Relationship Between Banking Capital and Lending in UK

Table of Contents

Part A

The section talks about theories that have been done on the impact of banking capital on lending. Holmström and Tirole (1997) considers the role of capital as a disciplinary equipment by assuring that banks have enough 'skin in the game' to develop required efforts for monitoring loan. It estimated that bank with higher capital have lower rates of lending and great volume of lending. Diamond and Rajan, (2000) suggested by considering short-run wholesale funding that if short-run debt funding is considered instead of bank capital, it will result in lower rates of lending and great volume of lending. Merton (1977) studied to determine how deposit insurance offers a put-option for shareholders of bank on bank returns. Bank with less capital tend to have higher amount of put-option and also increases the incentives of bank for risk-taking. In addition to this analysis, (Marcus, 1984; Keeley, 1990) decided to accommodate charter or franchise value of bank in the event that has been lost due to failure of the event. Banks that are under-capitalised might seek to decrease their exposure of risk in order to save their charter value. Further, Hellman et al. (2000) studied by considering bank capital, risk taking and competition as disciplinary roles that higher competition in deposit markets would decline the charter value and raise the risk taking factor. Boyd and Nicoló (2005) studied and found that higher competition decreases the rates of interest paid by the borrowers of bank which in turn ameliorates the cost of agency in loan contracts and also reduced the portfolio risk of bank. The study done on the models of risk-return decisions of banks provided ambiguous estimations about the association among the lending volume of bank, risk exposure and rate of interest related to loan. It suggested that a bank can raise its exposure of risk either by increasing its amount of lending by reducing rate of interest or by re-allocating of portfolio towards greater risk of assets that provides greater return rate. In both cases, the overall exposure of risk of bank was improved but the promise return such as rate of interest was lower in the first case and more in second case. The common divisor of all these theories was that decisions of portfolio and bank lending were identified by a range of aggregate and bank-specific aspects. Once these all aspects are monitored, one can able to determine a balance relation between rates of loan interest and bank capital. Gambacorta and Marquez (2011) reviewed and provided various rationales regarding the occurrence of cyclical variation. It was found from the conversations of heterogeneity in constraints and beliefs on borrowing that rationale was leverage cycle. Optimistic investors were interested to pay greater prices for assets that can produce a positive response during expansionary periods in order to raise the access of borrower for investment.

Capital requirements in banks are used as an effective tool to influence lending in banks. The change in the regulatory capital requirements have an impact on the lending by the banks.

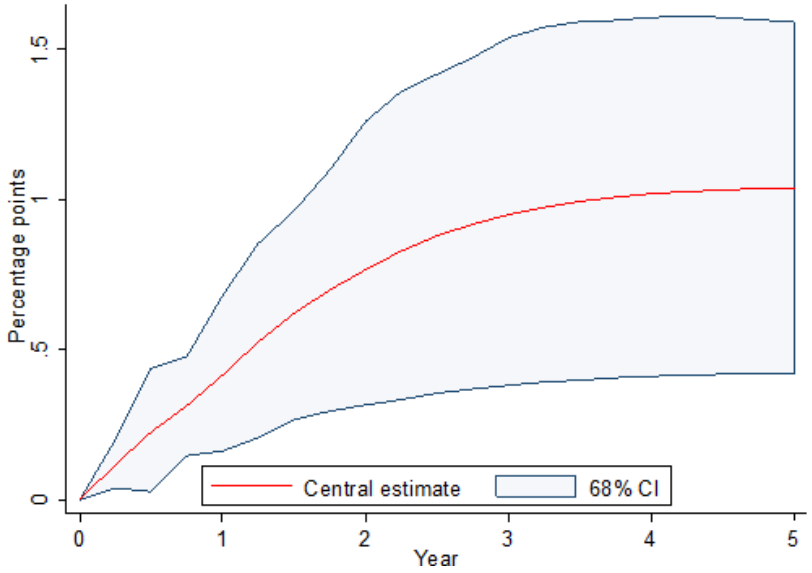

Figure 1: Impact of capital requirement on bank's capital ratio (Bridges et al, 2014)

In Figure 1, in case capital requirement increases by one percentage point, the increase in capital ratio by the bank is 0.4pp in one year and by 0.9pp in 3 years' time. After that, the increase is close to 1% per year.

From figure 2, it is evident that as capital requirement is increased, the secured loan growth reduces growth in loan temporarily. The secured loan growth initially decreased when capital requirement increased by one percentage point. Subsequently, the fall in the secured loan growth was 0.8%. At the end of first year, with the increase in capital accumulation to restore the buffer, the secured loan growth becomes approximately equal to the long term average.

