



Cost income ratio benchmarking in banking: a case study

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Keywords *Financial services, Benchmarking, Retail management, Banks, Performance measurement (quality)*

Abstract *This paper examines how ASB Bank, a New Zealand-based retail bank, made use of cost income ratio benchmarking when reviewing its operational efficiency. In particular, it shows the difficulties associated with the benchmarking process in the sector and details the practical steps taken to obtain meaningful comparative information. It is interesting that, while the cost income ratio was the principal metric used in this benchmarking exercise, it sought to identify best practice not in terms of minimizing this ratio but rather in terms of identifying typical ratios and cost structures among successful banking institutions.*

Introduction

This paper describes a practical approach to benchmarking the operational cost efficiency and structure of ASB Bank (ASB), one of the leading banks in New Zealand. The project was initiated by the bank's management in order to achieve two main objectives. First, to better understand how its overall costs compared to other banks in general and second, to assess its cost structure in contrast to best practice retail bank in the industry. The well-established cost income ratio (CIR) was chosen as a basic yardstick for measuring cost efficiency. The CIR, defined as non-interest expense divided by the sum of net interest income and non-interest income, is well accepted by finance practitioners as a performance indicator but does have theoretical and practical limitations as will be discussed more in detail later in this paper. A particularly interesting facet of this exercise was that it did not define best practice in terms of minimum CIRs but aimed to identify typical CIR levels that can be observed at successful banks (who could be termed "best practitioners").

In line with the project's objectives, the analysis was conducted in two phases. The first phase included a cross-comparison of ASB's total CIR with a comprehensive global sample of financial institutions. The second phase looked at components of both CIR and total non-interest expense for a smaller sample in order to investigate the cost structures of successful financial institutions.

The purpose of this paper is to impart the lessons learnt from this benchmarking experience. Therefore, it focuses less on the specific results found per se but rather on

The authors wish to thank Marc Jacobs of ASB Bank Auckland, David Tripe (Centre for Banking Studies, Massey University) and Dr Bernardo Bádiz-Lazo (Open University) for their help with this project.



some of the practical issues encountered when attempting to benchmark the cost structure of a bank. Accordingly, the paper is structured as follows. The next section presents a brief review on measuring efficiency of banks, financial performance and shareholder value creation in general as well as the use of benchmarking by financial services institutions. This is followed by the case study, illustrating in detail how ASB went about this project. The paper concludes with a discussion of lessons learned in this project, limitations identified and how ASB's management subsequently used the results.

Measuring the efficiency of banks

There is a large body of literature dedicated to describing approaches to measuring the efficiency of financial institutions. Publications targeted for a practitioners audience frequently focus on well-known accounting ratios such as the CIR and the cost asset ratio (Davidson, 1997). The CIR is defined as non-interest expense divided by the sum of net interest income and non-interest income, whereby non-interest expense usually excludes bad debt and tax expense. This measure has intuitive appeal and is thus often simply called "efficiency ratio". According to an *ABA Banking Journal* survey of US banks (Cocheo, 2000), this ratio is generally considered an important benchmark, particularly among publicly traded banks. This conclusion comes as no surprise, as CIR is the focus of many bank equity analysts when gauging relative efficiency in the sector (Asher, 1994).

The limitations of the CIR have been discussed in numerous articles such as that by Osborne (1995) who found no clear correlation between the CIRs and return on equity for a sample of US Banks. Tripe (1998) identified factors such as interest levels, the state of the economy or the balance sheet structure which impact on this ratio. Bekier and Nickless (1998) in turn found substantial differences with regard to the cost efficiency between countries. In particular, those OECD countries where checks are widely used for non-cash payments (USA, Canada, Australia, and the UK) tend to have more costly banking systems than the European countries that rely more on electronic transaction methods. Finally, Davidson (1997) noted that there is a timing problem in that unfavorable efficiency ratios might reflect investments, for example, into technology which, in the long run, could well lead to an improved cost position. The opposite, an artificially low CIR, might cost a bank dearly long-term if it has laid off so many staff that a subsequent loss of market share bites into revenues.

In summary, recent academic studies clearly have major reservations when this simple accounting ratio is used as an efficiency measure. Instead efficiency research tends to be firmly rooted in economic theory, estimating efficient frontiers based on cost or profit functions. Berger and Humphrey (1997) present a survey of 130 frontier efficiency studies on financial institutions in 21 countries. A brief overview of such X-efficiency methods measuring bank efficiency can also be found in the work of Avkiran (1999), in particular a description of the data envelopment analysis (DEA) method, a non-parametric technique to estimate efficient frontiers. DEA, much used to gauge efficiencies in the service industry in general, has gained "market share" in recent times.

