

Contents

General Notes:	3
Appraisal	3
Potential Thesis Questions:	3
Lecture 1: Introduction	4
The Current Account	4
Central Banks & Monetary Policy	4
Why adopt an inflation objective of 2%?	5
The Importance of the Banking Sector	5
Solutions to Bank Short Term Illiquidity	5
Conventional Policy	6
Non-Conventional Policy	6
The Shadow Rate	6
R^*	6
The Taylor Rule	6
Economic & Financial Crises	7
Defining a crisis	7
Currency Crises	7
Banking Crises	7
Sovereign Crises	7
Twin Crises	7
Modelling Crises	7
Generation I - Krugman, 1979	7
Generation II - Obstfeld, 1994	8
Generation III - Aghion, Bacchetta, and Banerjee, 2000-01	9
Jeanne 1999	9
Contagion (Masson, 1999)	9
Predicting Crises (EWS - Early Warning Systems)	10

Some significant variables	10
Contagian	10
State Dependence	11
Contagion & Political Uncertainty	11
Measuring the Effects of a Crisis	11
Accumulation of International Reserves	12
Fama Puzzle, Peso Problem	12
title	13

General Notes:

The man is a Central Banker at ECB and Banque de France.

Appraisal

Homework: Find an unpublished paper (working paper) and write a referee report.

- Max 4 pages - 30 lines per page
- Deadline - End of the course
- Must relate it to the topics seen in class

Potential Thesis Questions:

- The effects of unconventional vs conventional Monetary Policy

Lecture 1: Introduction

The Current Account

A variable which tells us how much a country pays out to other countries and how much it receives.

$$CA = Trade\ Balance + Income\ Account + Current\ Transfers$$

$$CA = (X - M) + INC + CT$$

Another definition is that a current account is:

$$CA = Domestic\ Savings - Domestic\ Investment$$

- Highlights how a deficit can occur
- Highlights the inter-temporal nature of national decision making

The Balance of Payments definition of Current Accounts:

$$CA = Finacial\ Account + \Delta R + EO$$

$$\text{where } FA = Foreign\ Direct\ Investment + Equities + Bonds + OI$$

Lastly, the exchange rate determined definition:

Central Banks & Monetary Policy

Mandates:

- ESCB: Maintain Price Stability (and after that support the general economic policies laid out by the Union)
 - One goal takes precedence over the other
- FED: Dual Mandate - Price Stability & Employment

- No hierarchy in mandates

Tools:

- Conventional Monetary Policy (Transmission Channel)
- Unconventional Monetary Policy

Why adopt an inflation objective of 2%?

Central Banks want to *avoid deflation*.

- Deflation leads people to postpone consumption today, in favour of consumption tomorrow.
- Targeting 0% from above and over doing it would lead to this deflationary effect.

Central Banks want to *maintain the validity of their tools* to control inflation.

- Targeting 2% allows them to set nominal interest rates at 0% and have a real interest of -2%.

One of the main tasks of Central banks is to calculate the strength of the **Transmission Rate**. This is how much a change in interest rate effects rates further down the chain when CB's have less direct influence.

The Importance of the Banking Sector

In the US, open markets are more influential. Whereas the EU banking sector is highly important.

Key Issue for a private bank: *Liquidity Mismatch*

- Risk of Bank Run

Solutions to Bank Short Term Illiquidity

- Interbank Loan
 - Borrow from the Excess Liquidity of other competing banks
- Central Bank Loan
 - Three different rates - which creates a corridor which bounds the market rate and can in some ways control the money market.
 - * MLF
 - * MRO
 - * DFR

Conventional Policy

Non-Conventional Policy

- Asset purchase programs (APP, PEPP)
- Long term liquidity operations (TLTRO)
- Negative interest rates, tiering
- Forward guidance (commitment on the level of interest rates, which can be date, or data dependent)

The Shadow Rate

R^*

The Taylor Rule

$$r = p + 0.5 \times y + 0.5 \times (p - 2) + 2$$

where r is the nominal interest rate, p is inflation, y is the output gap.

normative indication of what the central bank should do to fulfill its mandate

In practice, monetary policy is not so simple.

Economic & Financial Crises

EWS = Early Warning System

Forecasting Paradox

Forecasting a crisis may precipitate a crisis that would not have otherwise occurred.

Impossibility Theorem

If you predict a crisis in the future, this might trigger a policy reaction, which avoids a crisis which would have otherwise occurred.