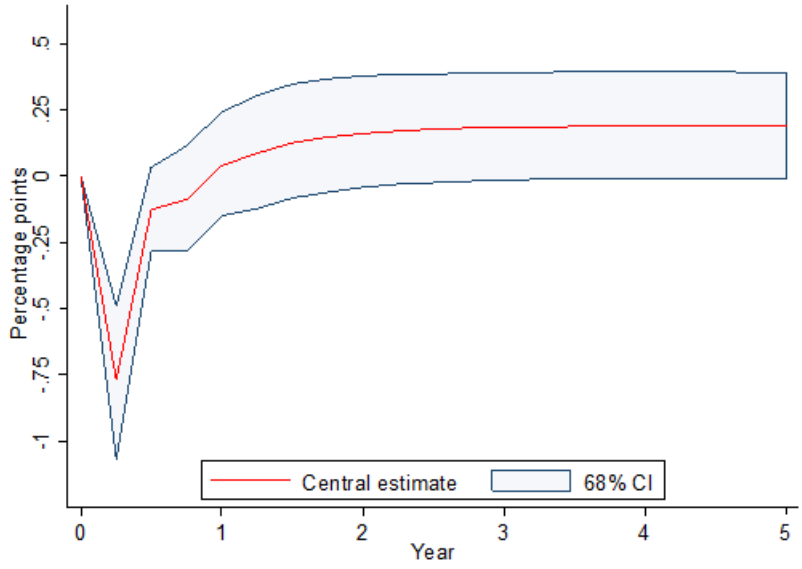

Figure 2: Impact of capital requirement on secured loan growth (Bridges et al, 2014)

To conclude, the capital requirements can be used an effective policy levers to impact the capital ratios and lending in bank (Peek, Rosengren, 1995). When the capital requirements increase, banks increase the capital ratio in order to ensure that buffer is above the regulatory minimum. This leads to banks reducing the lending temporarily in order to rebuild the buffers. Higher capital requirements mean that the banks have lesser cash to lend and hence it translates to lower lending (Santos, Winton, 2010). When the regulatory requirement on capital buffers is strict, banks have lesser capital at their disposal for lending. Hence, capital requirements can be effectively used by the regulators and central bank in order to impact the degree of lending in the economy which in turn impacts the lending rates (Saunders, Schumacher, 2000).

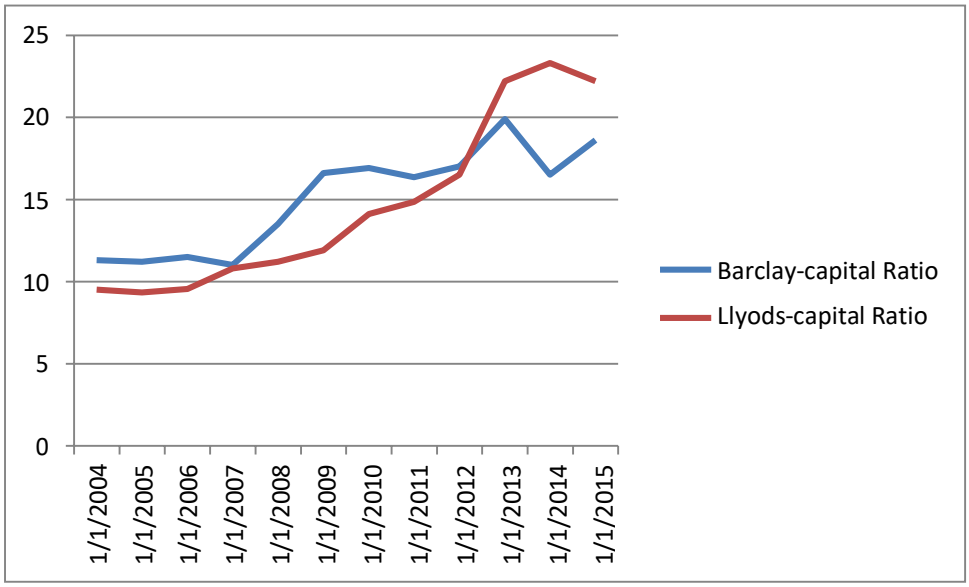

Figure 3: Capital ratio for Barclays and Llyods(Source: Bloomberg)