Despite theoretical concerns, there is now doubt that in practice lowering the CIR remains an important focus in a bank's cost management. This is because the more sophisticated efficiency techniques will not provide specific guidance as to how to

manage input cost but at best help to see overall strategic directions. No surprise that of the 130 studies listed by Berger and Humphrey (1997) a clear majority address regulatory and banking policy, as well as general research. The very few that focus on managerial performance conduct efficiency analysis of bank branches using proprietary data (Berger and Humphrey, 1997, pp. 191, 203).

Identifying best practice: measuring financial performance

It is virtually axiomatic in corporate finance that it is the goal of management to maximize shareholder value by taking actions that will increase the current value per share of existing stakeholder in the firm. This objective is quite vague and this section briefly reviews some of the main approaches to measuring such shareholder value creation and how they relate to the methodology adopted in this exercise.

The most basic ones are simple, static accounting ratios like return on equity (ROE) or earnings per share. The frequently used ROE is sometimes decomposed according to the well-seasoned DuPont system of financial control, covered in most introductory financial statement analysis and corporate finance textbooks such as Ross *et al.* (1999, p. 35). As shown in Figure 1, the first component measures the actual profitability of the firm. For a bank this profit margin would be inversely related to the CIR discussed in the previous section. Obviously, it is understood that unlike the profit margin, the CIR typically does not consider tax and other non-operational expense. The next two ratios measure the utilization of assets and the gearing of the company. For a banking institution, it makes sense to combine them into one equity capital utilization measure (Lloyd, 2001). This is because, unlike in the case of industrial firms, a bank’s gearing is not a particularly distinguishing factor and it is also strongly affected by regulatory capital requirements. These remaining two sub-components of ROE could then be interpreted as operational and capital efficiency, respectively.

Academic researchers and consultants alike agree that such traditional accounting based measures as ROE have many weaknesses. Criticism such as expressed in the work of Rappaport (1986), Stewart (1991), but also Copeland *et al.* (1996) centre on first, that the accounting measures are lacking a point of reference which, for example, take into account risks and comparable returns achieved in the market. Secondly, these measures are derived from accounting data, which may contain many of the distortions not only associated with the local accounting practices but also related to “window dressing” the reported results (Smith, 1992). Finally and related to the previous issue, accounting profits are derived with the accrual method and do not match the timing of real cash earned and lost, respectively, by the company. Yet cash is the king of finance

$$\begin{aligned}
 \text{ROE} &= \underbrace{\text{Profit Margin}} \times \underbrace{\text{Asset Turnover}} \times \underbrace{\text{Equity Multiplier}} \\
 \text{ROE} &= \frac{\text{Net income}}{\text{Total revenue}} \times \frac{\text{Total revenue}}{\text{Average assets}} \times \frac{\text{Average assets}}{\text{Average equity}} \\
 \text{ROE} &= \underbrace{\left[\frac{\text{Net income}}{\text{Total revenue}} \right]}_{\text{Operational Efficiency}} \times \underbrace{\left[\frac{\text{Total revenue}}{\text{Average equity}} \right]}_{\text{Capital Efficiency}}
 \end{aligned}$$

Figure 1.
Decomposing ROE
according to the Dupont
scheme

and only the present value of future cash earnings provides real value for the shareholders.

As a result, a host of theoretically more advanced value based measures have been developed. Value based metrics, in general, take the key business factors that create cash flows for a firm and present them as a single measure. They have been actively promoted by consultants and some common measures include shareholder value analysis (SVA), market value added (MVA), economic profit. However, the currently probably best-known one certainly is economic value added (EVA[®]) value metrics which has been developed and trademarked by Stern Stewart & Co., an American consulting company. The underlying value added concept used by Stern and Stewart is not actually new in that it had been around for many years before under the name of residual income, which also incorporates a cost of capital charge to derive a “true” ROE capital employed (Emmanuel and Otley, 1976; Stark and Thomas, 1998). It is not the intention of this paper to review these value based metrics in detail. Readers may turn to the classic texts like Rappaport (1986), Stewart (1991), or Copeland *et al.* (1996) for this purpose. Instead it shall be explained why whilst recognizing the existence and certain theoretical benefits of value based approaches, for the purpose of this case study it was decided that a simple ROE based performance measure would be employed.

The incremental benefit of using a theoretically superior but more complex performance benchmark was not considered adequate in view of the additional effort for data collection and analysis. Note that EVA[®] for example actually requires a large number of highly technical adjustments to overcome the shortcomings of traditional accounting statement data. Furthermore, it is not clear from the literature how well these advanced value based metrics actually perform themselves. Typically these studies will correlate measures like EVA[®] with corresponding stock returns. West and Worthington (1999) provide a good review of academic studies that explore this association. In summary, results of these studies, unless marshaled by consultants, are mixed. Correlations, while sometimes slightly better than for traditional accounting measures, remain extremely low. In other words, EVA-type measures are not immediate drivers of value to be realized in the stock market. There is another reason for using a basic ROE framework. Whilst the use of value based metrics has become somewhat popular among industrial firms, Spencer and Francis (1998) present a survey that a much lower percentage of financial services institutions in the UK have adopted them, particularly in their divisional performance evaluation. This despite the fact that consultants and researchers promote bank adapted value-metrics concepts like the one developed by CSFB shown in the work of Lloyd (2001) or Stern and Stewart shown in Uyemura *et al.* (1996).

