

Economies of Scale: How to achieve positive operating leverage

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Introduction

The baseline logic behind the phrase “economies of scale” in banking is sound: the larger the balance sheet, or scale in a fee-based business line, the more widely the institution can spread relatively fixed costs. Who can argue that the cost of compliance staff as a percent of average assets would be less at a \$10 billion asset bank than a \$1 billion asset bank?

Banking is a different business than most others. For banks (used generically to include all financial institutions), the balance sheet drives the income statement, not the other way around. The size of revenues, i.e. net interest income plus fee income, is proportional to the size of its balance sheet. Conversely, the number of accounts that must be managed, monitored, and serviced tends to drive expenses. So it makes sense that banks strive to be larger, drive more revenues, without a proportionate increase in operating expenses. This is what one bank CEO termed “positive operating leverage.”

The philosophy of economies of scale has driven the 23% decline in financial institutions since 2000 (see table). Also noteworthy is more than doubling of the average asset size of banks during that period. If you attend presentations made by investment bankers, the number of institutions is predicted to continue to decline dramatically as bankers strive for greater scale.

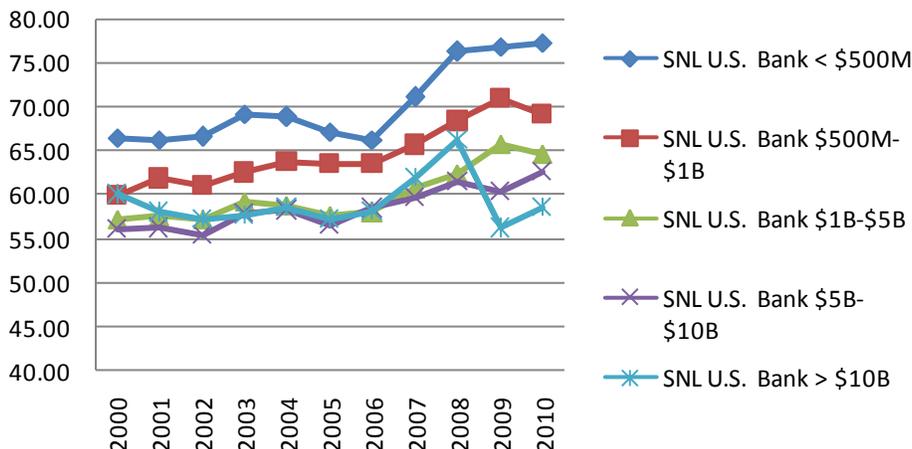
<i>(dollars in millions)</i>	2000	2010	Change
Number of Institutions	9,904	7,657	-22.7%
Industry Assets	\$7,462,898	\$13,321,383	78.5%
Assets per Institution	\$753.5	\$1,739.8	130.9%

Source: FDIC

Has consolidation resulted in the efficiencies we have been seeking? Our research into the subject says no.

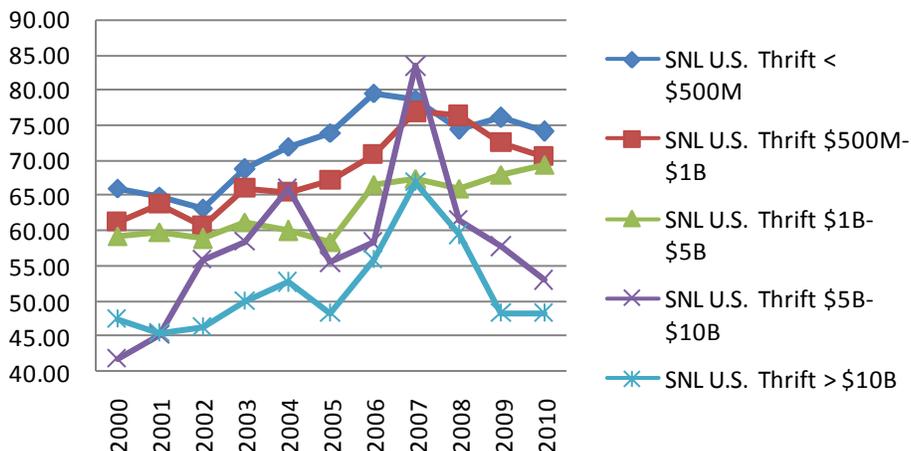
Over the past ten years, the efficiency ratio, defined as operating expenses divided by the sum of net interest income and fee income, has increased in all asset size classes of banks and thrifts except for the very largest banks (see charts).

