Monetary Union with a Single Currency and Imperfect Credit Market Integration

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Disclaimer

- The opinion expressed in this presentation are those of the authors and do not necessarily reflect the views of the Banque de France or those of the Eurosystem.
- The paper is not a policy paper discussing all pros and cons of a given proposal
  - We build a model to make a specific point about one (we argue) necessary complement to monetary union
  - Current version : Banque de France Working Paper No 541 https://www.banque-france.fr/uploads/tx_bdfdocumentstravail/DT-541_01.pdf

Main messages

- Interaction between currency arrangement and credit integration
  - Insufficient credit integration can undermine the benefits or sustainability of a unique currency—through credit rationing
  - (Monetary Union = currency union + ‘credit union’)
- New rationale for elements of BU and CMU to complete EMU
  - Common objective : reduce barriers to (intra-EZ) cross-border credit
  - Distinct from bank-sovereign loop or *risk-sharing mechanism.*
- Temptation of ‘ring-fencing’ on a national basis can be harmful to a currency union

Roadmap

- Main messages
- Currency unification vs credit integration
  - credit integration in EZ.
- Setup and results
- Conclusion
  - dynamics of credit within currency union ;
  - lessons for banking union and capital market union ?

Currency unification vs credit integration

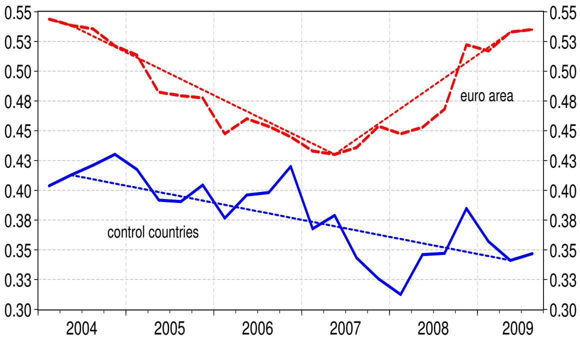
- Question : is credit market integration a requisite for the optimality of a currency union ?
- Government can decide/contract on currency unification (high powered money)
- But only have an indirect impact on degree on credit market integration
  - cannot force banks to unify their credit policy
  - can only unify the regulatory and supervisory policy
- Both U.S. and Euro Zone formed by unifying currency, while bank regulation and supervision remained initially at state level.
  - (U.S. experience : banking integration lengthy and painful process)
- Imperfect credit integration : residents of a given state face more stringent credit conditions when financing cross-border transactions compared to transactions with residents.

EZ : one currency, many credit markets

- Distinction is relevant for Euro zone (even prior to crisis)
- With Maastricht Treaty, governments acted the currency union
  - Eliminate currency risk (no conversion costs),
  - Equal access to cash for individuals whithin currency zone,
  - Equal access to ECB reserves for banks,
  - Integration / centralization of payment infrastructures.
- Creation of Euro triggered trend towards integration in segments of the financial markets.
  - Equity and bond markets
    - reduction of home bias (Schoenmaker and Bosch, 2008).
  - Money markets and wholesale banking.
    - Convergence of bank funding rates, increase in interbank lending across borders (Hartman et al. 2003, Manna, 2011).

EZ : one currency, many credit markets

- Reversal of integration since the *beginning of the* crisis



(Home bias in banking system, Euro area countries versus control countries (US, UK, SE, DK, CH). Source : Manna (2011))

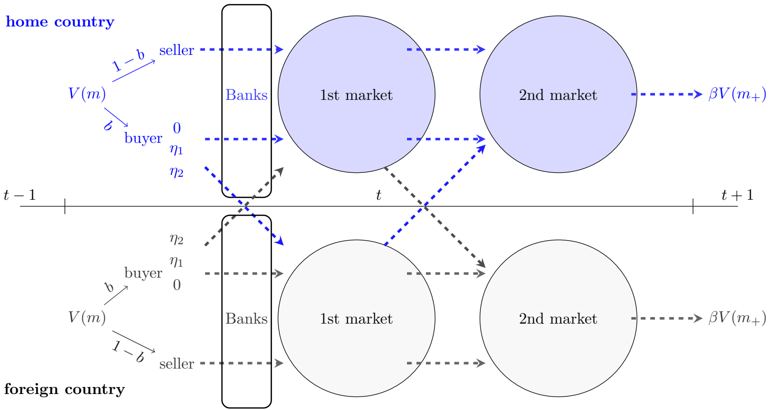
EZ : one currency, many credit markets

- Retail credit markets remain in national domains (ECB reports)
  - “retail banking markets continue to be less integrated, which is also reflected in the fragmented underlying financial infrastructure” (2007)
  - “Financial integration was remarkably fast in money and financial markets [. . .] Cross-border banking through branches or subsidiaries has remained limited [. . .] partly as a result of informational asymmetries stemming from supervisory fragmentation” (2012)
- Low entry by foreign banks (at least in credit market of core countries)
  - in terms of direct cross-border bank lending to NFCs and households.
  - in terms of presence through branches or subsidiaries.

