Reassessing the impact of finance on growth

Stephen G Cecchetti
Bank for International Settlements
Financial development: a double-edged sword

- **Contributes to growth**
  - Reduces transactions costs
  - Improves distribution of capital and risk

- **Detracts from growth**
  - Competes for resources
  - Creates vulnerability
  - Can misallocate resources
When does the dark side of finance dominate?

1. Can the size of the financial sector be bad for productivity?

2. Does the growth rate of the financial sector become damaging?

3. Are some sectors more exposed than others?
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2. Does the **growth rate** of the financial sector become damaging?
   
   Yes, a typical boom can reduce trend growth by ½ pp per year.
When does the dark side of finance dominate?

1. Can the size of the financial sector be bad for productivity?

   Yes, when credit exceeds 100% of GDP.

2. Does the growth rate of the financial sector become damaging?

   Yes, a typical boom can reduce trend growth by \( \frac{1}{2} \) pp per year.

3. Are some sectors more exposed than others?

   Yes, financially dependent and R&D intensive industries.
Productivity growth & financial sector size

- Size cuts both ways:
  - Fixed costs $\rightarrow$ increasing returns $\rightarrow$ bigger more efficient
  - But it diverts resources, reducing growth

- The empirical questions: Can we find a turning point?
Productivity growth & financial sector size
Real growth & financial sector size

- **Turning point**: private credit around **100%** of GDP

- **Impact is large**:
  - **New Zealand**:
    - Mid-1990s to 2006: Credit from 90% to 150% of GDP
      => Drag of nearly **-0.50** percentage points
  - **Thailand**:
    - Post-crisis: Credit from 150% to 95% of GDP
      => Benefit of **+0.50** percentage points
  - **United States**:
    - 2007: Credit >200% of GDP
      => Returning to 100% → **+1.50** percentage points
Productivity Growth and Financial Sector Employment

Controls: Investment to GDP, employment growth, openness to trade, initial labour productivity, country dummies.
Productivity Growth and Financial Sector Value Added

Controls: Investment to GDP, employment growth, openness to trade, initial labour productivity, country dummies.
The size of the financial sector and growth

- Turning point:
  - 3.2% of employment
  - 6.5% of value added

- In 2008:
  - Employment:
    - Canada: 5.7%
    - Ireland: 4.5%
    - US: 4.1%
    - UK: 3.5%
  - Value added:
    - Ireland: 10.4%
    - US: 7.7% ⇒ Reduce value added from 7.7% to 6.5%: Productivity growth + 0.14 pp/yr
Productivity growth & financial sector growth

- Finance consumes scarce resources
- Competes for inelastically supply inputs
- What is the relationship of trend growth to employment growth?
Productivity growth & financial sector growth
Productivity growth & financial sector growth

- Typical boom:
  - Financial Sector Share in Total Employment grows +1.6 pp
    ⇒ 0.50 pp decline in trend productivity growth
    (sample average productivity growth rate: 1.3%)

- From 2005 to 2009:
  - Productivity growth and financial sector share in employment growth:
    - Ireland: -2.7% and +4.1%
    - Spain: -1.4% and +1.4%
  - What if financial sector share in employment had been stable?
    - Ireland: -1.3% instead of -2.7%
    - Spain: -0.8% instead of -1.4%
Industry growth and financial sector growth

- Financial sector growth affects sectors that compete for inputs
  - Finance is capital intensive:
    Financially dependent sectors, likely more affected.
  - Finance is skilled-labour intensive:
    R&D intensive sectors
    (most likely to be skilled-labour intensive)
Financial dependence in manufacturing industries

R&D intensity in manufacturing industries
Industry growth and financial sector growth

- Main result: Financially dependent or R&D intensive industries are more harmed by financial sector booms.
- Compute difference in productivity growth b/w:
  - Financially dependent or R&D intensive industry in a country w/ a financial sector boom
  - Financially independent or low R&D intensive industry in a country w/ a slow growing financial sector
- Difference is **2 to 3 pp**! (av. of 2.1%, std.dev. of 4.3%)
- Example:
  Spanish transport vs Swiss chemical industry: 4.5pp difference
  Almost all (4pp) due to Spain’s financial sector boom
Conclusions

- Financial sector can be a drag on productivity growth
  - When private credit exceeds 100% of GDP
  - When the financial sector grows quickly
  - Financial booms are especially bad for
    - Financially dependent sectors
    - R&D intensive industries

- More finance is definitely not always better
Thank you.