US Bank Efficiency Ratio Trends



Source: SNL Securities LP

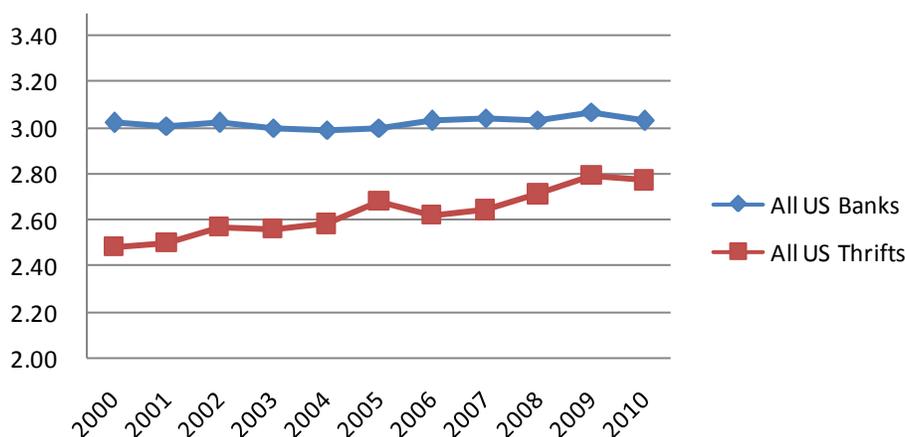
US Thrift Efficiency Ratio Trends



Source: SNL Securities LP

But efficiency ratios measure both the expense and revenue sides of the equation. To further isolate expenses and test the economies of scale argument, I measured expense ratios, defined as non-interest expense as a percent of average assets, for banks and thrifts. I used only the financial institutions still in existence throughout the 10-year period. By doing so, the decline in institutions and the growth in per-institution asset size should result in lower expense ratios, so the economies of scale logic go.

Non-Interest Expense/AA Trends



Source: SNL Securities LP

Clearly that was not the case. The expense ratio for all US banks remained flat while for thrifts it rose by a material amount. I pressed for more granular data to validate my findings so far because it belies conventional wisdom that the proliferation of size, advances in technology, and the decline in manual transactions has not resulted in lower costs.

According to my company's profitability peer database, the cost per product account has actually increased over the past 10 years (see table).

	<u>Annualized Cost Per Account*</u>		
	<u>2000</u>	<u>2010</u>	<u>Change</u>
<u>Loans:</u>			
Commercial Real Estate	\$2,964.96	\$4,043.81	\$1,078.85
Commercial & Industrial	1,432.90	1,565.95	133.05
Residential Mortgage	736.98	750.54	13.56
Consumer	239.36	784.41	545.05
<u>Deposits:</u>			
Non-interest Checking	\$290.46	\$395.94	\$105.48
Interest Checking	253.53	401.84	148.31
Money Market	164.31	829.91	665.60
Savings	104.97	213.86	108.89
CD's	64.76	219.04	154.28

*For the fourth quarter of year indicated. Numbers are medians and represent fully-absorbed costs.

Source: The Kafafian Group, Inc.

Every product group increased in cost per account, some by a significant amount.

In my experience, those that espouse one theory over another are more anxious to find holes in statistics that go against their line of thinking. Let me point out

some potential holes in the above analysis. First, the cost per account data is from a relatively small sample compared to the entire banking universe. Only data from those that utilize The Kafafian Group profitability service are included. Also, the banks are not the same in 2000 and 2010 due mostly to mergers and adding clients. Margin compression played a role in rising efficiency ratios as competition has become fiercer, even though the number of institutions declined. And the growing compliance burden plays a role in the increase in expense ratios.

But those that seek perfect information prior to making a decision may never decide. In my opinion, based on the above analysis, it is reasonable to conclude that financial institutions have not benefitted from economies of scale. Let's look at two large and acquisitive banks to see how they fared in reducing relative costs as they grew.

