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Citigroup 2007: Financial Reporting and Regulatory Capital

In early 2008, Jake Merando was trying to understand the implications of the deepening U.S. housing crisis for the financial health of Citigroup, one of the world's largest banks. Merando, a banking analyst at an investment firm, was considering Citigroup's future as the financial crisis continued. The fourth quarter of 2007 was shaping up to be the worst in Citigroup's 196-year history (see **Exhibit 1**), and tremendous uncertainty surrounded both the firm and the industry.

History of Citigroup[a]

Citigroup was established in 1812 as City Bank of New York. During its history, the firm attained numerous milestones within the banking industry, in the early years of the 1900s playing a key role in the establishment of the Federal Reserve Bank of New York, in 1919 becoming the first bank with more than $1 billion in assets, in the 1960s introducing the certificate of deposit, and by the 1990s holding the titles of largest U.S. bank and largest credit card issuer in the world.

In 1998, the then-named Citicorp merged with Travelers Group, a deal intended to bring a wide range of financial services under a single umbrella. The merger made Citigroup the largest financial services firm by assets in history and brought a number of Travelers' organizations into the corporate fold, including the investment banking and brokerage services of Salomon Brothers and Smith Barney, as well as Primerica's distribution of insurance and financial services. Citigroup continued to grow rapidly after the merger, increasing its domestic and international operations, most notably through its acquisition of Mexico's Grupo Financiero Banamex-Accival in 2001. As of December 2007, Citigroup operated in more than 100 countries with more than 200 million customer accounts, employing approximately 160,000 full- and part-time employees in the United States and another 227,000 employees internationally.

[a] Compiled from Citigroup Inc. corporate website, "Citi's History," http://www.citigroup.com/citi/corporate/history/, accessed May 2010.

Professors Edward J. Riedl and Suraj Srinivasan of HBS and Professor Sharon Katz of Columbia Business School prepared this case with assistance from Global Research Group Senior Researcher David Lane. This case was developed from published sources. Jake Merando is fictitonal. HBS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management.

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Operating Structure[b]

As of 2007, Citigroup operated four primary business segments: Global Consumer Group (GCG); Citi Markets & Banking (CMB); Global Wealth Management (GWM); and Citi Alternative Investments (CAI). A smaller, fifth segment, Corporate/Other, included corporate treasury services, operations and technology, corporate expenses, and costs incurred through discontinued operations (see **Exhibits 2a, 2b**, and **2c** for Citigroup's financial statements, and **Exhibit 3** for its segment data).

Global Consumer Group

GCG was responsible for banking, lending, insurance, and investment services for individual customers and small and medium-sized enterprises. It was further segmented into U.S. and international consumer operations. In the U.S., GCG operated Citigroup's credit card services, including MasterCard, Visa, Diners Club, American Express, and private-label cards. GCG also made loans for real estate, autos, and education, and operated Citigroup's retail banking services through Citibank branches, CitiFinancial, and Primerica Financial Services. Internationally, GCG offered similar services through local retail branches providing investment and retirement services, real estate and personal loans, and sales financing. Broken down by service, 30% of GCG net income came from U.S. credit card services, 28% from international retail banking, 22% from international credit card services, 14% from U.S. retail distribution, and 6% from U.S. commercial banking.

Citi Markets & Banking

CMB served Citigroup's largest customers worldwide, including corporations, governments, large institutions, and other large investors, offering investment banking, debt and equity market operations, and lending through its Securities and Banking division. CMB also provided cash management, trade services, custody and fund services, clearing services, and agency/trust services through its Transaction Services branch. In 2007, CMB reported a net loss of $5.25 billion on revenues (net of interest expense) of $10.5 billion. The revenue figure included $20.4 billion in write-downs and losses related to deterioration in the mortgage-backed and credit markets. Of this amount, $18.9 billion came from subprime-related exposures, of which approximately $14.2 billion was related to exposures in the most senior tranches of collateralized debt obligations. At the end of 2007, Securities and Banking had $37.3 billion in remaining U.S. subprime net direct exposure.

Global Wealth Management

GWM provided Citigroup's private banking, brokerage and investment advice, and financial planning services for high-net-worth individuals, companies, and nonprofit institutions. GWM was composed of three elements. Smith Barney offered clients investment advice, financial planning, and brokerage services; Private Bank supplied wealth management services to wealthy private banking clients; and Citigroup Investment Research conducted market research, mainly for Smith Barney and CMB's Securities and Banking division.

Citi Alternative Investments

CAI oversaw private equity, hedge funds, real estate, and structured products, and managed futures investments of both the bank itself and of high-net-worth individuals and other third-party clients.

[b] All material in this section is sourced from Citigroup 2007 10-K (New York: Citigroup, 2008), pp. 2, 23–34, and 128.