Benchmarking of financial services

The literature does provide some examples of benchmarking in the financial services sector such as Bátiz-Lazo (2001), Whymark (1998) and Wilkinson *et al.* (1995). However these are limited in number and many of the authors have commented on the problems establishing benchmarking relationships in this sector. For example, Arnott and Poulson (1997) found that although there was interest in best practice benchmarking there was a low level of benchmarking activity amongst financial services organizations (Arnott and Poulson, 1997; Poulson, 1996). This is supported by UK

survey by Holloway *et al.* (1999) who found the financial services sector to have one of the lowest incidences of benchmarking, citing difficulties of confidentiality and in measuring the less tangible outputs of services, making the identification and comparison of relevant processes more problematic. Vermeulen (2003) describes the implementation problems of benchmarking in the South African financial sector and highlights the lack of availability of partners.

It is perhaps no surprise therefore that this area of research is usually conducted by dedicated consulting companies that through their mandates get access to internal cost information. It goes without saying that such information has utmost commercial value and is thus not readily obtainable. An example of such a research house is Robert E. Nolan, a company which compiles internal financial data of a great number of US banks on a confidential basis (Grasing, 2001). All participants receive a compilation of ratios showing their efficiency and effectiveness compared to benchmark (top quartile), median and average performers in each business area. Unfortunately, ASB as a New Zealand bank cannot access this information. An idea of setting up an industry group to share some of this internal information would require participants' data to be kept confidential, which would be extremely difficult to achieve in a market with only a handful of banks in the New Zealand and possibly the Australian market.

Whilst the activity described in this paper may not be consistent with strict definitions of best practice benchmarking, it is an example of results benchmarking as opposed to process benchmarking (Trosa and Williams, 1996). This benchmarking exercise was creative in its attempt to identify "best practitioners" (successful banks) and from these derive best practice in terms of typical CIRs. The benchmarking exercise described can be categorized by a number of the many typologies which have been developed to describe or classify the characteristics of benchmarking. The activity is an example of what Schofield (1998) categorized as "*explicit* benchmarking" in that it was a deliberate and structured process to facilitate comparison and identify directions for change. In terms of perhaps the most commonly cited Camp's (1995) distinction between *internal*, *competitive*, *functional* and *generic* benchmarking, this is an example of *competitive* benchmarking in attempting to make "comparison to the best of the direct competitors" (Camp, 1995, p. 16). Wolfram Cox *et al.* (1997) describe benchmarking as a mixed metaphor discussing at length the tensions between *competition* and *collaboration* in the context of various forms of benchmarking. The relatively low uptake of benchmarking financial services sector has been attributed to the particular problems about sharing confidential information in financial services (Arnott and Poulson, 1997; Holloway *et al.*, 1999). It was in order to circumvent confidentiality issues that the bank that is illustrated in the following case took the pragmatic approach of trying to make the best use of publicly available information.

ASB Bank case study

Profile of ASB Bank

With reported total assets of NZ\$24.2 billion (as of 30 June 2002), ASB Bank is one of the five large retail banks operating in the New Zealand market. Established in 1847 as Auckland Savings Bank, the bank has its roots in cooperative community banking in the Auckland area. It is now wholly owned by Commonwealth Bank of Australia, which acquired the remaining 25 percent minority held by the charitable ASB Bank Community Trust in October 2000. ASB maintains a large network of 118 branches in

addition to its network of ATMs and electronic funds transfer at point of sale (EFTPOS) machines. ASB has representation throughout New Zealand, although its activities remain concentrated on the most populous areas around Auckland.

According to Standard and Poor's (Thompson, 2003), ASB has experienced consistent above-market balance-sheet growth, although from a lower base than its peer group. Yet despite diversification into new business lines, ASB's personal and residential mortgage banking activities remain the key driver of the company's business. This is illustrated by the fact that residential mortgages constitute 64 percent of total assets (as of 30 June 2002) and retail deposits contribute the bulk of ASB's funding.

ASB has been leading recent technological innovation in the New Zealand market, pioneering internet banking and setting up its branchless electronic banking subsidiary Bank Direct in 1997. It indeed enjoys an extremely positive image, ranking as the New Zealand's No. 1 major bank for the fifth consecutive year in terms of customer satisfaction in the respected Auckland University survey of residential and business bank customers (Van den Bergh, 2002).