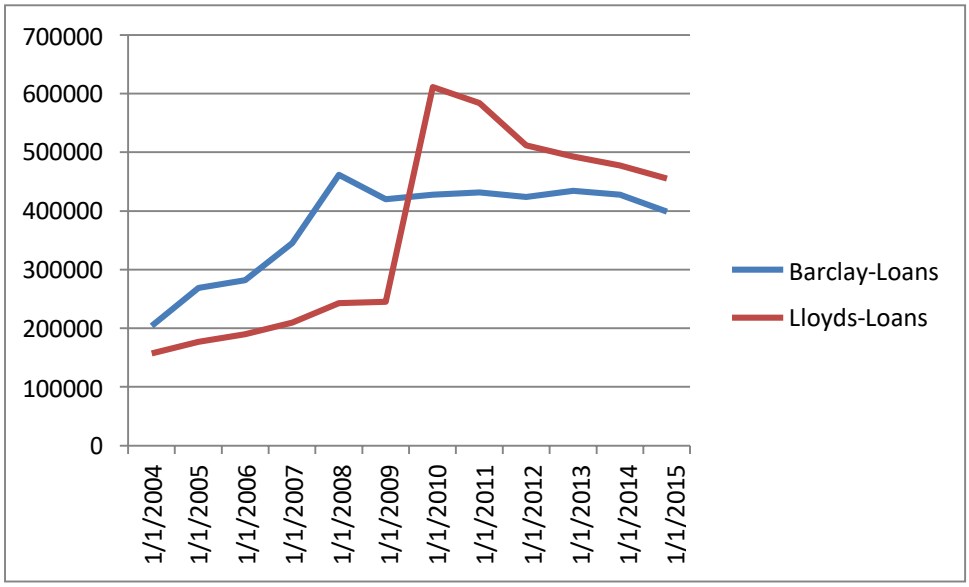

Figure 4: Loans for Barclays and Llyods(Source: Bloomberg)

Figure 3 above depicts the capital ratio for Barclays and Lloyds while figure 4 depicts the amount of loans i.e. lending for Barclays and Llyods. It can be inferred from the above two figures that with increase in capital ratio, the lending also increases. The capital ratio for Barclay was higher than Llyods until 2009 after which the capital ratio for Llyods increased. During the same period, the loans for Barclays were higher till 2009 after which the loans for Llyods were higher.

Part B

After the financial crisis, it was perceived that the firm's thorny issues that were too large, complex and interrelated to fail were given top priority at the regulatory reform agenda. The introduction of policy measures has been introduced since many years ago in order to address the implication posed by SIBs but there is lot of time required to implement (Moenninghoff, et al., 2014).

As per the FSB, SIFIs can be defined as the financial institutions whose disorder failure or distress is due to size, systematic interrelatedness and complexity of firms that would affect significant disruption on financial structure and activity. At the level of international, Basel Committee for Banking Supervision has introduced a strategy for determining G-SIBs and also introduced a set of guidelines to guide domestic authorities to identify domestic SIBs. The status of G-SIBs is identified using five key factors i.e. interconnectedness, complexity, substitutability, size and cross-jurisdictional activity (Dalton and Mathew, 2011). The strategy is also implemented to label a top level of G-SIBs against other G-SIBs. The list of G-SIBs is analysed on annual basis and banks can remove or enter their name in the list of G-SIBs or can re-listed their name at different level of SIBs.

- Higher capital requirements

  Banks determined that G-SIBs would require higher holding of capital within 1-3.5% of risk weighted assets based on the deemed level of G-SIBs. The additional capital comprises of capital tier one. The capital with high quality includes retained earnings and common stock. Banks determined that D-SIBs would have to acquire higher requirements of capital in the form of capital tier one. The amount of additional capital that a D-SIB must hold has let the national regulators to decide. Nevertheless, domestic authorities are intended to set requirement of additional capital that are in proportion to level of D-SIBs. Significantly, the capital requirements of D-SIB can exceed the amount of capital requirements of G-SIB; regulatory authorities will be needed to apply the higher amount of capital requirements in case determined D-SIB is considered as G-SIB.

- Intensive and effective supervision

  G-SIBs would also need to face rising scrutiny of supervision. G-SIBs would also experience more requests of information, more reviews of process and an increasing volume of visits by supervisors (Puzzanghera, Jim, 2013). The recommendations of

FSB for effective and intensive supervision of SIFI set out the expectations of FSB that supervisor needs to regulate the SIFI's activities appropriately and challenge their risk posed by business strategies and management processes. The recommendations comprises of stronger powers and resources of supervision, internal controls, capabilities of data aggregation and higher expectations of supervision for risk posed by management functions.

