Real Implications of Financial Linkages Between Canada and the United States

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Presented at the Economic and Financial Linkages in the Western Hemisphere Seminar organized by the Western Hemisphere Department International Monetary Fund November 26, 2007

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Real Implications of Financial Linkages Between Canada and the United States

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November 26, 2007
Motivation

• Extent and implications of trade linkages between Canada and the United States are well documented
  ➢ More than \( \frac{3}{4} \) of Canadian exports are destined for the United States
  ➢ A 1 p.p. increase in U.S. real GDP growth raises growth in Canada by 0.3 – 0.7 p.p.

• Financial linkages are substantial, but much less explored

• Financial linkages, and their interplay with the real economy, may be particularly important at current juncture
Outline

• Extent of financial linkages
• Transmission of U.S. financial shocks to Canada
• Econometric methodology
• Estimation results
• Extensions
• Conclusions
Financial linkages

Canadian corporate bonds: gross new issues

[Chart showing trends in Canadian corporate bonds, distinguishing between domestic and foreign issuance, with emphasis on the percentage of foreign issuance over time.]
Financial linkages

Percentage of Canadian stocks held by U.S. residents
Financial linkages

Foreign loans to Canadian non-bank sector as percentage of bank loans to Canadian non-financial corporations

Excluding mortgages

Including mortgages
Financial linkages

• Canadian corporations rely on the United States for:
  ➢ 30 – 50 percent of bond issuance
  ➢ 15 – 20 percent of stock financing
  ➢ 20 – 40 percent of bank loans

• All in all, about ¼ of long-term financing by Canadian firms is raised south of the border
Transmission of U.S. financial shocks to Canada

- Tighter financial conditions in the U.S. make it more difficult/expensive for Canadian corporations to raise capital => dampen activity in Canada [direct financial channel]

- Tighter financial conditions in the U.S. lead to tighter financial conditions in Canada => dampen activity in Canada [indirect financial channel]

- Tighter financial conditions in the U.S. lead to slower activity and less import demand => dampen activity in Canada [trade channel]
Econometric methodology

- Structural vector autoregression (SVAR)
- Two blocks – U.S. and Canada
- Variables – CPI inflation (qoq, saar); real GDP growth rate; 3-month T-bill rate
- Ordering within each block
- Block exogeneity assumption
  - Canadian variables do not affect U.S. variables
  - U.S. variables may affect Canadian variables simultaneously and with a lag
- Estimation period: 1983Q1 – 2007Q1
Impulse responses

Response of

\( y_{can} \)
\( i_{can} \)
\( y_{usa} \)
\( i_{usa} \)
Channels

Impulse response of Canadian real GDP growth to one percentage point increase in U.S. 3-month T-bill rate
Channels
Extensions and robustness checks

• Oil price
• Exchange rate
• Stock market variables
• Spread on corporate bonds
• Financial conditions indices
• Shorter period (since 1991Q1)
  – Qualitatively similar results
  – Wider confidence bands
  – Somewhat smaller responses
  – Decomposition looks similar, but direct effect a bit smaller
Impulse responses

*Shorter sample*

Response of

- $y_{can}$
- $i_{can}$

Shock to

- $y_{usa}$
- $i_{usa}$
Summary

- Exports to the United States equal ¼ of Canada’s GDP
- Canadian corporations raise about ¼ of long-term capital in the United States
- A one percentage point shock to U.S. real GDP growth moves Canadian real GDP growth by about half a percentage point
- A one percentage point shock to U.S. short-term interest rate leads to a similar change in Canadian interest rate and to an approximately one percentage point change in Canada’s real GDP growth
- Direct financial channel is the most important for transmitting the effect of U.S. financial conditions on Canadian output, particularly in the short run
- Results are robust to specification changes
Conclusions

• Canadian businesses depend on the United States for a substantial share of their financing

• Financial conditions in the United States have considerable effect on both financial conditions and real economic activity in Canada

• Major financial shock emanating from the United States may have severe implications for the Canadian economy