Research methodology

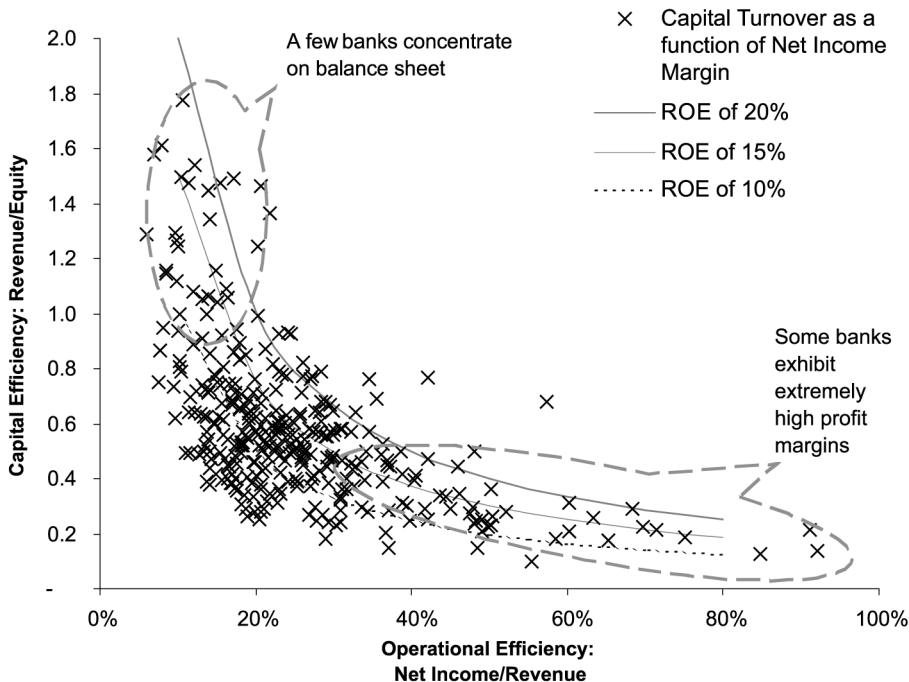
The research presented in this case study was conducted in the time frame of August through November 2002. It was commissioned by ASB's management and conducted by the first-named author of this article in cooperation with ASB's finance department. Accordingly, the research method could be characterized as participatory (Park, 1993; Robson, 2002) in that initial analysis was carried out through a consultancy relationship. From the outset, it was decided to proceed in a two-phase top-down approach, studying a comprehensive international sample of financial institutions first and narrowing it down to fewer suitable banks thereafter. ASB specified the CIR as the efficiency measure to be used, but with the insight gained in the first phase the focus shifted to the analysis of pure cost structures, without link to corresponding income. Latter is just an example of the dynamics within the project which involved close contact between the researcher and ASB and in which decisions on further analytical steps were taken in mutual agreement. The experience gained in this benchmarking project itself was subsequently found to be of general interest to academic research. In this respect the research could be classified as opportunistic (Freeman, 1986) in that the bank approached the researchers and later granted permission to present aspects of the project in a published research article.

Estimating the overall cost position of ASB

As indicated, the CIR benchmarking process proceeded in two steps and the first part included a comprehensive compilation and analysis of CIRs and other key financial data of a global sample of financial institutions. This provided particular challenges regarding how to evaluate suitable data sources. There is a range of providers of company financial information in the market but essentially only a few global ones. The general problem is that they will focus on equity listed financial institutions. This means non-listed subsidiary banks like ASB would not even show up on their radar screen. Yet banking conglomerates have become more global and cross-border ownership is now almost the norm. Moreover, there are countries like Germany with a large number of community and state owned banks which are similarly not contained

in such data bases. For this reason, the best data are provided by the two leading credit rating agencies Standard & Poor's (S&P) and Moody's. Most banks in established markets will be credit rated and the agencies usually also provide data for some or all of the unrated players in a particular banking market. For the purpose of this benchmarking project, data from S&P were employed.

The base sample contained financial data of 335 financial institutions representing basically all developed countries with the exception of Japan, due to the continued crisis in this banking sector, as well as 67 from selected developing nations. As an illustration, Figure 2 shows an important result found when positioning ASB among the more than 400 banks in the group with regard to operational and capital efficiency introduced earlier in this paper. Figure 2 does not show the CIR per se but highlights the fact that there are two fundamental strategies for financial institutions to create maximum value for their shareholders. To achieve a target ROE, it can either increase its profit margin or generate more revenues given its capital base (capital turnover). Such a trade-off may also be observed in retailing where some players focus on high turnover, low margin business and others, like specialty stores, achieve higher margins on lower volumes. Most banks seem to have a balanced approach; a smaller group focuses on extreme cost efficiency, respectively, on maximum capital turnover.



