very nice article)

The difficult case of Currency Unions

- ▶ Currency Union (CU) means no possibility to devalue
- ▶ Ex. Greece and the Eurozone
- ▶ An exit of the eurozone is not really an option
 - ⇒ CU is a stronger commitment than fixed exchange rates
 - ⇒ In the case of Greece, would require to re-define the currency denomination of debt
- ▶ Historical parallel by Eichengreen and Temin (Vox, 2010)
 - ⇒ Context of the Great Depression where Germany is the deficit country and US/France are the excedent ones
 - ⇒ Gold Standard
 - ⇒ Excedent countries refusing to expand, intensifying depression

- ▶ What options for Greece ?
 - ⇒ Memorandum/default on debt
 - ⇒ Increase price competitiveness with rapid increase of productivity (not likely) or “internal devaluation” = cut wages
- ▶ Risk = intensification of the depression / weak recovery due to deflation
- ▶ Role for excedent countries (today Germany among others)
- ▶ Overall, need for increase in public spendings asked by leading economists (Paul Krugman on his blog)
- ▶ Question remains very debated