The FSB has issued two reports on supervision of SIFI which determine level of several firm issues that obstruct effective supervision. Barriers consist of a lack in progress of risk identification and data aggregation, inadequate IT structures, and insufficient capabilities of risk reporting. The inability of seniors' organisers to properly explain frameworks of risk appetite in line to corporate strategy is also considered as a serious influence for concern. There was strong focus put on corporate governance, especially on roles and responsibilities of chief audit executive and chief risk officer. CROs are intended to have the determined support of the CEO and a proper earned ability with organisation. There is also a chance that Chief Audit Executive and CRO will have line managers, budget of firms, business strategy, and ability to challenge senior managers.

From the list of G-SIB, Barclays is chosen for analysis in this report.

Measures of Asset Quality for Barclays

- **Loan loss reserves/Gross Loans**

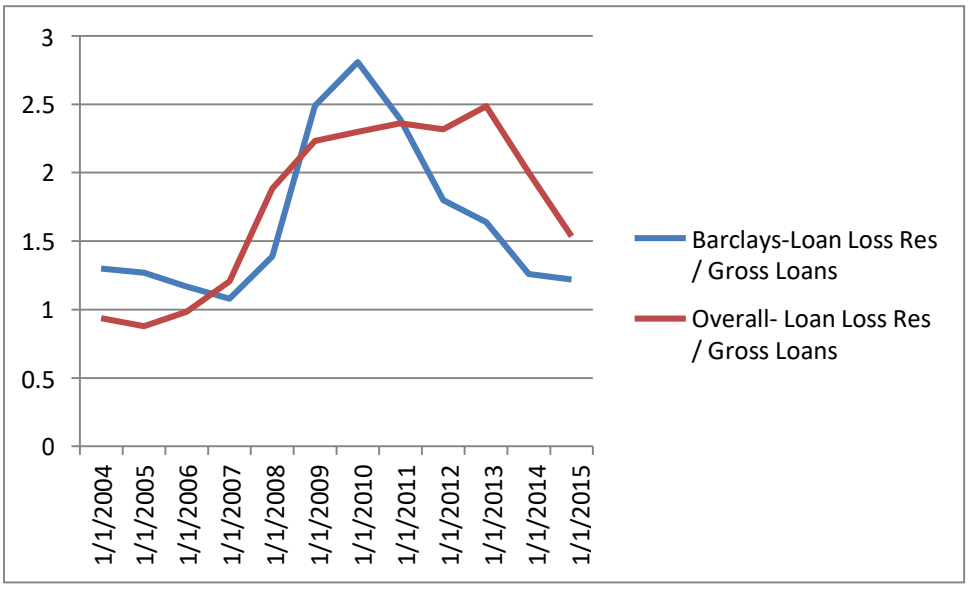

Figure 5: Loan loss reserve to gross loan ratio for Barclays and UK banking sector (Source: Bloomberg)

This ratio depicts the percentage of reserves for loan losses over gross loans for Barclays and UK banking sector (overall). Higher this ratio better is the asset quality. The loan loss reserves are the allowances that are kept aside for losses arising out of loan. As it can be seen from the above graph, this ratio increased from 2007 to 2010 but then started falling after 2010 for Barclays. This shows that for first couple of years, the bank focussed on improving the asset quality but subsequently the asset quality deteriorated. The UK banking sector also followed a similar trend, with slight variation in magnitude of change and timing.