Regulatory Capital[c]

Regulatory capital was capital that the Federal Reserve Board (the Fed) required banks in the U.S. to set aside to offset credit, market, and operational risks. The Fed maintained discretion to adjust these standards as appropriate. Under rules initially issued in 1989, three primary ratios were used to assess capital adequacy: the Tier 1 capital ratio, the total capital ratio, and the leverage ratio (see **Exhibit 4** for an overview of regulatory capital calculations, and **Exhibit 5** for related Citigroup disclosures). Of particular note, the Tier 1 capital ratio was calculated as Tier 1 capital divided by risk-weighted assets. Tier 1 capital was broadly defined as a bank's "core capital," comprising common stockholders' equity, qualifying perpetual preferred stock, and minority interests, and excluding most intangible assets. Risk-weighted assets reflected asset categories multiplied by the "risk weight" assigned to that asset as defined by regulators: riskier assets required higher levels of capital to provide a cushion against potential declines in value.

Generally, the Fed used regulatory capital measures to constrain the riskiness of lending by banking organizations. Accordingly, banking regulators assessed minimum values for each of these key measures. In 2007, "adequately capitalized" (i.e., minimum) levels were 4% for the Tier 1 capital ratio, 8% for the total capital ratio, and 3% for the leverage ratio; "well-capitalized" levels were 6% for Tier 1 capital, 10% for total capital, and 5% for leverage. Well-capitalized banks qualified for, among other things, lower premiums assessed by the Federal Deposit Insurance Corporation (FDIC). Undercapitalized banks (e.g., below the 8% minimum required total capital) received a warning from the FDIC, and continued violation of capital requirements triggered further regulatory costs, including intervention or (in the extreme) takeover by government regulators.

Subprime Mortgage Crisis and Citigroup Financial Reporting

Economists and market analysts often referred to the subprime mortgage crisis in 2007 as the biggest financial crisis since the Great Depression. Although a number of factors contributed to the spread of the crisis, its making was rooted in the downturn of the U.S. housing market. During the 1990s, the number of loans sold to people with poor credit or low income rose as lenders took on more risk. The subsequent collapse of the subprime market sent a chain reaction of economic hardships throughout the global markets. The consequences were particularly severe for financial institutions, which were required to write down the values of subprime assets such as mortgage and mortgage-backed securities to reflect the current prices in the depressed markets. Critics of new fair-value accounting guidelines argued that firms were forced to record excessively low values for their troubled assets.

Citigroup's financial statements required management to make estimates and assumptions that affected the reported amounts of assets, liabilities, income, and expenses in accordance with U.S. GAAP (Generally Accepted Accounting Principles). For 2007 and the upcoming 2008 fiscal year, the company identified the following critical accounting policies and estimates (see **Exhibits 6** and **7** for related Management Discussion and Analysis and footnote excerpts):

Valuation of financial instruments The assets and liabilities carried at fair value included fixed income and equity securities, derivatives, investments, trading assets, and resale and repurchase agreements. The amount of judgment involved in measuring the fair value of a financial instrument was affected by many factors, such as the type of instrument and the liquidity of the

[c] Information in this section compiled from http://www.fdic.gov (accessed August 6, 2010); Federal Reserve Bank of New York, "Introduction to US Capital Adequacy Standards" (2008); and Citigroup 2007 10-K (New York: Citigroup, 2008).

markets for the instrument. Citigroup used quoted market prices where these were available. When there was no active market for a financial instrument, the company used internally developed valuation techniques. The selection of a technique to measure fair value for each type of financial instrument depended on both the reliability and the availability of relevant market parameters, such as interest rates, currency rates, and options volatility. Citigroup used more than 800 valuation models that were periodically reviewed and validated by qualified personnel independent of those who sourced them. During 2007, the market illiquidity caused by the credit crisis rendered some observable data difficult to measure. As a result, more items were devalued to the lowest observable input or value driver. Approximately 38.9% and 35.2% of assets and 23.1% and 8.9% of liabilities were subjected to fair-value estimates for the years ended December 2007 and 2006, respectively.

Reserves for credit losses Lending impairment allowances represented management's best judgment of losses incurred in the loan portfolio on the date of the balance sheet as well as off-balance sheet lending commitments. The loan portfolio, which was measured at amortized cost less impairment, was comprised of assets presented on the balance-sheet line item *Loans, net of unearned income*. An impairment loss on a loan portfolio occurred when there was a difference between the carrying value of the loan and the estimated recoverable amount. Citigroup conducted regular internal reviews of the underlying estimates and models used when determining the loan loss reserves, which depended upon its current view of relevant external and internal economic factors. This included management's estimate of certain macroeconomic factors such as unemployment, GDP, changes in the portfolio size, and credit metrics, e.g. mortgage delinquency trends and any weaknesses in the housing market.

Securitizations Citigroup engaged in securitization activities related to various types of mortgage, student and car loans, credit card receivables, and corporate debt instruments. These securitized assets were used to increase the company's balance sheet liquidity and secure better financing rates in the market. Special purpose entities were typically used in such securitization transactions. Under this process, assets were transferred at fair value into a trust, and any changes in fair value were recorded as a gain or loss on sale. In determining the gain or loss, management measured the net present value of future cash flows based on factors such as expected credit losses and the discount rate on these estimated cash flows.