Fifth Third Bancorp

Fifth Third Bancorp is a \$110 billion in assets financial institution with 1,363 branches and is headquartered in Cincinnati, Ohio. It has made six acquisitions totaling \$32.6 billion in acquired assets between 2000 and 2007. The largest acquisition by far was the second quarter 2001 acquisition of Old Kent Financial, a \$22.5 billion in assets bank. I chose this period to offset any impact from the 2008-2009 financial crisis. Clearly Fifth Third undertook acquisitions to achieve economies of scale. Relevant statistics during this period include:

Fifth Third Bancorp				
	Total	Efficiency	Non-interest	
	Assets	Ratio	Expense/	EPS
	(\$000)	(%)	AA	(\$)
			(%)	
2000	45,856,906	50.80	2.52	1.83
2001	71,026,340	50.83	3.71	1.70
2002	80,899,212	46.24	2.96	2.59
2003	91,143,023	46.86	2.79	2.87
2004	94,455,731	53.64	3.18	2.68
2005	105,225,054	51.38	2.84	2.77
2006	100,669,263	54.46	2.92	2.13
2007	110,961,509	56.69	3.23	1.98

Source: SNL Securities LP

While Fifth Third's assets grew at a compound annual growth rate (CAGR) of 13.5%, earnings per share grew at a 1.1% CAGR and both the efficiency and expense ratios were higher in 2007 than when the bank was \$45 billion in assets in 2000. Positive operating leverage should result in EPS growing faster than asset size because adding the next \$100 in assets should cost less than the previous \$100. Has Fifth Third achieved positive operating leverage by more than doubling the size of the bank during the measurement period?

BB&T Corp

BB&T is a \$157 billion in assets financial institution with 1,791 branches headquartered in Winston-Salem, North Carolina. It made 21 acquisitions totaling \$44.6 billion in acquired assets from 2000 through 2007. BB&T acquired more, and often smaller, financial institutions during the measurement period than Fifth Third. Relevant statistics include:

	BB&T Corp			
	Total Assets (\$000)	Efficiency Ratio (%)	Non-interest Expense/ AA (%)	EPS (\$)
2000	59,340,228	50.41	3.41	1.53
2001	70,869,945	48.80	3.37	2.12
2002	80,216,816	50.76	3.16	2.72
2003	90,466,613	60.04	3.65	2.07
2004	100,508,641	49.75	3.02	2.80
2005	109,169,759	50.54	3.00	3.00
2006	121,351,065	52.83	3.05	2.81
2007	132,617,601	51.57	2.87	3.14

Source: SNL Securities LP

While BB&T's assets grew at a CAGR of 12.2%, earnings per share grew at 10.8%. But the efficiency ratio remained relatively steady in spite of BB&T's net interest margin falling from 4.20% in 2000 to 3.46% in 2007. The expense ratio declined, realizing economies of scale from its asset growth. Although EPS did not exceed asset growth, the culprit lies more in revenue generation than on realizing efficiencies from growth.

This analysis is a simple undertaking to determine if your financial institution is getting the results you want when executing a growth strategy to achieve economies of scale and positive operating leverage. If your results more closely resemble Fifth Third's than BB&T's, you should ask yourself why. I have three reasons for you to consider.

Top Reasons for Not Achieving Positive Operating Leverage

1. Quasi Government Agencies

Banking is one of the most highly regulated industries on the planet. Other than nuclear and medical, how many industries can claim to have greater than a one to one ratio of regulators versus institutions regulated? A CEO of a relatively new financial institution once told me that he had 14 examiners on-site performing a routine exam, more than his employee base.

Before de-regulation, bankers were told what products to offer, at what price, and where they can be offered. Most were restricted to one office. It's similar to a five year old being told where to be and what to do by a parent. If the

parent doesn't start to loosen the strings as the child gets older, he or she may never fully assume responsibility for themselves. In such an environment, bankers ask regulators regarding strategic initiatives, and regulators get accustomed to telling those that they examine how the bank should be run.

This is our culture as recent as thirty years ago. Although most that grew up in that culture have retired, it remains with us. Regulator activism during the recent financial crisis amplified this culture. This creates an operating environment that more closely resembles a government bureaucracy than a forward looking business.

How does one succeed in a government bureaucracy? You build an empire! For example, while performing an analysis of a bank's expense base, I asked the CFO if any department manager ever requested fewer employees during a budget season because of improved technologies or reduced manual processing. Although the CFO said no, he took offense to the implication that his department managers were not inclined to reduce expenses. Our collective culture does not include cost cutting in our DNA. We must add to what we have, much like a government agency. Do your department managers regularly request fewer resources next year than the previous one?

2. Fragmented Responsibilities

I learned in the Navy that if one person isn't identified as responsible, then nobody is responsible. Banking has many specialized disciplines. Talk to the commercial loan officer about loan to value ratios or loan covenants and you're covered. Talk to that same lender about product coding or Reg Q, you're likely to receive a blank stare.

