

PROPRIETARY TRADING IS A BIGGER DEAL THAN MANY BANKERS AND PUNDITS CLAIM

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I. Introduction

President Obama's endorsement of the "Volcker Rule" – a set of proposals designed to reduce public financial support for risky proprietary trading and hedge/private equity fund ownership by commercial banks and bank holding companies - has elicited an intense chorus of responses from bankers, economists and policy makers. The most vehement and uniform have come from the bankers themselves, and have been echoed uncritically by much of the business press and many Republican politicians. These responses have been twofold. First, proprietary trading had little to do with the current financial crisis and therefore restricting it would do little to prevent a replay; and second, proprietary trading provides a very small percentage of bank revenues and therefore is not very important.

The implication of these two points is that it is not really worth the political battle to restrict proprietary trading because it is small and unimportant.

A third set of arguments has been made by many bloggers, economists and some financial analysts: namely, that Volcker's very narrow limits would make it easy for bankers to evade the restrictions and, moreover, would allow investment banks and others in the shadow financial world to undertake many risky and dangerous activities that could crash the system and require tax payer bail-outs. This implies that the Volcker Rule would have to be beefed up considerably as well as broadened to include investment banks, hedge funds and other corners of the financial world, in order to truly reduce the risk in the system to acceptable levels and to significantly reduce the likelihood of the need for future massive tax payer bail-outs.

In this note we argue that the conventional banker wisdom is incorrect. First, proprietary trading, properly defined and contextualized, had a great deal to do with the crisis. We produce several types of evidence to suggest that proprietary investments and trading were large and had a significant impact on the crisis. For example, we cite evidence that by mid-April of 2008 large banks had lost roughly \$230 billion dollars on their super-senior CDO proprietary holdings, which regulators and other interested parties believed were simply inventories of assets held to facilitate client trading. If one makes the crude assumption that this represents a loss of approximately one-third of their value, then banks were holding three quarters of a trillion dollars of these highly risky assets. Clearly, proprietary trading, properly defined, was a major cause of the recent crisis. Second, we present rough estimates that suggest that this type of trading and investment was much more important for the bottom line of major banks than has been reported by banks and bank analysts and, subsequently, repeated in the press.

¹ Jessica Carrick-Hagenbarth provided superb editorial help.

At the same time, the critics are certainly correct that to be truly helpful the Volcker rule has to be significantly strengthened and broadened, specifically to large investment banks and the shadow banking system.

II. What Should We Mean By “Proprietary Trading”?

The objective of the “Volcker Rule” is to greatly restrict the ability of financial institutions to engage in highly risky activities that may de-stabilize these institutions, the financial system, and ultimately the overall economy with tax payer guaranteed funds and at the risk of large tax-payer bailouts. The “rule” is intended to eliminate private equity and hedge fund type risk taking/speculation/gambling that put at risk institutions that have explicit or implicit tax payer guarantees. As stated, the rule would attempt to do this by eliminating these institutions’ ownership of private equity and hedge funds thereby ending their “proprietary trading.” In this context, there is much confusion about how to best define “proprietary trading.”

Clarification can be found in recognizing that, given the objectives of the “rule,” the term “proprietary trading” is itself a misnomer. *The danger to the financial institution is not trading, per se, but proprietary position taking and proprietary investments.* Of course, these institutions may contribute to overall financial instability and risks through the manner by which they conduct “trading” for clients and for themselves (see further discussion below), but it is the investments and position taking that create the dangers and risks to the institutions themselves. When these positions or investments drop in value and/or can no longer be funded because liquidity has dried up, these often highly illiquid investments/positions can rapidly lose value and place the institution at risk. If the bank is very large or highly interconnected, then this dynamic places the overall economy at risk and this “too big to fail” institution then confronts the government with bail-out imperatives. As we describe in the next section, this is precisely what occurred in this crisis.

Part of the current confusion is also created by the enormously murky nature of the data on proprietary trading and investments as well as the incomes that are generated by these activities. “Trading revenue” is defined in most of the data sources as comprised of three components: 1) trading on *own account*; 2) trading *for clients*; and 3) *making markets*. In fact, all of these components are highly inter-related and all will involve, directly or indirectly, some trading, investments and position taking for the banks’ own accounts. But the data reporting requirements are so lax, that it is impossible for the public, and probably the regulators themselves, to understand the nature and size of these activities. For example, as we discuss below, many proprietary investments are “hidden” in banks’ trading books, disguised as “trading” for clients.

An absolutely crucial first step to reduce these risks for tax payers and the economy as a whole is this: there must be a revolution in information and accounting transparency. In particular, there must be major changes in accounting standards and greater empowerment of regulators to guarantee real time access to financial institutions’ books in order to better understand the quantity and quality of financial institutions’ proprietary investments and positions.

