

AN APPLICATION OF THE BOONE INDICATOR TO THE SOUTH AFRICAN BANKING SECTOR

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Objectives

- Investigate the extent of competition in the South African banking sector – specifically the loan market
- Apply a new competition measure (the Boone indicator) which focuses on bank market segments rather than the entire banking market
- Explore the implications of entry on competition against the backdrop of the pending entry of three new banks
- Offer policy recommendations regarding the regulation of competition in the banking sector in the future
- Provide an avenue for further research concerning competition dynamics across other bank market segments such as the savings market

Methodology

The Boone indicator provides a link between efficiency (marginal cost of production) and competition.

The model assumes banks compete in terms of quantity where each bank i faces a demand curve

$$p(q_i, q_{j \neq i}) = a - bq_i - d \sum_{j \neq i} q_j$$

and wants to maximise profits

$$\pi = (p_i - mc_i)$$

by choosing the optimal output level q_i .

The Boone indicator is represented by β in the following equation:

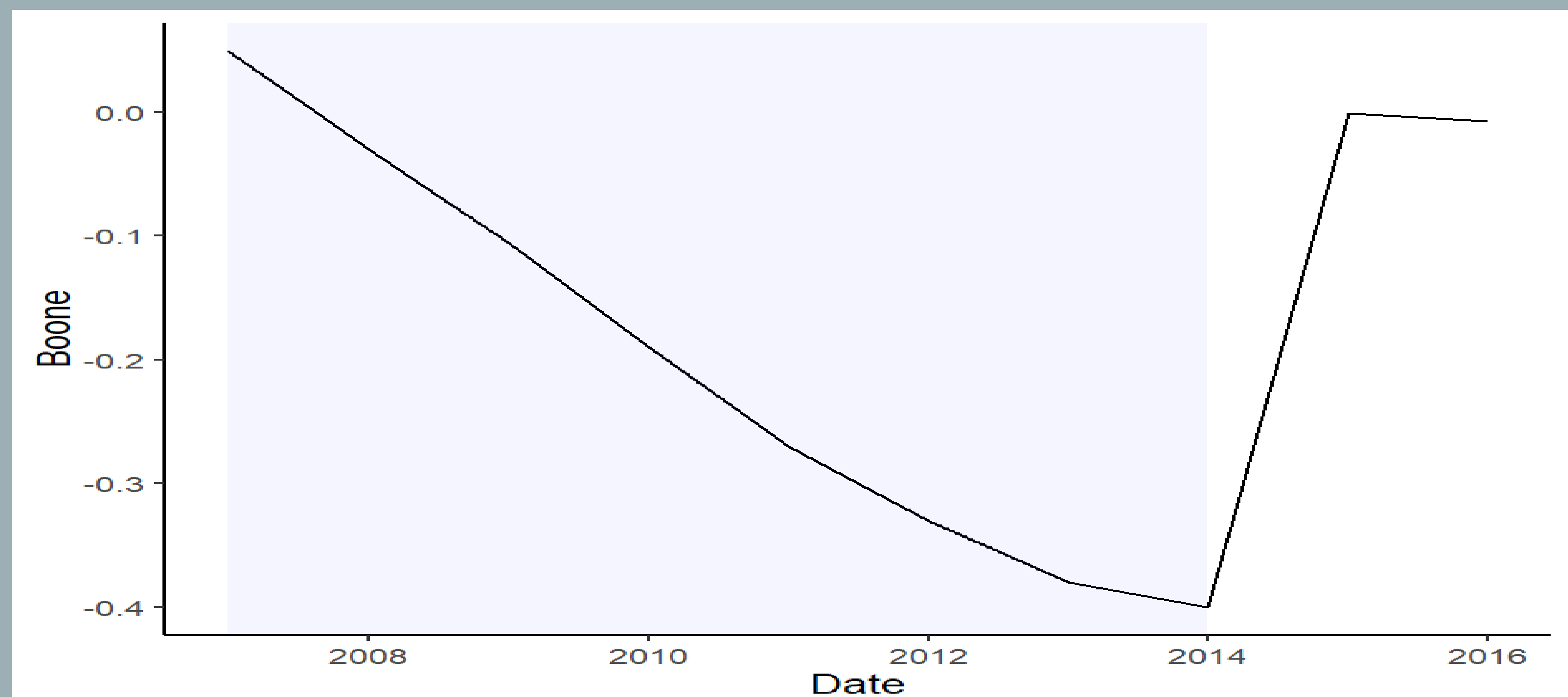
$$\ln s_i = \alpha + \beta \ln mc_i$$

The more negative the value of β , the more competition there is present in the sector.

Table of key variables for the five banks between 2003 and 2016

Bank	Total costs as a share of total assets	Average market share of lending	Loans as a share of total assets	Securities as a share of total assets	Other services as a share of total income	Other expenses as a share of fixed assets	Wages as a share of total assets	Interest expenses as a share of total funding
Standard Bank	4.39	29.31	44.80	4.55	190.97	129.62	0.73	5.05
Nedbank	6.74	21.97	74.83	7.98	177.87	154.94	0.91	5.72
Capitec	12.69	0.70	67.71	4.60	213.87	219.62	3.77	5.29
Absa	6.85	24.19	68.06	11.58	162.58	161.73	1.07	6.90
First National Bank	7.08	23.83	62.60	18.13	146.10	197.81	1.73	3.88
Average	7.55	20.00	63.60	9.37	174.18	172.74	1.64	5.37

The Boone indicator for the five banks between 2003 and 2016



Results

- Competition in the loan market has generally been increasing
- FNB and Capitec have been the most competitive banks in the loan market
- Standard Bank and Absa have been the least competitive banks
- The link between bank efficiency and market share is not obvious
- The addition of Capitec seems to have increased the competitiveness of all the banks in the sector

Recommendations

- Consolidate the power and reach of regulators
- Encourage foreign entry and reduce activity restrictions
- Impose size and conduct appropriate penalties and fees on banks
- Ensure switching and searching costs for consumers are close to negligible
- Create incentives for banks to keep innovating and adapting new technologies