Source: Standard & Poor's Rating Agency with data for 291 financial institutions for 2000 and 2001 with ROE in excess of 5 percent

Figure 2.
Efficiency matrix –
operational vs capital
efficiency

The selection process of banks suitable for detailed cost analysis

Figure 2 demonstrates a major practical problem when trying to identify the best practice banks for further analysis. It would not be meaningful to simply pick the cost leaders purely in terms of CIR as such institutions might not make efficient use of their balance sheets. A purely CIR focused approach to select a detailed sample thus did not seem appropriate and instead the soft factors shown in Table I were considered.

Based on these very flexible criteria, 81 banks were chosen for in-depth cost component review (Table II). Geographically, these basically cover the markets of the Anglo-Saxon countries as well as Scandinavia. Notable omissions are Continental European banks (e.g. France, Germany, Italy) mainly for structural reasons, which

Operating environment The institution had to be operating in an environment similar to the New Zealand banking market. This meant, for instance, the state of development of the national economy should be comparable; there should be a degree of competition and not just a few state-owned banks. This eliminated institutions from developing countries but also South African banks from the sample

Operational profile The activities of the institution had to be comparable to the ones of ASB. This eliminated specialized lending institutions such as the wholesale-funded public sector lenders in Europe, e.g. Dexia Credit Local (France) or the Nederlandse Waterschapsbank (Netherlands). Many of these banks exhibit extremely favorable CIRs but they do not take deposits and often have only minimal operational activities. Another example are the German Pfandbrief Banks that are in essence mortgage funding vehicles for the commercial banks
Further instances for excluding banks under this criterion were if: the balance sheet business was only a minor contributor to revenues (e.g. asset managers); the size was too small (e.g. very small local bank); the institution was too large, e.g. one of the very large, global banking groups like Deutsche Bank, ABN Amro, UBS or Citigroup

Table I.
Selection criteria for detail sample

"Adequate" CIR and ROE CIR and ROE data were available for a period of usually 5 years which were then averaged to smooth out special one-time effects. In the search of best practice banks, institutions with continually low ROE and unfavorable CIR were eliminated

Country	Number of banks	Total assets in US\$ million	Average assets in US\$ million	Average CIR 1997-2001 (%)
Australia	6	503,318	83,886	55.5
Canada	2	231,709	115,855	61.4
Denmark	2	279,618	139,809	59.2
Finland	2	73,510	36,755	50.4
Ireland	3	183,813	61,271	61.9
New Zealand	5	72,580	14,516	51.3
Sweden	3	283,902	94,634	49.8
United Kingdom	6	772,228	128,705	49.8
United States	52	1,059,307	20,371	57.4
Total	81	3,459,985	^a 42,716	56.2

Table II.
Summary information of best practice candidate group

Note: ^aAsset median US\$16,628 million

include, for example, the strong involvement of the public sector in the ownership of major banks.

It should be noted that the banks are, on average, larger than ASB with just over 10 billion US\$ in assets. Fortunately, the mean asset number is affected by a few larger banks and a median asset figure of 16.6 million US\$ indicates a large number of size wise comparable institutions in the sample. Still this is an example of one of the practical compromises that are required when setting up such a peer group for comparison. Another aspect is that some banks, notably all New Zealand banks are actually covered twice in the sample. ASB, for instance, is analyzed as a stand-alone New Zealand entity as well as a part of parent Commonwealth Bank of Australia. Similarly, just a few cross-border players now dominate the Nordic banking market.

Cost components

Cost and other financial data were identified from original financial reports published by the financial institutions selected, mostly obtained from company or regulatory Web sites. They included the latest two years of data that had been published. This meant the most recent data were reports of the year ending 30 June 2002 whereas a few annual were data from year ending 30 September 2001. The majority of companies, apart from banks in Australia and New Zealand, close their books in December (in particular all US banks) so most data were for the 2000 and 2001 calendar years. In view of the purpose of this project, i.e. studying cost structures, no attempt was made to synchronize these data. The structure of operational cost, aside from any special items, can typically be expected to remain fairly static in the short-run.

The most significant difficulty was that there is little international standardization in cost reporting. One can guess that regulators are less concerned with operating costs of banks than with the proper disclosure of risks for the depositor, for example information on capital adequacy. Banks in certain countries provided very little detail, while others break down costs into minute elements. Surprisingly, the level of detail was least revealing for the UK banks and Scandinavian institutions. Banks in both markets showed much detail with regard to their staff costs, but occupancy and equipment costs (O&E) could be estimated at best. At the other end of the spectrum were Australian banks, particularly the four large national players, who provided the most cost information. Information for US banks varies but in general it is possible to obtain the three components' personnel, O&E and "other" from their statements. New Zealand banks are more secretive but again, above three cost components could at least be "guesstimated".