III. Proprietary Investment and Trading Helped Crash the System

Risky proprietary investments by investment banks, along with trading for clients whose decisions were influenced by these banks, were among the main forces that sustained upward pressure on security prices in the bubble. Indeed, by running large trading books, banks had inside information on client trading patterns and could use that information to front-run, and therefore help sustain, market trends. Moreover, banks borrowed large sums of short-term funds, mostly in the form of repos, to leverage their own trading and to loan to hedge funds and other clients whose trades were executed by the banks. Rising leverage to sustain such trading helped create systemic risk.

More importantly, as market makers, banks maintain large inventories of the securities ostensibly to facilitate trading, but these inventories in fact include substantial quantities of proprietary investments hidden within market-maker inventories. *By 2008, bank trading books held hundreds of billions of disguised proprietary investments.* The piling up of risky assets on bank trading books was stimulated in part by inept regulation. Under Basle I rules, capital requirements for on-balance-sheet loans were much higher than they were for assets, provided only that banks declared that these assets were being held for trading and thus would presumably not be on the books for long. This provided a strong incentive for banks to create and warehouse the 80 percent of collateralized debt obligation (CDO) tranches rated AAA. Yet the kinds of assets banks were piling up in their trading books were longer-term, illiquid, risky assets whose price could plummet in a crisis. Gillian Tett, senior capital market analyst of the *Financial Times*, explained this phenomenon as follows:

“[While] the Basel rules require banks to hold large capital reserves against the risk of credit default in their loan book, regulators only require small buffers for assets held in the trading book if these are labeled as low-risk, according to so-called Value at Risk (VAR) models. Research by supervisors suggests that the proportion of assets held in banks’ trading books has risen sharply in recent years, *often to above 50 per cent of those assets*, apparently because of the favourable regulatory treatment... In April, the FSF (Financial Stability Forum) said: ‘Global banks’ trading assets have grown at double digit rates in recent years, and in some cases represent the majority of a bank’s assets’” (Tett 2008b, emphasis added).

In a follow-up piece, Tett showed how reckless the giant banks had become in their use of trading-book accounting to pile up risky proprietary investment.

“The travails of UBS have served as a particularly painful wake-up call. UBS had quietly stockpiled tens of billions of dollars of so-called super-senior CDO tranches on its trading book, supposedly because it planned to sell these to investors (although it is unclear whether the bank expected such sales to occur.) The bank made little provision against the chance of these instruments turning sour, because the models implied a negligible risk of losses. When the price of these super-senior tranches collapsed by up to 30 per cent late last year, this created more than \$10bn (£5.1bn, €6.4bn) worth of trading book losses *for which the bank had set nothing aside...* (2008c, emphasis added)

By mid-April of 2008, banks had lost roughly \$230 billion dollars on their super-senior CDO proprietary holdings that regulators and other interested parties believed were simply inventories of assets held to facilitate client trading (Tett, 2008a). These losses probably were created from about three quarters of a trillion dollars worth of risky assets. Clearly, proprietary trading was a major cause of the recent crisis.

IV. Proprietary Trading and Investment is Bigger than You Think

Despite these massive losses, within a day or two of the Volcker Rule announcement, the press was full of stories quoting data from bank analysts that proprietary trading was very small and therefore not worth worrying about.

The CFO of Goldman Sachs, David Viniar was quoted by Reuters as saying: “Goldman does have proprietary trading operations, which account for ‘10ish’ percent of its revenues. The analysis in the *Wall Street Journal* on January 21, 2010 was typical: Proprietary trading makes up about 10% of Goldman Sachs revenue, 5% of Citi’s, less than 5% of Morgan Stanley’s, and less than 1% for Bank of America and J.P Morgan.² Jason Zweig reflected the conventional wisdom when he wrote in the *Wall Street Journal*, “...it is small potatoes for banks.”³

One can understand why banks would want to promote this idea: first, they wanted to protect the value of their bank stocks which had been battered the day the “Volcker Rule” was announced; and second, they presumably wanted to build the case that proprietary trading is so small that it is not worth worrying about.

There is strong evidence that these widely cited numbers are much too low. In the previous section we suggested that enormous proprietary investments were hidden in trading books, and indeed, it is likely that they are scattered around in many parts of these banks’ balance sheets. There are also more recent anecdotal hints, acquired by good financial journalists through interviews with bankers. For example, Andrew Ross Sorkin reports from Davos, “...as the chief executive of a global bank said to me, knocking back a shot of vodka, ‘The numbers you’ve heard about don’t include all the investments we make that are related to our clients. Nobody’s talking about that. That’s a much bigger number’” (Feb 2, 2010).