EZ : one currency, many credit markets

- Credit markets far from being integrated (despite regular EC and Eurosystem initiatives to foster financial integration)
- Potential causes ?
  - No automatic inter-jurisdiction cooperation for seizing up collateral or revenues across border ;
  - Higher cost to get credit information about non resident ;
  - Pressure on banks to favor local assets, either by national supervisors/resolution authorities (‘ring-fencing’), or by local governments.
- $\Rightarrow$ Firms/households face higher costs when financing (through credit) transactions with non-residents.
- Question : Consequences of limited credit market integration on optimality / sustainability of the currency union ?
  - Analysis in model with two symmetric countries

Model structure



Model ingredients

- Two symmetric countries, *no aggregate shocks*.
  - separate currencies vs unique currency
- Additional cost $c \geq 0$ for cross-jurisdiction credit
  - Perfect credit integration : $c = 0$
- Key point : Banks manage default risk of borrowers
  - set credit limits according to borrowers' incentives.
  - incentives to repay loans affected by level of credit integration and by currency arrangement.
- Benchmarks : currency union optimal when
  - no credit rationing in equilibrium ;
  - credit sufficiently integrated ($c <$threshold).
- What happens when insufficient credit market integration ?

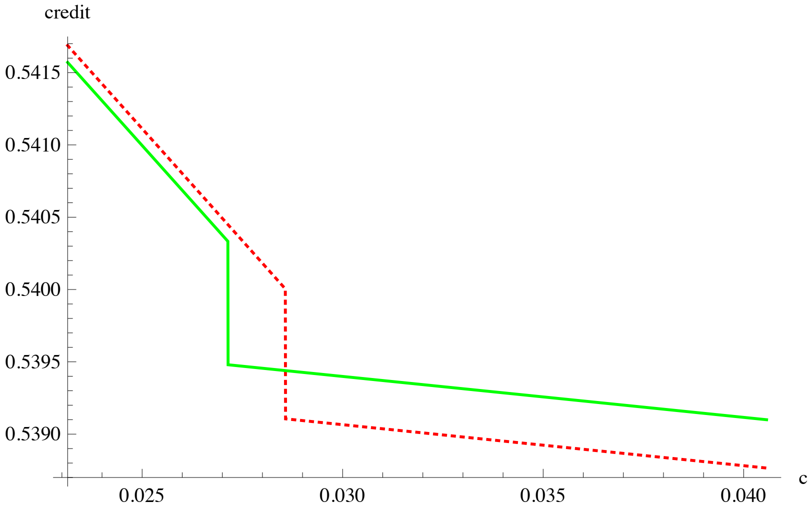
Credit integration and sustainability of MUs

- Main result : When credit integration is insufficient
  - currency union associated with *more credit rationing*
  - separate currencies is the optimal arrangement

- Intuition : a unique currency can increase incentives to default ?
  - Higher cost for cross-border credit (c) increases relative prices of foreign goods/inputs $\Rightarrow$ home bias in spending/investment decisions.
  - This credit-induced home bias only affects agents that repay their loans
  - By contrast, agents that would have defaulted on their loans would not be affected anymore as they would face restricted access to credit in the future. They would rely more on cash to finance their transaction.
  - When the home bias effect is large enough, conversion costs associated with separate currencies can curb default incentives.

- Higher credit rationing follows as banks react to higher default incentives.

Credit in a constrained equilibrium



Takeaway from the paper

- **Insufficient credit integration can undermine the sustainability of a monetary union**
  - more credit rationing under unique currency regime
  - currency union optimal when credit integration is high.
- Key parameter : additional cost for cross-border credit (c)
  - Obstacles to seize collateral/revenues across jurisdictions
  - Limited access to credit information across borders
  - Pressure by local authorities (supervisors/resolution) to favor credit and assets on a local basis (‘ring-fencing’)
- Two broad implications
  - behavior of credit in a monetary union
  - credit integration necessary to complete currency union

Credit in a crisis within a MU

- Stylized model (symmetric countries, representative agents,...)
- Variations of impediments to cross-border credit as determinant of credit behavior
  - reaction of local authorities in time of crisis
  - not observable (anecdotes + very indirect via home bias ?)
- Crisis : shock to credit supply (bank capital) or aggregate demand
  - pressure by governments to favor local credit to sustain economy
  - 'ring-fencing' strategy by national supervisory and resolution authorities as probability of bank resolution problems increases.
  - $\Rightarrow$ credit rationing for borrowers dependent from local banking sectors (households, SMEs)
  - $\Rightarrow$ threat to optimality of monetary union, or support to MU by all economic agents ?
- Additional chanel could have reinforced credit rationing in some EZ countries ?

Implications for Banking / Capital Market Union

- Credit integration as a necessary condition to reap the full benefits of a currency union.
- One (major) objective of a banking union should be to suppress impediments to cross-border credit within EZ
    - "[...] a Spanish firm should be able to borrow from a Spanish bank at the same price at which it would borrow from a Dutch bank" (speech by M. Draghi, october 2013)
- Some elements in CMU 'package' seem to serve that purpose :
    - development of access to information about SMEs for banks and non-banks investors ; initiatives to increase ability to seize/mobilize collateral or revenues across jurisdiction ; development of securitisation markets.
    - *Not necessarily a risk sharing mechanism*, and can also facilitate cross-border banking.
- Negative externality of ring-fencing on the currency union itself.
    - BU major step to solve this, as reduces links between national authorities and banks