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Bank Capital Observations

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Considerable debate persists surrounding the extent to which banks have actually increased their capital since the financial crisis. The objective of our report is to help establish measurable parameters and facts. We consider the six largest bank holding companies (BHCs) – JP Morgan Chase, Bank of America, Citigroup, Wells Fargo, Goldman Sachs, Morgan Stanley – and find that:

- Since December 31, 2007, the big four traditional BHCs (JPM, BAC, C, WFC) have increased Tier 1 capital by $306 billion or 103%. Much of this improvement is a result of the acquisitions that were made during the crisis.
- Gains in total risk based capital have been modestly less impressive as Tier 2 capital has slid by $13 billion or 9%.
- Risk-weighted assets among the four largest BHCs have declined from 66% to 61% of total assets, as institutions have reduced risk and / or adjusted their business mix to reflect changes in regulatory risk weights.
- The ratio of BHC capital to total assets has improved.
- There is substantial variation in the improvement, even across this small subset of banks.

Level of Capital at Systemically Important BHCs

Tier 1 capital expanded to $734 billion by September 30, 2013 from $624 billion at March 31, 2009, or 18% via a combination of new equity issuance and retained earnings net of share repurchase and dividends. For the four traditional BHCs, Tier 1 capital rose by 16% during the same period. While it is true that, since December 31, 2007, Tier 1 capital for the four traditional BHCs is up by an impressive $306 billion, this gain of 103% reflects the large acquisitions in 2008-2009.[2]

Figure 1. Change in Tier 1 Capital since the Crisis, US$ billions

		Change since 4Q 2007		Change since 1Q 2009	
	3Q 2013	$	%	$	%
Total (big 4)	**604**	**306**	**103%**	**85**	**16%**
Total (big 6)	**734**	**NA**	**NA**	**110**	**18%**
- BAC	159	76	91%	(12)	-7%
- C	146	57	63%	24	20%
- JPM	161	73	82%	24	18%
- WFC	137	101	275%	48	54%
- GS	71	NA	NA	14	25%
- MS	59	NA	NA	11	22%

Source: FFIEC and Center for Financial Stability calculations.

[1] With thanks to Jeff van den Noort and Austin Chung.

[2] Specifically, the acquisitions of Wachovia (by Wells Fargo), Bear Stearns and Washington Mutual (by JP Morgan Chase), and Merrill Lynch (by Bank of America). For more details, please see the CFS financial timeline at http://www.centerforfinancialstability.org/timeline.php.

During the same period (1Q 2009 to 3Q 2013), Tier 2 capital shrank 26% to $157 billion. We note that this came in spite of increases in the allowable reserve component, as these increases did not entirely offset the contraction in qualified subordinated debt and various preferred equity securities. The Tier 2 contraction also may reflect the fact that after the Lehman/AIG events, there has been a greater emphasis on tier 1 as the "high quality" capital.

Figure 2. Shifts in Tier 2 Capital since the Crisis, US$ billions

		Change since 4Q 2007		Change since 1Q 2009	
	3Q 2013	$	%	$	%
Total (big 4)	**140**	**(13)**	**-9%**	**(53)**	**-27%**
Total (big 6)	**157**	**NA**	**NA**	**(54)**	**-26%**
- BAC	39	(11)	-23%	(28)	-42%
- C	33	(12)	-27%	(5)	-14%
- JPM	35	(9)	-20%	(11)	-24%
- WFC	34	19	126%	(9)	-21%
- GS	14	NA	NA	0	1%
- MS	3	NA	NA	(1)	-26%

Source: FFIEC and Center for Financial Stability calculations.

Boost in BHC Assets / Move to Less Risky Assets

Total assets in BHCs are now $9.7 trillion for the big six or $8.0 trillion for the four traditional BHCs.

During the period 1Q09-3Q13, reported assets for the top six bank holding companies rose by 7%. At the same time, risk weighted assets declined by 1%. This masks large differences between institutions, only some of which is explained by large acquisitions during the downturn.