Disclosure of IT related costs was disappointing on the whole. Apart from Australian banks, only 15 other institutions gave some indication with regard to their IT expense. Moreover the comparability of these IT cost data had to be put into question. Publishing annual accounts also has a public relations aspect in that some cost elements are viewed favorably by analysts. These would include an IT expense item, which might only be disclosed to emphasize only the technological leadership of the particular institution. It is a matter of judgment as to what should be included in IT expense. There could thus be an incentive to shift even remotely related expense into this "positive" cost position.

Table III and IV) list the specific data that were collected from the company's income statements as well as from the accompanying footnotes where necessary. It

BIJ 11,3	<i>Net interest income</i>	Net interest income was recorded before provisions for doubtful loans. It was noted that some banks book major debt provisions on a regular basis. This obviously leads to an overly good-looking CIR for these institutions. Examples were banks with substantial “subprime” lending such as WestCorp Irvine (classified as consumer finance institution)
312	<i>Other operating income</i>	Here the largest items typically were account charges, loan fees etc. There are banks that have built up special activities (e.g trust banking business, credit card processing for third parties, private banking and asset management) where this item actually becomes larger than the net interest component. Another item included is “trading gains”. Rating agencies sometimes remove this from the calculation of efficiency ratios. In our sample we adjusted for exceptional trading losses/gains, e.g. at Allfirst which lost USD 700 million due to a fraud of one of its FX traders

Table III.
Revenues/income

<i>Personnel</i>	<p>All institutions in the sample reported personnel costs. Just in the case of Irish Life & Permanent PLC, an insurance and banking conglomerate, they had to be estimated as there was no specific figure for the banking operations</p> <p><i>Salaries and wages:</i> A large number of banks disclosed not just total employment related cost but they would also report the salary component</p> <p><i>Other personnel:</i> Calculated as the balance of total personnel cost and the salaries component</p> <p>Note that many banks gave further details with regard to pension related cost and also provided a break-down of cost by staff rank. In Scandinavia and the UK reporting is particularly detailed as this is likely a local regulatory requirement</p>
<i>(O&E)</i>	<p>The template for the O&E component was originally drafted based on the reporting of Australian banks. Unfortunately, it was later found that this was too ambitious as particularly the European banks often report little details on O&E</p> <p><i>Operating lease rentals:</i> Non-US banks often gave details on their premises rental costs. This item is a component of O&E</p> <p><i>Depreciation, amortisation:</i> This non-cash expense item was often reported as an income statement item in Europe and it was assumed that all depreciation forms part of total O&E. Obviously depreciation figures are also reported for US banks but in their cash flow statements</p>
<i>Information technology</i>	<p>The IT component was a very inconsistently reported item. It was called names like “data processing”, “information services” or the like. Often it was unclear what this really included. Did it also comprise the personnel cost of IT staff? If this item was reported, was the equipment component omitted from O&E? Owing to these uncertainties, no comprehensive analysis of the information technology component was possible, but some patterns in national subsets were discovered</p>
<i>Other operating expenses</i>	<p>Whatever costs not allocated to personnel, O&E and IT was subsumed under this item. Banks often specifically reported more types of operating expense (e.g. postage, professional services, communication expense etc.). Some larger items were also observed such as “merger related restructuring cost” or “amortization of intangibles”. If it made the appearance that such an item was unique and at the same time substantial, it was removed from operating expense in order to avoid distortion of the ratios derived from it</p>

Table IV.
Operating costs

also explains in more detail some of the reporting characteristic and elaborates on the practical problems when adjusting the figures to the common data template.

Categorization of institutions

In order to derive conclusions about factors affecting cost structures and overall CIR, there was a need to categorize the institutions. A characterization across such an international sample proved a daunting task. First, for the complete data set a business focus classification was defined. It classed the sample into retail banks, i.e. institution predominantly serving personal customers, versus more universally operating institutions. Details on this business focus classification can be found in Table V. It was basically derived by studying the bank’s operating profile as well as details of its financial statements and accompanying footnotes.

A further categorization looked at the banks’ loan portfolio, i.e. the asset focus. It typified banks as shown in Table VI. In the subsequent analysis, this asset focus

Category	Number of banks	Average assets (US\$ billion)	Description
Retail	52	24.8	Retail banks provide services mainly for individuals and small to medium-sized business
Universal	14	44.0	Universal banks are typically larger as they extend their reach to provide services to larger commercial customers. Their operations often include activities such as asset management and insurance subsidiaries
Large	10	143.3	These are universal banks of a larger size that will offer even a broader range of products and services
Special	5	24.0	Special institutions are predominantly operating in a special segment (e.g. private banking, asset management, service provider for other banks), which has become more important than, respectively, almost as important as the actual deposit taking/lending business itself
Total	81	42.7	

Table V.
Business focus classification

<i>Commercial</i>	These banks have a significant proportion of commercial business loans (including commercial mortgages) in their loan portfolio
<i>Mortgages</i>	There is a predominance of residential mortgages in the portfolio
<i>Consumer finance</i>	A substantial portion of lending is to finance consumer spending (credit cards, consumer goods and car finance etc.)
<i>Balanced</i>	Lending to above sectors seems balanced

Table VI.
Asset focus classification

classification was mainly applied in the analysis of the 52 US banks which provided a large enough sample not affected by cross-border differences.