As we indicate, it is impossible to distinguish the many client related trades in the data, nor should one try. Many client trades are made in connection with, and in order to support proprietary trades and fees. In many cases, this is a false distinction, both in principle and also in terms of assessing the data.

²Jonathan Weisman, Damian Paletta and Robin Sidel, “New Bank Rules Sink Stocks: Obama Proposal Would Restrict Risk-Taking by Biggest Firms as Battle Looms,” *Wall Street Journal*, January 21, 2010.

http://online.wsj.com/article/SB10001424052748703699204575016983630045768.html?mod=WSJ_newsreel_us

³Jason Zweig, “Will New Rules Tame the Wall Street Tiger?” *Wall Street Journal*, January 23, 2010.

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Trading Revenue

As others have pointed out, publicly available data are quite murky. This makes it virtually impossible to sort out precisely how much revenue the large (former) investment banks like Goldman or commercial banks like Citi made from proprietary trading. But with significant digging, there is enough data to make some rough estimates. “Trading revenue” is defined in most of the data sources as comprised of three components: 1) trading on own account; 2) trading for clients; and 3) making markets. In fact all of these components are highly inter-related and all will involve, directly or indirectly, some trading, investments and position taking for the banks own accounts. A Reuters blog post gives a clear example: “In a lot of cases, client activity is taken on specifically to generate prop trading revenue. For instance, one of the biggest incentives for investment banks to underwrite asset/mortgage backed securities in Europe was to be able to write the lucrative currency/interest rate swaps.” An article by Gretchen Morgenson and Louise Story for the New York Times on the relationship between Goldman Sachs and AIG with respect to payments on CDSs that ultimately destroyed AIG provides a concrete example: “In many of these (CDS) deals, Goldman was trading for other parties and taking a fee. As the mortgage market declined, Goldman paid some of these parties while waiting for AIG to meet its demands...”. (NYT, Feb. 7, 2010) They were doing this at the same time they were trading CDSs for their own account, and these were hopelessly inter-meshed.

Data from secondary literature makes it immediately obvious the oft quoted percentages are too low. For example, Morrison and Wilhelm report that in 2007, Goldman made \$31 billion dollars in revenue from “Trading and Principle Investments” which amounted to 68% of their net revenue in that years (2007, p. 302). So, the 10% figure cited by Goldman and repeated in the press is rather puzzling.

A closer look at the data suggests where the low-ball estimates may be coming from. It also provides a good benchmark for us to provide estimates of the size of this activity on banks’ revenues. First, as we see below, the widely reported data are likely to be taken from the crisis years, 2008 or 2009, rather than from the height of the bubble years. But if one is trying to assess the impact of strict rules in preventing future problems, surely the pre-crisis years are more relevant. Second, the quoted shares are of *gross revenue* rather than of *net revenue*. Gross revenue is, of course, a much bigger number and therefore will reduce the size of the ratio. But *net revenue*, is a much more relevant figure because it is net revenue that is divided into salaries, bonuses and profits and that the bankers and stockholders really care about. In other words, it is a much better measure of the bottom line. Third, the widely cited estimates are almost certainly trying to estimate proprietary trading in the most narrow way possible and likely do not take into account the often arbitrary lines that are drawn between own account, client account and market making aspects of trading, position taking and investment.

The Data

To illustrate these points we undertook some rough calculations of trading for three banks: Goldman Sachs, Morgan Stanley and Citi. These estimates must be seen as very rough because the data are so difficult to break down, but we believe they accurately illustrate our points.

**TRADING AS A SHARE OF TOTAL AND NET REVENUE
FOR MORGAN STANLEY, GOLDMAN SACHS AND CITIGROUP**
(rough estimates)*

<i>millions of dollars, except %</i>	2006	2007	2008
Morgan Stanley			
principal transactions, including	13,612	6,468	1,260
trading	11,805	3,206	5,452
investments	1,807	3,262	-4,192
total revenues	70,696	85,281	62,262
net revenues	29,799	27,979	24,739
<i>principal transactions as a share of total revenue</i>	19.25%	7.58%	2.02%
<i>principal transactions as a share of net revenue</i>	45.68%	23.12%	5.09%
Goldman Sachs			
trading and principal investments	24,027	29,714	8,095
total revenues	69,353	87,968	53,579
net revenues	37,665	45,987	22,222
<i>principal transactions as a share of total revenue</i>	34.64%	33.78%	15.11%
<i>principal transactions as a share of net revenue</i>	63.79%	64.61%	36.43%
Citigroup			
principal transactions	7,990	-12,086	-22,188
total revenues	142,010	154,546	105,756
net revenue	86,327	78,495	52,793
<i>principal transactions as a share of total revenue</i>	5.63%	-7.82%	-20.98%
<i>principal transactions as a share of net revenue</i>	9.26%	-15.40%	-42.03%

*Note: we are not claiming this is precisely proprietary trading; it is not possible, even in principle, to clearly distinguish between proprietary trading, market making, and client related trading. But the benchmark figure on MS for 2008 at 2% of gross revenue suggests that our data are in line with the estimates quoted in the press.