Results for 2007 and Expectations for 2008

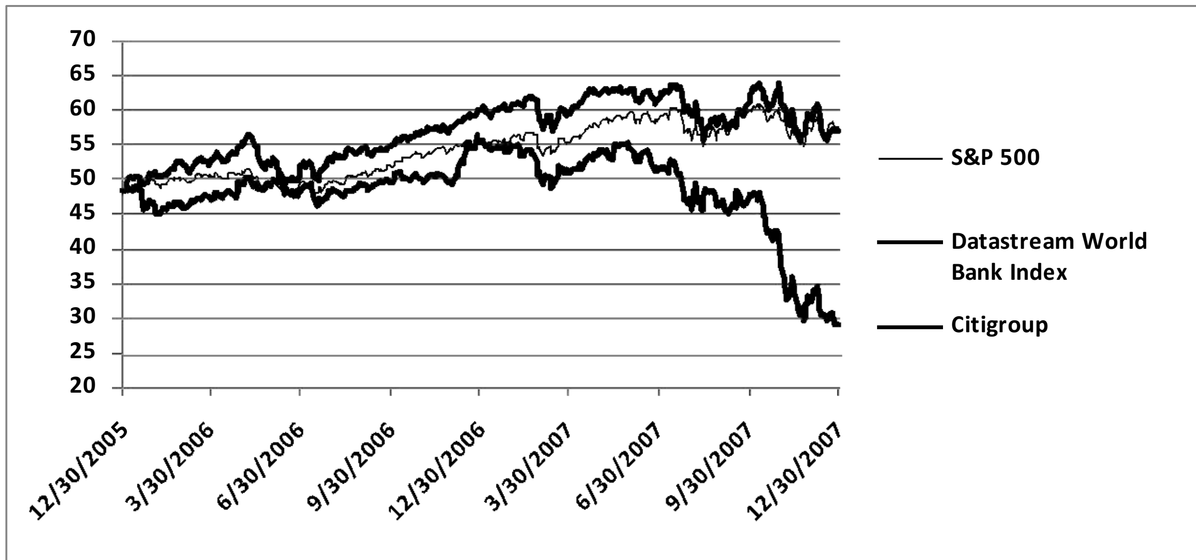
On January 15, 2008, Citigroup issued a press release with its fiscal 2007 results. While net income for the year was $3.6 billion, the fourth quarter was the worst in the firm's history, with a net loss of $9.8 billion. The loss primarily reflected an $18.1 billion write-off due to losses on subprime-related exposures, as well as a $4.1 billion increase in credit costs related to higher current and estimated losses on consumer loans. Following the press release, significant uncertainty remained regarding Citigroup's expected performance for the upcoming year. Forecasts for industrywide subprime losses varied widely, from $265 billion (S&P) to in excess of $600 billion (UBS).[d] Geraud Charpin, head of European credit strategy at UBS, stated: "We have to recognize the risk that the economy will suffer more damage than what consensus suggests. All the investment schemes that have been built on the basis of a strong and resilient economic backdrop have to be unwound."[e] Against this backdrop, Merando pondered what further losses Citigroup could be facing, and the implications these might have for its operations and regulatory requirements.

[d] Anastasija Johnson, "S&P Sees More Than $265 Billion Subprime Losses," Reuters, January 31, 2008.

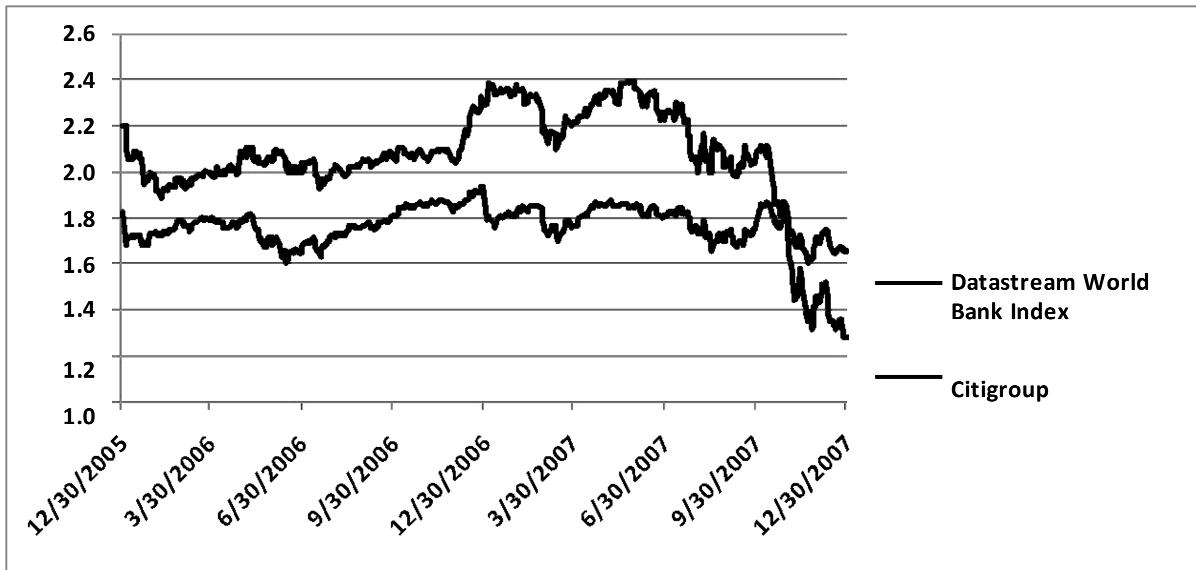
[e] Abigail Moses, "Financial Firms Face $600 Billion of Losses," Bloomberg, February 29, 2008.