- **Loan Loss Provision/Net Interest Revenue**

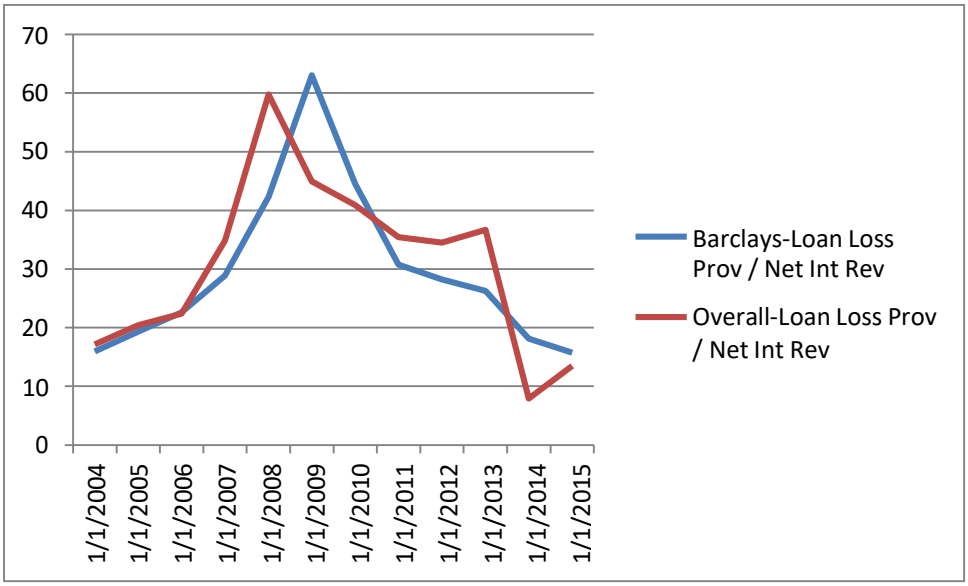

Figure 6: Loan loss reserve to net interest revenue for Barclays and UK banking sector (Source: Bloomberg

This ratio depicts the percentage of loan loss provision over net interest for Barclays and UK banking sector. Higher this ratio better is the asset quality. The loan loss provisions are the cushion that is kept aside for losses arising out of loan. As it can be seen from the above graph, this ratio increased from 2007 to 2010 but then started falling after 2010. This shows that for first couple of years, the bank focussed on improving the asset quality but subsequently the asset quality deteriorated. The trend was similar for the UK banking sector with slight variation in magnitude and timing of change.

Measures of Liquidity for Barclays

- **Interbank Ratio**

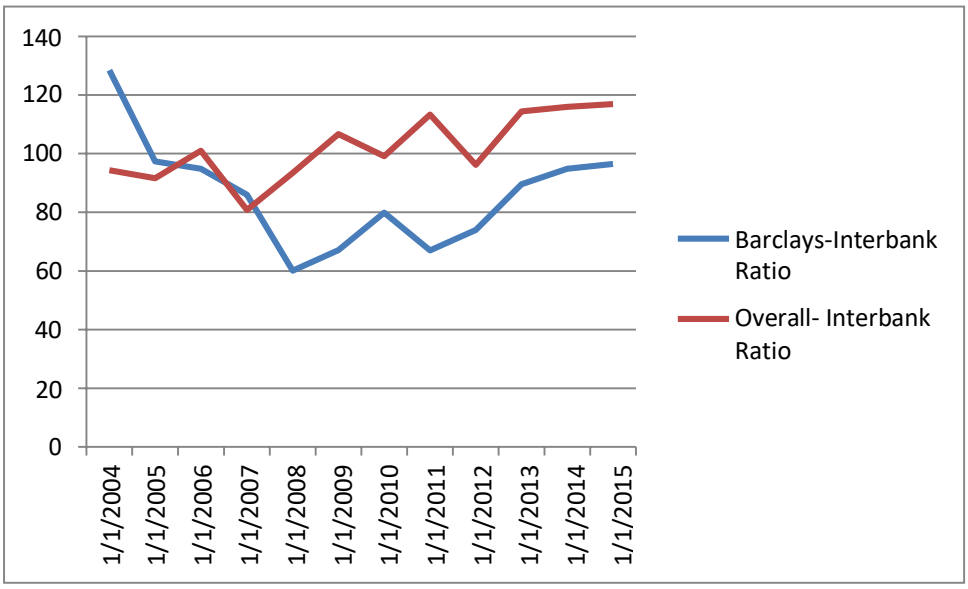

Figure 7: Interbank Ratio for Barclays and UK banking sector (Source: Bloomberg)

Interbank rate is the ratio of total lending to other banks divided by total money borrowed from other banks. As it can be seen from the above graph that the total borrowings for Barclays has been increasing as compared to the lendings over the years. After 2011, the borrowing has slightly decreased as compared to the lendings. For the overall banking sector in UK, the interbank ratio has been slightly on the higher side.

