

# X-Efficiency and Productivity Change in Australian Banking

Penny Neal

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## Abstract

This paper investigates *X*-efficiency and productivity change in Australian banking between 1995 and 1999 using Data Envelopment Analysis (DEA) and Malmquist productivity indexes. It differs from earlier studies by examining efficiency by bank type, and finds that regional banks are less efficient than other bank types. The study concludes that diseconomies of scale set in very early and hence are not a sufficient basis on which to allow mergers between large banks to proceed. Total factor productivity in the banking sector was found to have increased by an average annual 7.6 per cent between 1995 and 1999. All of the productivity increase was due to technological advance shifting out the frontier. The banking sector's performance was less efficient relative to the frontier in 1999 than it had been in 1995.

## REFERENCES

Avkiran, N.K. 1999, 'The Evidence on Efficiency Gains: The Role of Mergers and the Benefits to the Public', *Journal of Banking and Finance*, vol. 23, pp. 991-1013.

[Web of Science®](#) | [Google Scholar](#)

Charnes, A., Cooper, W.W. and Rhodes, E. 1978, 'Measuring the Efficiency of Decision Making Units', *European Journal of Operations Research*, vol. 2, pp. 429-444.

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Drake, L. 2001, 'Efficiency and Productivity Change in UK Banking', *Applied Financial Economics*, vol. 11, pp. 557-571.

[Google Scholar](#) 

Dyson, R.G., Thanassoulis E. and Boussofiane A. 1990, DEA Tutorial, <http://www.deazone.com/tutorial/index.htm>

[Google Scholar](#) 

Fare, R., Grosskopf, S., Norris, M. and Zhang, S. 1994, 'Productivity Growth, Technical Progress, and Efficiency Change in Industrialized Countries', *American Economic Review*, vol. 84, pp. 66-83.

[Web of Science®](#)  | [Google Scholar](#) 

Farrell, M.J. 1957, 'The Measurement of Productive Efficiency', *Journal of the Royal Statistical Society, A CXX*, Part 3, pp. 253-290.

[Web of Science®](#)  | [Google Scholar](#) 

Freixas, X. and Rochet, J.C. 1997, *Microeconomics of Banking*, The MIT Press, Cambridge, Massachusetts and London, England.

[Google Scholar](#) 

Harper, I. 2000, 'Mergers in Financial Services: Why the Rush?', *The Australian Economic Review*, vol. 33, pp. 67-72.

[Google Scholar](#) 

Kent, C. and DeBelle, G., 1999, 'Trends in the Australian Banking System: Implications for Financial System Stability and Monetary Policy', Reserve Bank of Australia Research Discussion Paper RDP 1999-05.

[Google Scholar](#) 

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---

Parham, D., Barnes, P., Roberts, P. and Kennett, S. 2000, 'Distribution of the Efficiency Gains of the 1990s', Productivity Commission Staff Research Paper, AusInfo, Canberra. <http://www.pc.gov.au/research/staffres/doteg/index.html>

[Google Scholar](#) 

---

Parham, D., Roberts, P. and Sun, H. 2001, 'Information Technology and Australia's Productivity Surge', Productivity Commission Staff Research Paper, AusInfo, Canberra.

[Google Scholar](#) 

---

Sathye, M. 2001, 'X-efficiency in Australian Banking: An Empirical Investigation', *Journal of Banking and Finance*, vol. 25, pp. 613–630.

[Web of Science®](#)  | [Google Scholar](#) 

---

Sikora, P. 2001, 'The Four Pillars of Wisdom: The Major Banks Rethink their Strategy', *Journal of Banking and Financial Services*, vol. 115, no. 4, August, pp. 28–31.

[Google Scholar](#) 


---

Walker, G. 1998, 'Economies of Scale in Australian Banks 1978–1990', *Australian Economic Papers*, vol. 37, pp. 71–87.

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