Exhibit 1 Selected Market Measures

Panel A. Stock Price (S&P 500 and World Bank Index indexed to Citigroup's share price, December 31, 2005)



Panel B. Price-to-Book Ratio



Source: Thomson Reuters Datastream, accessed June 2010.

Exhibit 2a Citigroup, 2007 Consolidated Balance Sheet

	December 31	
In millions of dollars, except shares	**2007**	2006
Assets		
Cash and due from banks (including segregated cash and other deposits)	**$ 38,206**	$ 26,514
Deposits with banks	**69,366**	42,522
Federal funds sold and securities borrowed or purchased under agreements to resell (including $84,305 at fair value at December 31, 2007)	**274,066**	282,817
Brokerage receivables	**57,359**	44,445
Trading account assets (including $157,221 and $125,231 pledged to creditors, respectively)	**538,984**	393,925
Investments (including $21,449 and $16,355 pledged to creditors, respectively)	**215,008**	273,591
Loans, net of unearned income		
Consumer	**592,307**	512,921
Corporate (including $3,727 and $384 at fair value, respectively)	**185,686**	166,271
Loans, net of unearned income	**$ 777,993**	$ 679,192
Allowance for loan losses	**(16,117)**	(8,940)
Total loans, net	**$ 761,876**	$ 670,252
Goodwill	**41,204**	33,415
Intangible assets (including $8,380 at fair value at December 31, 2007)	**22,687**	15,901
Other assets (including $9,802 at fair value at December 31, 2007)	**168,875**	100,936
TOTAL ASSETS	**$ 2,187,631**	$ 1,884,318
Liabilities		
Non-interest-bearing deposits in U.S. offices	**$ 40,859**	$ 38,615
Interest-bearing deposits in U.S. offices (including $1,337 and $366 at fair value, respectively)	**225,198**	195,002
Non-interest-bearing deposits in offices outside the U.S.	**43,335**	35,149
Interest-bearing deposits in offices outside the U.S. (including $2,261 and $472 at fair value, respectively)	**516,838**	443,275
Total deposits	**$ 826,230**	$ 712,041
Federal funds purchased and securities loaned or sold under agreements to repurchase (including $199,854 at fair value at December 31, 2007)	**304,243**	349,235
Brokerage payables	**84,951**	85,119
Trading account liabilities	**182,082**	145,887
Short-term borrowings (including $13,487 and $2,012 at fair value, respectively)	**146,488**	100,833
Long-term debt (including $79,312 and $9,439 at fair value, respectively)	**427,112**	288,494
Other liabilities (including $1,568 at fair value at December 31, 2007)	**102,927**	82,926
Total liabilities	**$ 2,074,033**	$ 1,764,535
Stockholders' equity		
Preferred stock ($1.00 par value; authorized shares: 30 million), at aggregate liquidation value	**$ —**	$ 1,000
Common stock ($0.01 par value; authorized shares: 15 billion), issued shares: **2007** and 2006—**5,477,416,086 shares**	**55**	55
Additional paid-in capital	**18,007**	18,253
Retained earnings	**121,920**	129,267
Treasury stock, at cost: **2007—482,834,568 shares** and 2006—565,422,301 shares	**(21,724)**	(25,092)
Accumulated other comprehensive income (loss)	**(4,660)**	(3,700)
Total stockholders' equity	**$ 113,598**	$ 119,783
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	**$ 2,187,631**	$ 1,884,318