Defining a crisis

Currency Crises

Banking Crises

Sovereign Crises

Twin Crises

No link between banking and currency crises prior to the 1980s

- Bretton-Woods was a more stable currency system
- Not much financial globalisation by that time

Modelling Crises

Generation I - Krugman, 1979

- Only fundamentals matter to explain the crisis.
- Think of Government Deficits and Reserves

Key features

- Individuals have 2 assets
 - Domestic money M with real value M/P
 - Foreign currency F
 - So the wealth is $W=M/P+F$
- Domestic currency is held by domestic residents only
- Government runs deficit $G_t > T$
- To cover for the deficit the government can increase M and raise P (\ll inflation tax \gg)
- Because of inflation s should go up
- But the government decides to peg the ER
- Eventually the government runs out of reserves; s jumps up
- But agents realize this and trigger speculative attack just before

Key Issues

- Explains why currency crises appear when governments run (and monetize) deficits with a peg
- Here government's actions are exogenous
- Empirics show that government deficit are not a significant determinant of currency crises (example of FR, UK in EMS crisis, or Asian countries in 90s)
- Government's trade-off between peg and unemployment (when interest rates need to be hiked to defend peg) seems to be a key issue
- Timing of crises very unpredictable: multiple equilibria?

Generation II - Obstfeld, 1994

- Multiple equilibria; self-fulfilling crises; contagion
- Role of "softer fundamentals", political factors

Generation III - Aghion, Bacchetta, and Banerjee, 2000-01

- Highlight fragility in the banking and financial sector
- Main factors: high debt, low reserves, domestic borrowing constraints; also: expectations about future depreciation
- Role of currency mismatch
- Ambiguous effect of rising interest rate
- Not tackled in this course

Jeanne 1999

Shows a looser link between the crises and fundamentals.

- For extreme values, the fundamentals explain the occurrence of crises
- However for intermediary values, crises can happen without large changes in the fundamentals

Contagion (Masson, 1999)

Three Types:

- Common cause (e.g. shock in core country) affecting set of economies
- Change in macroeconomic fundamentals induced by a shock elsewhere (e.g. through competitiveness in case of currency crises)
- A shock in one country affecting others for reasons unexplained by macro fundamentals (e.g. change in market sentiments). Goldstein (1998) “wake up call”

His model is based on the probability that a country defaults

Similar solution to Jeanne:

- For extreme values, there is a unique solution to the model
- However for intermediary values, multiple solutions exist.

Predicting Crises (EWS - Early Warning Systems)

General Steps:

1. Choose a Crisis Index
2. Select potential indicators
3. Model selection (logit/probit, EWS, Continuous Index)
4. Country & Time selection for panel data
5. Use model to anticipate crises

-

Some significant variables

Small set of variables which cover different categories and are often used in significant estimation:

1. External Competitiveness
 - overvalued exchange rate
 - current account / GDP ratio
2. External exposure
 - short-term debt / reserves
3. Domestic real & public sectors
 - real GDP growth rate
4. Domestic financial sector
 - domestic credit to private sector
5. Contagion
 - Equity market contagion

Contagion

Crisis more likely to spread to a country competing and trading with countries experiencing a crisis.

We looked at calculations in class.

Contagion can also have a negative relationship

- Imagine two countries: Country B goes into crisis, people pull their money out and then give put it into country A

State Dependence

Having had a heart attack in the past, will often make you more likely to have one in the future. This is similar to *State Dependence*.

“True state dependence occurs when past experience of an event (e.g. of innovation) has a structural effect on the probability of experiencing that event in the future, regardless of other individual characteristics”

- Positive state dependence: may indicate additional vulnerability (bad reputation, less trust)
 - E.g. Brazil versus Switzerland
- Negative state dependence: “myth of economic recovery”

The Kaminsky Method (Interesting)

Kaminsky, Lizondo & Reinhart, 1998. “Leading Indicators of Currency Crises,” IMF Staff Papers

Discretizing indicators (Giving it a value of 0 or 1 depending on a threshold) loses valuable information.

Contagion & Political Uncertainty

Measuring the Effects of a Crisis

Growth Dynamics: The Myth of Economic Recovery) Cerra and Saxena, AER 2008

Literature: Conducts Impulse Response Rates where there are three possible outcomes:

- Catch up with previous growth
- Permanently lower growth path but growing at the **same** rate
- Permanently lower growth path, but growing at a **lower** rate

Accumulation of International Reserves

In the 90s after Black Tuesday; people said that corner solutions are the only option. Hard Pegs or Floating ER.

Fama Puzzle

The forward premium anomaly in currency markets (also referred to as the forward premium puzzle or the Fama puzzle) refers to the well documented empirical finding that the domestic currency appreciates when domestic nominal interest rates exceed foreign interest rates.

Peso Problem

A problem arising when “the possibility that some infrequent or unprecedented event may occur affects asset prices”

title