So when the lender is successful at getting the whole piece of the customer's business, including deposits, and he is told to punch in this or that field on the account opening system and have the customer sign this disclosure or that, he complies without question. Somebody else who knows what they are doing came up with these procedures, so the thought process goes.

But what if the person that developed those procedures is no longer there, the process is outdated, or the regulation has changed or is no longer in existence? How does such a flawed process get fixed?

This reminds me of a process review I was performing at a client in the deposit operations area. The employee was manually calculating minimum required distributions (MRD) for IRA account holders. The bank had recently upgraded their core processing system and such a process seemed to be something it should accomplish automatically. The old system had a bug that caused errors, hence the manual process. One phone call to the core processor representative resulted in the procedure to accomplish the same task automatically. The person that created the manual process had been

long gone, and the person that performed the process did so blindly. Bank processes, like government programs, die hard.

This also rings true in our risk management processes. When a bank employee is challenged as to why they perform a process a certain way, frequently the answer is compliance or audit made them do it.

3. Underutilized Technology & We Always Do It This Way

According to Art Gillis, President of Computer Based Solutions, Inc., an independent bank technology consultancy, banks utilize their systems to less than 70% of capacity. Other bank IT professionals put utilization rates anywhere between 20%-60% of capabilities. What purchases do we make that we only intend to use half of the purchased item's potential? This is magnified by the high expense of bank technology.

But my experience echoes Mr. Gillis'. Recall the minimum required distribution for IRAs example mentioned above. Another financial institution had an employee in the Finance Department breaking out building expenses such as the electric bill via Excel spreadsheets to allocate to various departments in the headquarters building. Not being a finance guru myself, I asked if the G/L software could do it automatically based on rules. The employee did not know but stated she didn't have time to set it up. I could go on. Does your Finance Department use Excel as your main accounting software?

I lump the technology utilization challenge with the "we always do it this way" one because they are closely linked. The example above perpetuated itself because the employee was used to doing it in Excel and was unfamiliar how to do it within the G/L. This attitude, which is not unique to banking but is human nature, adds to the inefficiencies happening within our departments and is impeding progress to generating positive operating leverage.

What to Do

Jack Welch described in his 2001 book *Jack: Straight from the Gut* a process at General Electric called "Work-Out." GE was a huge conglomerate and many of the inefficient behaviors described above most likely happened several times over at such a large organization. To combat organizational inefficiency, they established "Work-Out teams," where they assembled smart employees from different divisions to identify inefficiencies within a particular unit.

The team did not limit itself to people from the unit being reviewed to avoid defensiveness or any political implications. They reviewed the most onerous processes, asking "why" things were done the way they were. A typical Work-Out lasted two to three days. The boss of the unit reviewed was not part of the discussion. When the review was complete and the team finished their

investigations and recommendations, the boss returned and was required to make a yes or no decision on at least 75% of the recommendations. This on-the-spot decisiveness proved to be what Welch described as a “bureaucracy buster”. Work-Out teams were typically led by an outside facilitator to keep them focused and to keep politics out.

Financial institutions should periodically review their processes in a similar fashion. For example, perhaps the account opening process is longer at your bank than others in your experience. Assemble a team from IT, Compliance and Branch Administration to look at the steps in the process to determine what doesn't add value and recommend changes. The team could interface with other areas of the bank and outside vendors to determine what are the roadblocks and potential solutions. By periodically reviewing your bank's processes, you can better invest bank resources to strategically important areas, reduce the amount of time wasted on outdated processes, and maximize your use of technology.

Summary

Economies of scale should result in lower efficiency and expense ratios, and greater profitability... i.e. positive operating leverage. If you are growing to spread relatively fixed costs over a greater revenue base, then you should measure to determine if you are succeeding. Success should result in better results to peer, industry benchmarks, and downward trends in operating costs per account. Growing absent success in these metrics means you are simply managing a more complex organization for no additional benefit.

Holding yourself accountable for positive trends in the above or similar metrics is critical to your success. Processes begin with good intentions, age into habits, and degrade into inefficiencies. Achieving economies of scale in this context is not a destination, but a continuous journey. Are you on the journey?

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Notes:

“The Value of Bank Software is Based on a Bank's Skill in Using It, Not the Vendor's Price” by Art Gillis, *Bank Systems & Technology*, May 17, 2010 <http://www.banktech.com/articles/227101552>

Jack: Straight from the Gut, Jack Welch, John A. Byrne, Business Plus, pp. 182-184

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