Source: Annual Reports and authors' calculations.

Consider, first, Morgan Stanley. The data show that in 2008, Morgan Stanley's trading and investment revenues were about 2% of total revenue as has been widely reported in the press. Note that we are not claiming this is precisely "proprietary trading" as defined narrowly. But the benchmark figure for Morgan Stanley in 2008, at 2% of gross revenue, as well as other estimates below, suggests that our data are in line with the estimates quoted in the press.

Now, note that this 2% figure is from 2008, the year the system crashed. But note that in 2006, at the height of the bubble, income as a share of total revenue was more than 19%.

The next point is that total or gross revenue is not the appropriate revenue figure to look at. It is important to distinguish between total revenue, which does not take into account interest expense, and net revenue, which nets these costs out. Profits for shareholders and bonuses for bankers come from net revenue, not gross revenue. This is the figure that the banks themselves really care about.⁴ The ratio of trading income as a share of *net revenue* was 5.1 % in the year of the crash, it was more than 45% at the height of the boom in 2006.

Morgan Stanley is interesting to consider further because there are data available broken down between investment income and trading income. Note that the big losses for Morgan Stanley in 2008 came from its investment accounts.

A similar overall story holds for Goldman Sachs. In 2008, trading income as a share of gross revenue was “tenish” percent as reported in the press by Goldman; more “precisely” according to our figures, it was about 15%. But if one goes back to the boom years of 2006, it was more than a third of the gross revenue, almost 35%. Furthermore, if one uses the superior measure, namely as a percentage of net revenue, trading income’s share in 2008 was 36%, and in 2006 and 2007 was a whopping 64% or more.

For Citigroup, our numbers are even rougher than for Morgan Stanley and Goldman, but they are accurate enough to tell an interesting tale. Trading and investment revenue as a share of gross revenue in 2006, at the height of the bubble, was only about 5% of gross revenue, the number cited by many in the press. If one uses the more appropriate net revenue figure then this share jumps to over 9%.

Interestingly, if one looks at the contributions to Citi’s revenue losses during the crash, according to these admittedly crude estimates trading and principle investments played a significant role. In 2008, for example, trading and principle investment losses amounted to 20% of gross revenue and over 40% of net revenue. If one counts these trading losses as a percentage of the declines of total and net revenue, these numbers become much higher. For example, between 2007 and 2008, Citigroup’s total revenues fell by almost \$50 billion and net revenues fell by almost \$26 billion. In 2008, they lost \$22 billion which amounts to 44% of total revenue losses and more than 80% of net revenue losses. Contrary to the bankers and pundits that claim that “proprietary trading” did not cause the crisis, it is these losses which led to a tax payer bailout and which, in fact, constitutes what most of us mean by “the financial crisis.”

V. Conclusions

Trading, and proprietary investments, made a much bigger contribution to bank revenues (and losses) than bankers and the press have suggested. It is virtually impossible to distinguish proprietary trading and investments from market making and trading for clients, which often involve proprietary investments and position taking by the banks. Trying to make highly restrictive definitions of proprietary trading will make it very easy for banks to use accounting gimmicks to move investments, position taking and income to where it is not restricted by regulations. Hence, the Volcker Rule must utilize a broad definition of proprietary trading, investment and position taking if it is going to succeed.

⁴ Profits are calculated from net revenue by deducting other costs.

Moreover, as many critics have pointed out, the Volcker Rule must be expanded in other ways as well if it is really going to help reduce systemic danger. Most important is to expand restrictions to investment banks themselves, and to the “shadow” banking and financial world which, despite comments by bankers and pundits to the contrary, did contribute to financial meltdown.

However, none of this will be possible unless there is a revolution in accounting standards and reporting. Regulators and the public do not have adequate information on the quantity and quality of these investments and positions. The only way they will get it is if the accounting standards and reporting requirements are greatly strengthened and complemented by close, hands-on financial examination by regulators. Without this, banks will be able to manipulate trading, investments and positions data around virtually any set of rules that are created.

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