Economic and Behavioral Aspects of the Euro Crisis

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Scope of presentation

- Introduction
- Macroeconomic background
- Behavioral insights
- Conclusions – lessons to be learnt

Introduction

- The EU today faces one of the greatest challenges in its existence
  - political
  - economic
  - social
- For more than two years, we have witnessed sovereign financial distress of several Eurozone countries
  - Greece, Ireland, Portugal – already received rescue packages
  - Italy and Spain – closely monitored and much more dangerous due to the size of their economies
  - many other countries downgraded by rating agencies

Macroeconomic background

Monetary union of dissimilar economies

- Core / North
  - Austria, Benelux, Finland, France, Germany
  - efficient and highly productive, prudent net savers, consuming moderately and providing for their future
  - stable and high private saving rates and persistent current account surpluses

- Peripheries / South
  - Greece, Ireland, Italy, Portugal, Spain
  - less efficient, consume in excess of their resources, experiencing high growth pre-2008, based on cheap funding and high expectations
  - low savings, current account deficits balanced by foreign capital inflows

Current account (% of GDP) 1992-2007

% of GDP

8
6
4
2
0
-2
-4
-6
-8
-10
-12

1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007

North
South
Euro Area

Source: Holinski, Kool, Muysken (2010)

Net foreign assets (% of GDP) 1992-2007

% of GDP

10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90

1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007

North
South

Source: Lane and Milesi-Ferretti (2007)

Convergence?

- Until recently the disparity in current accounts was mainly attributed to the convergence process and the theory of inter-temporal maximization
  - countries with a lower per-capita income attract foreign investment , because high economic growth promise superior rates of return
  - these countries consume more and save less in anticipation of higher growth in the future
  - important assumption – high productivity will allow to repay the foreign capital in the future

- Holinski, Kool, Muysken (2010) demonstrate that the economic convergence hypothesis does not stand up to the empirical facts
  - real income differentials are persistent
  - total factor productivity remains low in the *Peripheries* (with the exception to Ireland)
  - terms of trade data surprisingly do not confirm a substantial loss in international competitiveness as inflation differentials could initially suggest

Problems in the Peripheries

- relatively strong currency
- low productivity
- loss of international competitiveness
- current account deficit financed by higher indebtedness
  - worsening trade balance
  - increasing negative net factor income
  - decreasing current transfers
- higher inflation
- relatively lower effective interest rates
- GDP growth driven by domestic consumption and investment bubble, particularly in the property sector

Monetary policy inflexibility

- Lack of national currency = impossible to increase the money supply and/or devaluate

- Paradoxically, greater risk of default of the country which is in a monetary union
  - A state that is able to perform sovereign monetary policy can always increase the supply of money to repay its debt, at least as long as the debt is denominated in its national currency

- Inadequacy of nominal interest rates
  - too tight for the Core / North
  - too loose for the Peripheries / South

Lack of fiscal discipline / public debt

- The Core was not dealing better with public finance than the Peripheries.
  - Germany and France had similar scale problems to Italy and Portugal.
  - Greece was constantly registering the highest budget deficit in the whole EMU.
  - Spain and Ireland were having fiscal surpluses for many years until the end of 2007

- Dynamics of governmental expenditures in the Peripheries twice as high as in the Core

- Relatively fixed and predetermined structure of the budgetary expenditures

- Record high budget deficits and levels of indebtedness in the years 2009-2011, as the result of direct and indirect spin-off effect of the credit crunch in the US

Eurozone’s banking system

- very large relative to the size of the overall domestic economies
  - average financial institution's gross debt = 143% of GDP (the US average 94%)
  - problematic for already indebted European governments to credibly issue new guarantees or use public funds for yet another wave of recapitalization
- high bank leverage
  - tangible assets 26 times common equity (the US level is 12 times)
  - only a thin layer of common equity capital is available as first-loss risk capital
- tend to own a lot of the debt issued by their own governments
  - considered risk-free, no capital set aside, potential credit losses
  - a large degree of interdependence between the financial solidity of banking system and government solvency
- involved in financing poor investments in the Peripheries.
  - potential losses from the private sector

Behavioral insights

Extrapolation bias and time horizon

- **Extrapolation error** consists in attaching too much weight to past trends, particularly those observed during a relatively short period of time and in inadequately extending them onto subsequent future periods
  - Short-series bias
  - Representativeness heuristic

- **Myopia of decision makers** - humans focus mostly on the nearest future
  - The evaluation period for ordinary consumers equals most often the interval between their salary payments, i.e. one month.
  - The evaluation period for investors and businesses is usually one year.
  - Politicians pay a lot of attention to the direct political impact and media coverage Their evaluation period rarely exceeds the time till the next elections.