- **Net Loans to Total Assets**

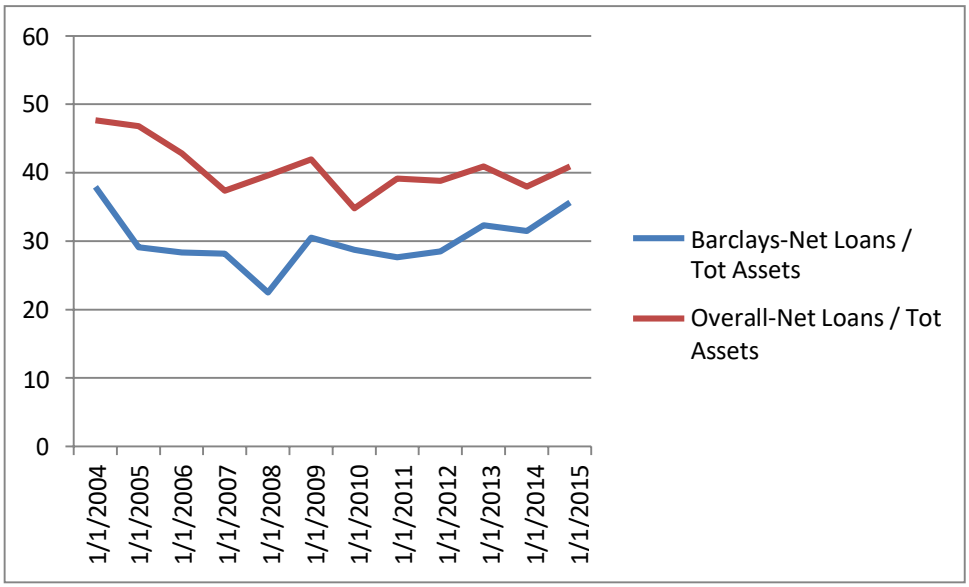

Figure 8: Net Loans/Total Assets Ratio for Barclays and UK banking sector (Source: Bloomberg)

This ratio depicts what percentage of total assets are net loans for Barclays and for UK banking sector. This reflects higher lending by the bank. During the crisis period, the net lending by the bank decreased but after the crisis, the net loans extended by the banks gradually increased. This ratio was higher for the UK banking sector as compared to Barclays.

References

Holmström, B. and Tirole, J. (1997) financial intermediation, loanable funds, and the real sector, Quarterly Journal of Economics 112, 663-691.

Diamond, D. W., and Rajan, R. G. (2000) A Theory of Bank Capital. Journal of Finance 55, 2431–2465

Marcus, A. (1984) Deregulation and bank financial policy, Journal of Banking and Finance 8, 557-565.

Merton, R. (1977) An analytic derivation of the cost of deposit insurance and loan guarantees an application of modern option pricing theory, Journal of Banking and Finance 1, 3-11.

Keeley, M. (1990) Deposit insurance, risk, and market power in banking. American Economic Review 80, 1183-1200.

Hellmann, T. F., Murdock, K. C. and Stiglitz, J. E. (2000) Liberalization, Moral Hazard in Banking, and Prudential Regulation: Are Capital Requirements Enough? American Economic Review 90, 147–165.

Boyd, J.H., and De Nicoló, G. (2005) The Theory of Bank Risk Taking and Competition Revisited. Journal of Finance 60, 1329-1343.

Moenninghoff, S.C., Ongena, S., Wieandt, A. (2014) "The Perennial Challenge to Abolish Too-Big-To-Fail in Banking: Empirical Evidence from the New International Regulation Dealing with Global Systemically Important Banks, pp. 10, 11, 28

Dalton, Matthew (2011). "France, Belgium Reach Pact on Ailing Dexia". The Wall Street Journal

Puzzanghera, Jim (2013). "MetLife gets out of banking business, sells deposits to GE Capital". Los Angeles Times

Peek, J., and Rosengren, E. S. (1995) The Capital Crunch: Neither a Borrower Nor a Lender

Be, Journal of Money, Credit and Banking 27, 625–638.

Santos, J. and Winton, A. (2010) Bank capital, borrower power, and loan rates, AFA 2010

Atlanta Meetings Paper, available at SSRN: http://ssrn.com/abstract =1343897.

Saunders, A. and Schumacher, L. (2000) The determinants of bank interest rate margins:

An international study, Journal of International Money and Finance 19, 813-832.

Sharpe, S. A. (1995) Bank Capitalization, Regulation, and the Credit Crunch: A Critical Review of the Research Findings. Washington Federal Reserve Board Finance and Economics Discussion Series 95-20.

Steffen, S and Wahrenburg, M. (2008) Syndicated loans, lending relationships and the business cycle, Goethe University Frankfurt Working Paper, available at SSRN: http://ssrn.com/abstract=1101022.

Turner, A. (2009) The Turner Review: A regulatory response to the global banking crisis. The Financial Services Authority, 25 The North Colonnade, Canary Wharf, London

Gambacorta, L., and Marquez-Ibañez, D. (2011) The Bank Lending Channel: Lessons from the Crisis, Economic Policy 26, 135-182.