Exhibit 2b Citigroup, 2007 Consolidated Statement of Income

In millions of dollars, except per share amounts	Year Ended December 31 2007	2006 (1)	2005 (1)
Revenues			
Interest revenue	**$124,467**	$ 96,497	$ 75,922
Interest expense	**77,531**	56,943	36,676
Net interest revenue	**$ 46,936**	$ 39,554	$ 39,246
Commissions and fees	**$ 21,132**	$ 19,244	$ 16,930
Principal transactions	**(12,079)**	7,999	6,656
Administration and other fiduciary fees	**9,172**	6,934	6,119
Realized gains (losses) from sales of investments	**1,168**	1,791	1,962
Insurance premiums	**3,534**	3,202	3,132
Other revenue	**11,835**	10,891	9,597
Total non-interest revenues	**$ 34,762**	$ 50,061	$ 44,396
Total revenues, net of interest expense	**$ 81,698**	$ 89,615	$ 83,642
Provisions for credit losses and for benefits and claims			
Provision for loan losses	**$ 17,424**	$ 6,738	$ 7,929
Policyholder benefits and claims	**935**	967	867
Provision for unfunded lending commitments	**150**	250	250
Total provisions	**$ 18,509**	$ 7,955	$ 9,046
Operating expenses			
Compensation and benefits	**$ 34,435**	$ 30,277	$ 25,772
Net occupancy expense	**6,680**	5,841	5,141
Technology/communication expense	**4,533**	3,762	3,524
Advertising and marketing expense	**2,935**	2,563	2,533
Restructuring expense	**1,528**	—	—
Other operating expenses	**11,377**	9,578	8,193
Total operating expenses	**$ 61,488**	$ 52,021	$ 45,163
Income from continuing operations before income taxes, minority interest, and cumulative effect of accounting change	**$ 1,701**	$ 29,639	$ 29,433
Provision (benefit) for income taxes	**(2,201)**	8,101	9,078
Minority interest, net of taxes	**285**	289	549
Income from continuing operations before cumulative effect of accounting change	**$ 3,617**	$ 21,249	$ 19,806
Discontinued operations			
Income from discontinued operations	**$ —**	$ 27	$ 908
Gain on sale	**—**	219	6,790
Provision (benefit) for income taxes and minority interest, net of taxes	**—**	(43)	2,866
Income from discontinued operations (net of taxes)	**$ —**	$ 289	$ 4,832
Cumulative effect of accounting change (net of taxes)	**—**	—	(49)
Net income	**$ 3,617**	$ 21,538	$ 24,589
Basic earnings per share			
Income from continuing operations	**$ 0.73**	$ 4.33	$ 3.90
Income from discontinued operations (net of taxes)	**—**	0.06	0.95
Cumulative effect of accounting change (net of taxes)	**—**	—	(0.01)
Net income per share	**$ 0.73**	$ 4.39	$ 4.84
Weighted average common shares outstanding (millions)	**4,905.8**	4,887.3	5,067.6

(1) Reclassified to conform to the current period's presentation.

Exhibit 2c Citigroup, 2007 Consolidated Statement of Changes in Stockholders' Equity

In millions of dollars, except shares in thousands	Year ended December 31 **2007**	2006	2005
Preferred stock at aggregate liquidation value			
Balance, beginning of year	**$ 1,000**	$ 1,125	$ 1,125
Redemption or retirement of preferred stock	**(1,000)**	(125)	—
Balance, end of year	**$ —**	$ 1,000	$ 1,125
Common stock and additional paid-in capital			
Balance, beginning of year	**$ 18,308**	$ 17,538	$ 16,960
Employee benefit plans	**455**	769	524
Issuance of shares for Grupo Cuscatlan acquisition	**118**	—	—
Issuance of shares for ATD acquisition	**74**	—	—
Present value of stock purchase contract payments	**(888)**	—	—
Other	**(5)**	1	54
Balance, end of year	**$ 18,062**	$ 18,308	$ 17,538
Retained earnings			
Balance, beginning of year	**$ 129,267**	$ 117,555	$ 102,154
Adjustment to opening balance, net of taxes	**(186)**	—	—
Adjusted balance, beginning of period	**$ 129,081**	$ 117,555	$ 102,154
Net income	**3,617**	21,538	24,589
Common dividends	**(10,733)**	(9,761)	(9,120)
Preferred dividends	**(45)**	(65)	(68)
Balance, end of year	**$ 121,920**	$ 129,267	$ 117,555
Treasury stock, at cost			
Balance, beginning of year	**$ (25,092)**	$ (21,149)	$ (10,644)
Issuance of shares pursuant to employee benefit plans	**2,853**	3,051	2,203
Treasury stock acquired	**(663)**	(7,000)	(12,794)
Issuance of shares for Grupo Cuscatlan acquisition	**637**	—	—
Issuance of shares for ATD acquisition	**503**	—	—
Other	**38**	6	86
Balance, end of year	**$ (21,724)**	$ (25,092)	$ (21,149)
Accumulated other comprehensive income (loss)			
Balance, beginning of year	**$ (3,700)**	$ (2,532)	$ (304)
Adjustment to opening balance, net of taxes	**149**	—	—
Adjusted balance, beginning of period	**$ (3,551)**	$ (2,532)	$ (304)
Net change in unrealized gains and losses on investment securities, net of taxes	**(621)**	(141)	(1,549)
Net change in cash flow hedges, net of taxes	**(3,102)**	(673)	439
Net change in foreign currency translation adjustment, net of taxes	**2,024**	1,294	(980)
Pension liability adjustment, net of taxes	**590**	(1)	(138)
Adjustments to initially apply SFAS 158, net of taxes	**—**	(1,647)	—
Net change in accumulated other comprehensive income (loss)	**$ (1,109)**	$ (1,168)	$ (2,228)
Balance, end of year	**$ (4,660)**	$ (3,700)	$ (2,532)
Total common stockholders' equity and common shares outstanding	**$ 113,598**	$ 118,783	$ 111,412
TOTAL STOCKHOLDERS' EQUITY	**$ 113,598**	$ 119,783	$ 112,537

Source: Citigroup, 2007 10-K Report (New York: Citigroup, 2008).