Finally, a so-called “funding focus” was established which provided a characterization of funding strategies (Table VII). Most banks do rely on deposits to fund their loan portfolio. Some institutions, however, will fund a substantial portion in the wholesale market (e.g. bond issues, federal home loans in US, mortgage-, asset-backed securities). Again this category was mainly used for the analysis of the US subsample.

Analyzing the data

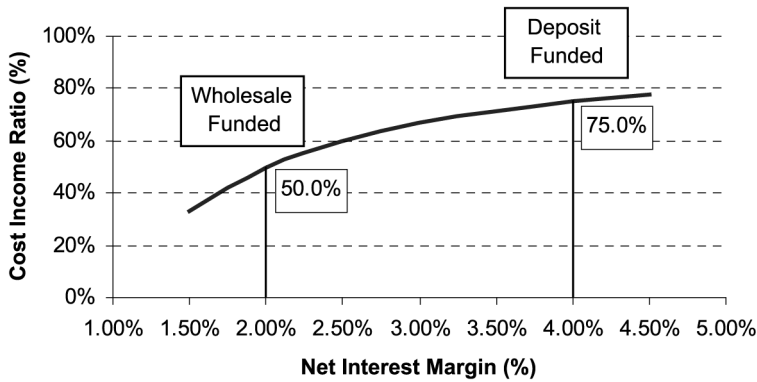
Despite the lack of cost detail for banks in some markets, this analysis still produced some interesting results. As indicated, the primary aim of this paper is more about reflecting on the processes undertaken than about presenting the specific data from the benchmarking study. However, to highlight the value of such cross-industry studies, this section contains a generic and qualitative discussion of selected results.

It was confirmed that offering retail deposit products as opposed to relying on wholesale funding does indeed lead to a higher CIR. When considered, this is actually no surprise as dealing with large number of customers will increase operating expense. If one assumes that in an efficient market both deposit- and wholesale-funded institutions achieve the same return on their loan assets (ROA), their CIR becomes a function of the interest margin. Figure 3 shows this relationship for the simple numerical example of two banks with an identical loan portfolio which achieve a ROA of 1 percent. The deposit-funded bank will obtain a higher interest margin at the expense of a less favorable CIR. Therefore, it would not be meaningful to target an artificially low CIR for a retail bank like ASB. This would likely endanger the competitive position of the bank in the long run when service quality becomes substandard. Rather it should remain within a certain range typical for deposit-taking institutions in the sector.

Further interesting results related to the personal cost component of total non-interest expense. The categorization into retail versus universal banks revealed that retail banks actually spend comparably less on personnel than the larger, more diversified universal bank. One might be amazed at this at the first glance, however universal banks tend to have lines of business that cannot be automated to the same extent. Examples would include investment services or corporate banking. To no surprise, the data also show a higher proportion of non-interest income for universal and larger banks. Again as an illustration, Figure 4 shows distribution of relative personnel cost (as percentage of total non-interest expense) as a function of the business focus.

Table VII.
Funding focus
classification

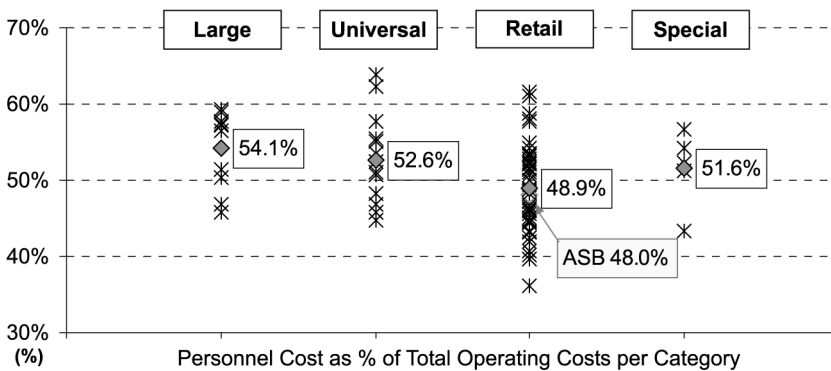
<i>Deposits</i>	About 80-90 percent of funds are sourced from deposits (accounts, term deposit products, etc.)
<i>Wholesale/ deposits</i>	Up to 50 percent of funding originates from wholesale type funds
<i>Wholesale</i>	More than 50 percent of wholesale funding



Note: Hypothetical CIRs for banks achieving a return on assets (ROA) of 1% on their loan portfolio but some are funded through the wholesale market (lower interest margin), respectively some funded by deposits (higher operating cost compensated by higher interest margin). Assumes zero non-interest income

Calculation:
$$CIR = 1 - \frac{ROA}{Interest\ Margin}$$

Figure 3.
CIR as a function of the interest margin



Source: Company financial accounts of 81 banks domiciled in the US, Canada, Australia, New Zealand, UK, Ireland and Scandinavian countries

Figure 4.
Sample result: share of personnel cost in total non-interest expense by business focus

What lessons were learned?