- **Yet, the laws of macroeconomics demonstrate themselves often in a long-term horizon**

Extrapolation bias and time horizon

- Creation of the EMU and introduction of the common currency gave a strong initial growth impulse in the Peripheries
- People extrapolated the good situation into the future, failing to see the long-term consequences of the EMU and associated risks.
- Current prosperity built up confidence and created expectations for more growth.
- **Based on that conjecture, individuals consumed too much, businesses invested far beyond their capacities, and politicians spent irresponsibly.**

Underestimation of risk

- **Overconfidence** (Odean 1998, Barber&Odean 2001, Glaser&Weber 2003, Szyszka 2010)
  - above-average effect
  - calibration effect
  - illusion of control
  - ungrounded optimism

- Overconfidence enhanced by:
  - **self-attribution bias** (Taylor and Brown, 1988)
  - **confirmation bias** (Wason, 1966, Lord, Lepper & Ross, 1979)

- **Misperception of probability of extreme scenarios**
  - unlikely things as if they were completely impossible
  - highly probable events as if they were to certainly occur (Fischhoff et al. 1977, Kahneman &Tversky1979)

Why does it take so long to face the truth?

- The truth about Greek indebtedness has been known at least since early 2010
- Practically, Greece is a bankrupt, but no-one wishes to admit it
- Relatively small impact on banks' balance sheets in 2010, but far more in 2011
- All possible actions to postpone the formal declaration of insolvency

Bad news travel slowly

- **Ungrounded optimism** once again

- **Cognitive conservatism** (Edwards,1968)

- **Loss aversion**
  - Prospect theory (Kahnemann & Tversky 1979, 1982)

- A game with Credit Default Swaps
  - banks versus hedge funds

Euro heuristic

- Financial markets underestimated risk disparity among members of the EMU
  - **the Euro label**
  - the cost of financing was similar in all economies of the Eurozone
  - in 2007 the spread between 10-year government bond yields of Greece and Germany was only 0.27 percentage point
- **Halo effect**
  - People notice predominantly the most visible characteristic and base on it their entire opinion about something or somebody without taking into account other details (Thorndike 1920, Nisbett & Wilson 1977, Rosenzweig 2007)
- **Availability bias**
  - *To much weight assigned to information that is easily available, recallable from own memory, personal experience etc.*

Herding

- Herding in the financial world means to make decisions based on observation of other market participants rather than based on own information and analysis

- Herding during the boom drove prices away from fundamentals in the Peripheries
  - consumers
  - investors
  - financial institutions

- Herding in debt and currency markets may result in self-fulfilling prophecy
  - The role of rating agencies
  - The role of hedge funds

The role of rating agencies

- Under a lot of criticism after the US credit crunch
- Granted favorable ratings to institutions and securities related to the real estate market
- Failed to recognize the systematic risk of the mortgage backed securities
- Accused of conflict of interest
  - paid by issuers
- Three major agencies although international, but considered American
  - Fitch
  - Moody's
  - Standard & Poor's

The role of rating agencies

- Initial failure to recognize vast risk disparity in the EMU
  - until 2009/2010 – Ireland's rating = Spain's rating = Germany's rating = AAA
- Very lately downgrading Greece
  - Greek bonds had traded at junk level much earlier than the actual downgrade
- Overreacting in case of Portugal and Ireland (?)
  - yields on Portuguese and Irish debt spiked as a reaction to downgrades to junk
  - previous practices of the agencies and current fundamentals did not justify so heavy downgrades (Gärtner, Griesbach, Jung 2011)
- Self-fulfilling prophecy
  - downgrades = higher expected yields = short-term losses for bonds holders = higher cost of new debt servicing and difficulties to roll-over/refinance for governments = even higher risk aversion and higher costs = insolvency

The role of hedge funds

- Hedge funds constitute an important sector of the financial market
  - large (2000+ hedge funds in the US, top 225 funds have US$1.3 trillion, the largest one, Bridgewater Associates, has US$58.9 billion
  - highly leveraged
  - active almost in all markets
  - taking huge bets on mispricing
  - provide liquidity and might be useful in market efficiency/price correction
  - in reality, accused of destabilizing the markets and increasing volatility

- Naked operations = pure speculation

The role of hedge funds

- hedge funds are said to have bet:
  - against the creditworthiness of Greece (buying CDS)
  - against the value of the euro (short-selling the currency)

- Dec1, 2011 the European Parliament banned naked transactions on CDS
  - the ban ineffective for the American funds and other non-EU funds

- Structuring of Greek default
  - „voluntary" exchange of bonds
  - no CDS activation ?
  - The International Swaps and Derivatives Association makes official, binding determinations regarding the existence of „credit events" triggering CDS
    - 15 major investment banks and trading firms

Conclusions

- The root of the Euro crisis is combination of several factors:
  - imbalances among the EMU members
  - inflexibility of the monetary policy
  - lack of fiscal discipline
  - previous hit as a spin-off from the US credit crunch and the global slowdown
  - strong interdependence between euro-banking system and government solvency

- Behavioral inclinations did not cause the crisis directly, but
  - helped it develop
  - enhanced its scale
  - make it more difficult to manage

Thank you for your attention

Comments and questions welcome
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