Exhibit 3 Citigroup Segments

	Global Consumer Group (GCG)	Citi Markets & Banking (CMB)	Global Wealth Management (GWM)	Citi Alternative Investments (CAI)	Corporate/ Other
	U.S. **- Cards** - MasterCard, VISA, Diners Club, private label, and Amex **- Consumer Lending** - Real estate lending - Student loans - Auto loans **- Retail Distribution** - Citibank branches - CitiFinancial branches - Primerica Financial Services **- Commercial Business** - small/middle-market commercial banking **International** **- Cards** - MasterCard, VISA, Diners Club, and private label **- Consumer Finance** - Real estate lending - Personal loans - Auto loans **- Retail Banking** - Retail bank branches - Small and middle-market commercial banking - Investment services - Retirement services - Real estate lending - Personal loans - Sales finance	**- Securities and Banking** - Investment banking - Debt and equity markets - Lending **- Transaction Services** - Cash management - Trade services - Custody and fund services - Clearing services - Agency/trust services	**- Smith Barney** - Advisory - Financial planning - Brokerage **- Private Bank** - Wealth management services **- Citigroup Investment Research** - Equity and fixed-income research	- Private equity - Hedge funds - Real estate - Structured products - Managed futures	- Treasury - Operations and technology - Corporate expenses - Discontinued operations
Revenue ($ millions)					
2006	$ 50,299	$ 27,187	$ 10,177	$ 2,901	$ (949)
2007	$ 56,984	$ 10,522	$ 12,986	$ 2,103	$ (897)
Percent Change	13%	(61%)	28%	(27%)	5%
Net Income ($ millions)					
2006	$ 12,056	$ 7,127	$ 1,444	$ 1,276	$ (654)
2007	$ 7,868	$ (5,253)	$ 1,974	$ 672	$ (1,644)
Percent Change	(35%)	(174%)	37%	(47%)	(151%)
Provision for loan/credit losses ($ millions)					
2006	$ (7,579)	$ (359)	$ (24)	$ 13	
2007	$ (17,020)	$ (1,390)	$ (100)	$ 0	
Percent Change	(125%)	(287%)	(317%)	n.m.	
Identifiable Assets ($ millions)					
2007	$ 745,000	$ 1,224,000	$ 104,000	$ 73,000	$ 42,000

Source: Compiled from Citigroup, 2007 10-K Report (New York: Citigroup, 2008), pp. 2, 23–34, and 128.

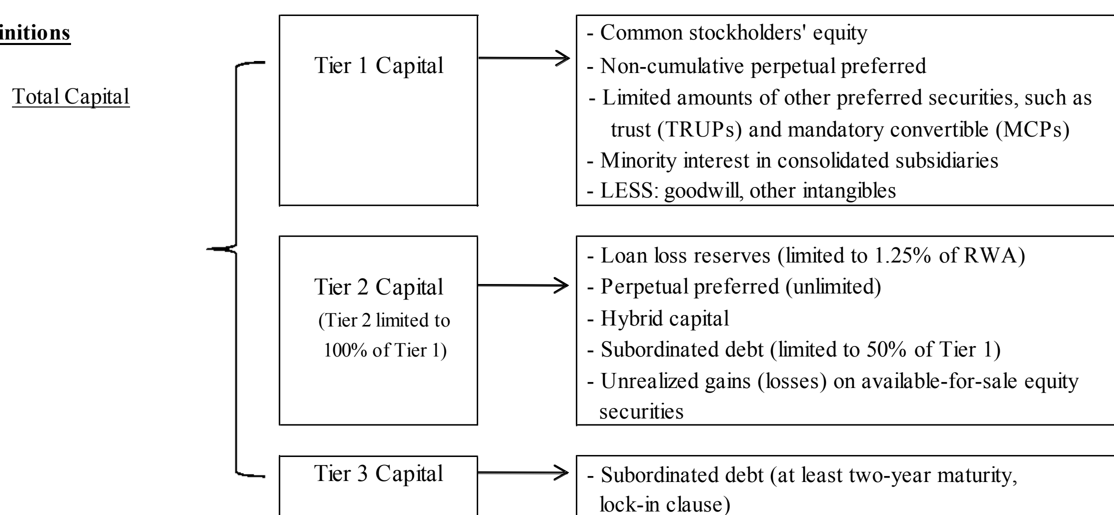
Exhibit 4 U.S. Regulatory Capital Requirements

Below is a summary of calculations for three primary regulatory capital ratios for U.S. banks and bank holding companies:

RATIO	CALCULATION		MINIMUM	WELL CAPITALIZED
(1) Tier 1 Capital	Tier 1 Capital / Risk-weighted Assets	=	4%	6%
(2) Total Capital	Total Capital / Risk-weighted Assets	=	8%	10%
(3) Leverage	Tier 1 Capital / Average Total Assets	=	3%	5%

Definitions

Total Capital



Risk-Weighted Asset (RWA)
- $ amount of asset x risk weight
- broad categories of risk weights reflect credit quality of the borrower, guarantor, or collateral:

0%	Cash; claims on U.S., OECD governments
20%	Claims on banks and public sector entities; claims secured by cash or government securities, or guaranteed by OECD governments or banks
50%	Residential mortgages, OTC derivatives
100%	Standard risk weight for other claims
200%	Securitization exposures externally rated one category below investment grade

Average Total Assets quarterly average total assets, net of goodwill and intangibles

Source: Compiled by casewriters from http://www.fdic.gov (accessed August 6, 2010); Federal Reserve Bank of New York, "Introduction to US Capital Adequacy Standards" (2008); and Citigroup 2007 10-K (New York: Citigroup, 2008).

Exhibit 5 Excerpts on Regulatory Capital from Citigroup 2007 10-K

Citigroup is subject to risk based capital and leverage guidelines issued by the Board of Governors of the Federal Reserve System (FRB). Its U.S. insured depository institution subsidiaries, including Citibank, N.A., are subject to similar guidelines.

Capital is generally generated via earnings from operating businesses. This is augmented through issuance of common stock, convertible preferred stock, preferred stock and subordinated debt, and equity issued as a result of employee benefit plans. Capital is used primarily to support asset growth in the Company's businesses and is sufficient to absorb unexpected market, credit or operational losses. Excess capital is used to pay dividends to shareholders, fund acquisitions and repurchase stock.

Citigroup's capital management framework is designed to ensure that Citigroup and its principal subsidiaries maintain sufficient capital consistent with the Company's risk profile, all applicable regulatory standards and guidelines, and external rating agency considerations. The capital management process is centrally overseen by senior management and is reviewed at the entity and country level.

Components of Capital Under Regulatory Guidelines

In millions of dollars at year end	**2007**	2006
Tier 1 Capital		
Common stockholders' equity	**$ 113,598**	$ 118,783
Qualifying perpetual preferred stock	**—**	1,000
Qualifying mandatorily redeemable securities of subsidiary trusts	**23,594**	9,579
Minority interest	**4,077**	1,107
Less: Net unrealized gains on securities available-for-sale	**(471)**	(943)
Less: Accumulated net losses on cash flow hedges, net of tax	**3,163**	61
Less: Pension liability adjustment, net of tax	**1,057**	1,647
Less: Cumulative effect included in fair value of financial liabilities attributable to credit worthiness, net of tax	**(1,352)**	—
Less: Restricted Core Capital Elements	**(1,364)**	—
Less: Intangible assets:		
Goodwill	**(41,204)**	(33,415)
Other disallowed intangible assets	**(10,511)**	(6,127)
Other	**(1,361)**	(793)
TOTAL TIER 1 CAPITAL	**$ 89,226**	$ 90,899
Tier 2 Capital		
Allowance for credit losses	**$ 15,778**	$ 10,034
Qualifying debt	**26,690**	21,891
Unrealized marketable equity securities gains	**1,063**	436
Restricted Core Capital Elements	**1,364**	—
Total Tier 2 Capital	**$ 44,895**	$ 32,361
TOTAL CAPITAL (Tier 1 and Tier 2)	**$ 134,121**	$ 123,260
RISK-ADJUSTED ASSETS	**$ 1,253,321**	$ 1,057,872

	2007	**2006**	**2005**	**2004**	**2003**
Tier 1 capital	7.12%	8.59%	8.79%	8.74%	8.91%
Total capital	10.70%	11.65%	12.02%	11.85%	12.04%
Leverage	4.03%	5.16%	5.35%	5.20%	5.56%

Source: Citigroup, 2007 10-K Report (New York: Citigroup, 2008), pp. 3, 75, 153.

Exhibit 6 Excerpts from Citigroup 2007 Management Discussion and Analysis

ACCOUNTING CHANGES

Fair Value Measurements (SFAS 157)

The Company elected to early-adopt SFAS No. 157, "Fair Value Measurements" (SFAS 157), as of January 1, 2007. SFAS 157 defines fair value, expands disclosure requirements around fair value and specifies a hierarchy of valuation techniques based on whether the inputs to those valuation techniques are observable or unobservable. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect the Company's market assumptions. These two types of inputs create the following fair value hierarchy:

- Level 1 – Quoted prices for *identical* instruments in active markets.
- Level 2 – Quoted prices for *similar* instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs and significant value drivers are observable in active markets.
- Level 3 – Valuations derived from valuation techniques in which one or more significant inputs or significant value drivers are unobservable.