Lessons have been learnt in two main areas. First, there were the conclusions drawn from the empirical research itself and second, we review the learning experience for ASB regarding the benchmarking of its operations.

As far as the results themselves are concerned, the expectations of the ASB management were not entirely fulfilled. It had embarked on this project with the perspective of determining a CIR and cost structure of a best practice retail bank. Such

benchmark values would then have been applied to setting cost targets for the ASB organization. The data proved too “noisy” in the sense that too many unknown factors affected the results. While a sample of more than 80 banks for the detail study seems quite large, each institution is still very special in its business mix and also operating environment. The difficulties in interpreting the results were compounded by the limited disclosure of detailed cost data, i.e. by sector, as well as lacking reporting standards across the sample. On a more positive note, this exercise probably helped ASB decrease its strong CIR focus as a method of measuring operational efficiency because, as a confirmation of Osborne (1995, p. 57) discussed earlier in this paper, it was found that a broad range of CIRs are actually consistent with adequate levels of profitability. This means projects that generate high revenues in relation to required equity might in future obtain a better airing at ASB even if they come at the expense of a seemingly less favorable CIR.

As to the learning experience in view of future benchmarking at ASB, the bank concluded that both the scale and scope of such an analysis would have to be reduced in future. This means first, the sample would have to be smaller, limited to direct competitors operating in New Zealand and possibly banks in Australia which would remove the large uncertainty pointed out earlier in the literature review as to how local market characteristics affect the cost structure in the banking sector. Second, the benchmarking objective would have to be more identifiable. Instead of overall financial performance, a more process orientated approach evaluating specific activities could be adopted. Examples of typical questions to be studied would include the cheque processing costs, the economics of automatic teller machines (ATMs), and the occupancy cost related to the branch network etc. Accordingly, the benchmark ratios determined would be related to the activity (process) analyzed, e.g. processing cost per cheque, transactions per ATM, occupancy cost per square metre. Looking at this in another way, it is not the pure financial ratios that should be studied first but rather the corresponding activities whose efficiency in turn is reflected in such financial ratios.

It is clear that some of these studies would require a willingness of competitors to share information which might be difficult in the competitive culture of the New Zealand banking market. Yet there are specific benchmarking topics where cooperation could actually be achieved. Consider a project to consolidate the loan loss experience in retail lending. An overview of losses occurring in the entire market would be a basis for any in-house evaluation of lending operations. Other fields of common interest could include the analysis of activities that have been outsourced to specialized companies. Outsourcing at banks no longer encompasses just catering and building maintenance but also functions such as call centers, IT operations and development, which are much closer to the core business of a financial institution.

Conclusions

The aim of this paper was not to present an exemplar of best practice, but more to present an example of how one bank approached benchmarking and to reflect on the lessons learned. The case study illustrates the difficulties in obtaining meaningful comparative cost data for the banking industry from purely external data sources, despite sourcing these from detailed annual accounts. There is little standardization in their disclosure and results are furthermore affected by the mix of an institution's

business activities as well as the particular banking market. Whilst it was not possible to identify the ideal CIR as desired, it did allow ASB to view its CIR relative to others and to reassess the significance of this performance indicator in the knowledge that there was more than one route to “success”. In summary, a pure comparative overview of cost data did not provide ASB with an answer as to what is at the root of sustained success as a retail bank. Instead future benchmarking projects will need to have more specific goals.

This might seem an overly negative outcome of this exercise but, as mentioned before, at the same time there was considerable learning associated with the project. Gaining an insight of what is not useful as a benchmark measure may be just as valuable as knowing the competitor’s performance is slightly better or worse. Efficiency improvements do not have their roots in cutting the numerator (i.e. cost) of the CIR but in operational improvements through technology or processes. The authors contend that benchmarking projects should thus not be limited to results benchmarking of purely financial data, even if competing banks were to share such internal data as done in comparable projects in the USA (Grasing, 2001). This is because pure financial performance ratios may only offer symptoms of successful and unsuccessful business activities, respectively, and not provide the insight that managers may desire. ASB’s experiences seem to suggest that specific and process oriented benchmarking may prove more valuable to managers of financial services than results benchmarking alone. There is clearly an opportunity for academic researchers to become involved in such projects.

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