Discussion of: Foreign Currency Borrowing by Small Firms

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Summary – aim of the paper

- To examine the choice of currency denomination of loan concentrating on small firms
  - Trade-off between costs of loan and distress costs
  - Relationship with information asymmetries
- Theoretical motivation: lack of models of profit maximizing enterprises' choice of debt denomination
  - Allayanis et al. (2003) use capital structure theories explaining indebtedness to examine choice of denomination of debt
  - It is mainly the behaviour of small firms what is unexplained
- Empirical background: increased FX lending to the private sector from domestic banks in transition countries, mainly to households and SMEs
  - Increased risks of lending?

Summary – contribution

- Explanation for why small firms can use FX loans
- Modelling the relationship between the information asymmetry and firms' decision on currency denomination of the debt
- The database used gives deep insight into the topic:
  - Country and firm level data
  - Small firms: lack of empirical works on their behaviour – usually no database
  - Transition countries
- Message: it is not absolute interest rate differential what matters but its relative measure to other related costs

Summary - model

- Loan supply:
  - two loans: LC and FX;
  - the quantity of loans is not limited;
  - there is perfect price competition;
  - interest rate differential between FX and LC funds.
- Loan demand:
  - two types of firms: LC and FX earners;
    - The firms can decide to match the currency of the income and the loan or not
  - PD if currency matching: 0 %, if no currency matching: 50 % - exogenously given;
  - the only source of the default is exchange rate volatility;
  - there is a firm-specific distress cost, firms trade-off between the costs of the loan and the costs of distress.

Summary - model

- No information asymmetry between the bank and the firm:
  - The banks can perfectly price the risks of default
  - Firms with FX income take FX debt
    - FX debt is cheaper and the PD is 0 %
  - Firms with LC income take either LC or FX debt
    - For each LC loan rate there is a level of distress cost under which firms take FX debt
    - Above this level firms take LC debt
- Information asymmetry between the bank and the firm:
  - The bank cannot make a difference between those who currency match and those who do not, thus, FX earners with FX debt bear part of the risk premium
    - Firms with FX income take FX debt
    - Firms with LC income who take FX loan pay lower interest rate than in the perfect information case, thus the level of distress cost under which firms take FX debt is higher

Summary – model predictions

- Higher possibility to choose FX loan
  - if the ratio of FX income is higher
  - for firms with LC income if
    - the distress costs are smaller
      - where the level of distress costs below what the firm chooses FX loan is higher in case of information asymmetry
    - more opaqueness (information asymmetry)
    - higher interest rate differential
    - smaller exchange rate volatility (PD)

Summary – empirical examination

- Database: 2005 BEEPS data
  - 26 countries
  - 3105 loans, raised between 2002 and 2005
- Probit and OLS regressions
  - Firm level determinants
    - FX income: significant relationship
    - Distress costs: partial evidence
    - Opaqueness: mixed evidence
  - Country level determinants
    - Interest rate differential: across countries yes, inside countries: not; stronger effect for firms with FX income – against predictions
    - Foreign bank presence (supply side) and corporate government reforms: more FX debt for FX earners – against predictions
    - Low FX rate volatility increased the probability to have FX debt for those with LC income

Comments - model

- Distress costs versus probability of default (probability of exchange rate changes)
  - What matters: distress costs or the interaction between distress costs and PD?
  - PD: does it modify the model if PD is not fixed?
    - the level of distress costs below which firms take FX loan depends on PD in that case
    - in this case the model could be used to explain the relationship between exchange rate *expectations* and choice of FX loans
    - in the empirical model the role of exchange rate volatility is examined
    - in the empirical part interaction of exchange rate volatility and distress costs could be examined

- Loan supply
  - Alternative model: *Luca-Petrova (2007): What drives credit dollarization in transition economies?*
    - model both the behaviour of enterprises and banks
    - 21 transition countries, all of them are examined in this paper, panel examination, 1990-2003
    - bank-related factors are more important to explain credit dollarization than firm-related ones

Comments – empirical part

- Variables
  - Variables to measure distress costs
    - Distress costs: firm- or country related?
    - Debt (leverage): related to the probability of default, but not to the distress costs? – again the problem of distress costs and PD
  - *small firms*: what does this variable measure?
    - Distress costs, opaqueness or something else (financial constraints, LC earning firms)?
    - In the regressions, after controling for distress costs, opaqueness and country-specific variables, *small firm* is significant and negative in the equation of LC earners.
      - either distress costs and opaquaness are probably not well measured or there is some unexplained difference between small and large firms

    My suggestion: *small firms* could be used to proxy distress costs OR to examine better the problem in the title, a split of the sample by small and large firms would be useful

Comments – empirical part

- Variables
  - *foreign banks, foreign liabilities of the banking sector* is used as a measure of informational asymmetry
    - Foreign banks role can differ if they start their operation as green-field investment or buying local banks – in case of CEE countries in 2005 it should not be related to informational asymmetry
    - Its role could be explained by easier access to funds and larger interest rate differential
      - mainly in the period before subprime crisis
    - Confirmed by the result that "*Foreign bank (…) increases foreign currency borrowing by foreign currency earning firms*" but not by local currency earning firms.
    - Foreign liabilities of the banking sector:
      - Ize (2003): dollarization of deposits and credits are strongly, positively correlated
      - Luca-Petrova (2007): „credit dollarization is the combined effect of domestic deposit dollarization and banks' desire for currency-matched portfolios beyond regulatory requirements"

Comments – empirical part

- Estimations
  - variable *age*
    - Interpretation: is it related to risk aversion rather than informational asymmetry?
    - Measurement?
  - Significant variables in different estimations: interest rate differential on EUR vs exchange rate volatility of USD
    - Any potential explanation?

Comments – possible further research

- Unexplained result: FX loans are of longer duration than LC loans
  - it would be interesting to know the reasons behind this
  - Does this not contradict with the results of the paper?
    - For example: on the long term exchange rate uncertainty is higher; longer term loans are probably larger ones, thus they increase the PD
- Financial constraints versus distress costs
  - Cowan (2006): financially constrained firms do currency mismatch more often
  - This paper: firms with high distress costs do currency mismatch more often
  - What is the relationship between financial constraints and distress costs?

Miscellaneous

- Keywords: why competition, banking sector, market structure?
- p. 4.: "Managing the risk from economic exposure…" – what do you mean by economic exposure?
- p. 20.: choice of foreign currency loan is positively related to firm-level distress costs? Need for clarification
- It is proposed that there is interest rate differential between the foreign and the local currency funds – but there are a few countries in the sample where there is currency board, thus, the interest rate differential is zero
- Estimations for country level measures ratios of FX loans
- Conclusions: should be written in a more relevant way for smaller firms
- Hungary data: some differ from what I know about, need for cross-checks