



Applied Financial Economics >

Volume 15, 2005 - [Issue 15](#)

731 | 44 | 0
Views | CrossRef citations to date | Altmetric

Original Articles

An analysis of the relevance of off-balance sheet items in explaining productivity change in European banking

Barbara Casu & Claudia Girardone

Pages 1053-1061 | Published online: 22 Aug 2006

Cite this article <https://doi.org/10.1080/09603100500120688>

Sample our
Economics, Finance,
Business & Industry Journals
>> [Sign in here](#) to start your access
to the latest two volumes for 14 days

Full Article

Figures & data

References

Citations

Metrics

Reprints & Permissions

Read this article

Share

Abstract

The 1990s have witnessed a significant growth in bank income generated through non-traditional activities, especially for large EU universal banking institutions. Using the non-parametric Malmquist methodology this study analyses the impact of the inclusion of off-balance sheet (OBS) business in the definition of banks' output when estimating total factor productivity change indexes. Whereas the results reinforce the prevalent view in the recent literature, indicating that the exclusion of non-traditional activities leads to a misspecification of banks' output, the impact of the inclusion of these activities varies. Overall, the inclusion of OBS items results in an increase in estimated productivity levels for all countries under study. However, the impact seems to be the biggest on technological change rather than efficiency change.

Notes

¹Important developments in this field have been introduced, among others, by the work of Diewert ([1976](#), [1978](#), [1981](#)), Caves et al. ([1982a](#) and [1982b](#)) and Färe et al. ([1985](#), [1994](#)).

²Shephard's ([1970](#)) distance functions have guided much of the development in efficiency and productivity analysis. In a multi-input multi-output framework, an output distance function is defined as the reciprocal of the maximum proportional expansion of the output vector, given inputs. An input distance function is defined as the reciprocal of the maximum proportional contraction of the input vector, given outputs.

³In his empirical work, Farrell ([1957](#)) defines technical efficiency as the maximum proportional contraction of inputs. He also indicated that, under constant returns to scale, this may be interpreted as the percentage by which output could be increased using the same inputs. The interpretation of Farrell's measures of technical efficiency as reciprocals of distance functions can be found in Färe et al. ([1985](#), [1994](#)).

⁴For a literature survey on the subject, see Grosskopf ([1993](#)) and Färe et al. ([1997](#)). Also, Ray and Desli ([1997](#)) discuss the conceptual framework and Mukherjee et al. ([2001](#)) derive the geometric decomposition for a generalized Malmquist index.

⁵The input distance function is similarly defined.

⁶It is to note that data on OBS items for UK banks were available on for six institutions, namely HSBC, Barclays Bank, Clydesdale Bank, Abbey National, NatWest and the Royal Bank of Scotland.

⁷Specifically, according to ECB ([2000](#) and [2003](#)) the OBS/Total Assets ratio for the whole banking sectors in the year 1994 (2000) was: 28.31 (29.76) in France, 14.54 (13.46) in Germany, 24.91 (13.46) in Italy, 5.65 (9.66) in Spain and 32.53 (34.2) in the UK.

Related research

People also read

Recommended articles

Cited by
44

Information for

Authors

R&D professionals

Editors

Librarians

Societies

Opportunities

Reprints and e-prints

Advertising solutions

Accelerated publication

Corporate access solutions

Open access

Overview

Open journals

Open Select

Dove Medical Press

F1000Research

Help and information

Help and contact

Newsroom

All journals

Books

Keep up to date

Register to receive personalised research and resources by email



Sign me up



Copyright © 2026 Informa UK Limited [Privacy policy](#) [Cookies](#) [Terms & conditions](#)

[Accessibility](#)

 Taylor and Francis Group

Registered in England & Wales No. 01072954
5 Howick Place | London | SW1P 1WG