Figure 3. Change in Total Assets (TA) and Risk-weighted Assets (RWA), US$ billions

		Change since 4Q 2007		Change since 1Q 2009	
	3Q 2013	TA	RWA	TA	RWA
Total (big 4)	**7,980**	**32%**	**22%**	**6%**	**-4%**
Total (big 6)	**9,735**	**NA**	**NA**	**7%**	**-1%**
- BAC	2,129	24%	6%	-8%	-24%
- C	1,900	-13%	-15%	4%	4%
- JPM	2,463	58%	31%	18%	8%
- WFC	1,488	159%	135%	16%	6%
- GS	923	NA	NA	0%	5%
- MS	832	NA	NA	33%	34%

Source: FFIEC and Center for Financial Stability calculations.

The overall composition of assets in BHCs is less skewed to assets with higher risk weightings than it was during the financial crisis. For instance, on aggregate, the big six BHCs now maintain a 58% ratio of risk-weighted assets relative to total assets (see line 2, Table 4) as compared to a 64% ratio in 1Q 2009. The same inference is drawn if we instead compute the aggregate using only the four traditional BHCs. Having a greater concentration of assets in the lower risk weight categories can sometimes be

interpreted as a move to clean balance sheets and restructure -- but it can also inhibit economic activity, as financial institutions are hesitant to assume risk.[3] In addition, some have expressed concerns that the risk weight categories are inherently subjective,[4] and hence may be susceptible to 'gaming'.

Figure 4. Reduction of Risk, Risk-weighted Assets (RWA) / Total Assets (TA)

	4Q 2007	1Q 2009	3Q 2013
Total (big 4)	**66%**	**67%**	**61%**
Total (big 6)	**NA**	**64%**	**58%**
- BAC	70%	73%	61%
- C	57%	56%	56%
- JPM	67%	61%	56%
- WFC	84%	83%	76%
- GS	NA	45%	47%
- MS	NA	46%	46%

Source: FFIEC and Center for Financial Stability calculations.

Capital Ratios at Systemically Important BHCs

Capital ratios are vital to establish the actual safety of BHCs, as they succinctly show the amount of available capital to support total assets on the balance sheet. Since the crisis, capital ratios of all stripes have increased. This may be due to financial markets generally pressing and rewarding managements when they meet new regulatory requirements ahead of official deadlines.

Figure 5. Reduction of Risk Weightings - Progression of Risk-Based Capital Ratios

	Tier 1 Leverage			Tier 1 risk-based capital			Total risk-based capital		
	4Q 2007	1Q 2009	3Q 2013	4Q 2007	1Q 2009	3Q 2013	4Q 2007	1Q 2009	3Q 2013
Total (big 4)	**5.1%**	**6.9%**	**8.0%**	**7.4%**	**10.2%**	**12.4%**	**11.3%**	**14.1%**	**15.3%**
Total (big 6)	**NA**	**6.8%**	**7.9%**	**NA**	**10.8%**	**12.9%**	**NA**	**14.5%**	**15.7%**
- BAC	5.0%	7.1%	7.8%	6.9%	10.1%	12.3%	11.0%	14.0%	15.4%
- C	4.0%	6.6%	8.1%	7.1%	11.9%	13.6%	10.7%	15.6%	16.7%
- JPM	6.0%	6.8%	6.9%	8.4%	10.7%	11.7%	12.6%	14.3%	14.3%
- WFC	6.8%	7.1%	9.8%	7.6%	8.3%	12.1%	10.7%	12.3%	15.1%
- GS	NA	5.9%	7.9%	NA	13.7%	16.3%	NA	16.9%	19.4%
- MS	NA	7.1%	7.3%	NA	16.7%	15.3%	NA	18.2%	16.1%

Source: FFIEC and Center for Financial Stability calculations.

Concluding Themes

Although we find that the largest institutions have increased capital and reduced risk post-crisis, the question remains as to whether these increases have proceeded at the right pace or – perhaps more

[3] CFS Divisia M4 monetary aggregate data confirms a real time reluctance of financial institutions – more broadly – to limit lending and the assumption of risk.

[4] See, e.g., Le Leslé, Vanessa, and Sofiya Avramova (2012), "Revisiting Risk-Weighted Assets: Why Do RWAs Differ Across Countries and What Can Be Done About It?," IMF Working Paper WP/12/90.

pressingly – what the optimal level should be to ensure financial stability and restore stronger economic activity on a sustainable basis.

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