This hierarchy requires the Company to use observable market data, when available, and to minimize the use of unobservable inputs when determining fair value. For some products or in certain market conditions, observable inputs may not always be available. For example, during the market dislocations that occurred in the second half of 2007, certain markets became illiquid, and some key observable inputs used in valuing certain exposures were unavailable.

Valuations of Financial Instruments

The Company holds fixed income and equity securities, derivatives, retained interests in securitizations, investments in private equity and other financial instruments. In addition, the Company purchases securities under agreements to resell and sells securities under agreements to repurchase. The Company holds its investments, trading assets and liabilities, and resale and repurchase agreements on the balance sheet to meet customer needs, to manage liquidity needs and interest rate risks, and for proprietary trading and private equity investing. Substantially all of these assets and liabilities are reflected at fair value on the Company's balance sheet.

Allowance for Credit Losses

Management provides reserves for an estimate of probable losses inherent in the funded loan portfolio on the balance sheet in the form of an allowance for loan losses. In addition, management has established and maintains reserves for the potential credit losses related to the Company's off-balance sheet exposures of unfunded lending commitments, including standby letters of credit and guarantees. These reserves are established in accordance with Citigroup's Loan Loss Reserve Policies, as approved by the Audit and Risk Management Committee of the Company's Board of Directors.

Source: Citigroup, 2007 10-K Report (New York: Citigroup, 2008).

Exhibit 7 Excerpts from Citigroup 2007 Financial Footnotes

5. INTEREST REVENUE AND EXPENSE

For the years ended December 31, 2007, 2006, and 2005, respectively, interest revenue and expense consisted of the following:

In millions of dollars	**2007**	2006	2005
Interest revenue			
Loan interest, including fees	**$ 66,194**	$ 54,864	$ 47,089
Deposits with banks	**3,200**	2,289	1,537
Federal funds sold and securities purchased under agreements to resell	**18,354**	14,199	9,790
Investments, including dividends	**13,487**	10,399	7,338
Trading account assets	**18,507**	11,865	8,137
Other interest	**4,725**	2,881	2,031
Total interest revenue	**$ 124,467**	$ 96,497	$ 75,922
Interest expense			
Deposits	**$ 28,741**	$ 21,657	$ 13,502
Trading account liabilities	**1,440**	1,119	669
Short-term debt and other liabilities	**30,392**	22,257	14,597
Long-term debt	**16,958**	11,910	7,908
Total interest expense	**$ 77,531**	$ 56,943	$ 36,676
Net interest revenue	**$ 46,936**	$ 39,554	$ 39,246
Provision for loan losses	**17,424**	6,738	7,929
Net interest revenue after provision for loan losses	**$ 29,512**	$ 32,816	$ 31,317

7. PRINCIPAL TRANSACTIONS

Principal transactions revenue consists of realized and unrealized gains and losses from trading activities. Not included in the table below is the impact of net interest revenue related to trading activities, which is an integral part of trading activities' profitability. The following table presents principal transactions revenue for the years ended December 31:

In millions of dollars	**2007**	2006 (1)	2005 (1)
Markets & Banking:			
Fixed income (2)	**$ 4,053**	$ 5,593	$ 3,923
Credit products (3)	**(21,805)**	(744)	(75)
Equities (4)	**818**	870	271
Foreign exchange (5)	**1,222**	693	604
Commodities (6)	**686**	487	843
Total Markets & Banking	**(15,026)**	6,899	5,566
Global Consumer (7)	**1,371**	513	397
Global Wealth Management (7)	**1,315**	680	519
Alternative Investments (7)	**(136)**	(4)	9
Corporate/Other	**397**	(89)	165
Total principal transactions revenue	**$ (12,079)**	$ 7,999	$ 6,656

(1) Reclassified to conform to the current period's presentation.
(2) Includes revenues from government securities and corporate debt, municipal securities, preferred stock, mortgage securities, and other debt instruments. Also includes spot and forward trading of currencies and exchange-traded and over-the-counter (OTC) currency options, options on fixed income securities, interest rate swaps, currency swaps, swap options, caps and floors, financial futures, OTC options, and forward contracts on fixed income securities.
(3) Includes revenues from structured credit products such as North America and Europe collateralized debt obligations. In 2007, losses recorded were related to subprime-related exposures in Markets & Banking's lending and structuring business and exposures to super senior CDOs.
(4) Includes revenues from common, preferred and convertible preferred stock, convertible corporate debt, equity-linked notes, and exchange-traded and OTC equity options and warrants.
(5) Includes revenues from foreign exchange spot, forward, option and swap contracts.
(6) Primarily includes the results of Phibro Inc., which trades crude oil, refined oil products, and other commodities.
(7) Includes revenues from various fixed income, equities and foreign exchange transactions

18. ALLOWANCE FOR CREDIT LOSSES

In millions of dollars	**2007**	2006	2005
Allowance for loan losses at beginning of year	**$ 8,940**	$ 9,782	$ 11,269
Additions			
Consumer provision for credit losses (1)	**16,191**	6,636	8,224
Corporate provision for credit losses	**1,233**	102	(295)
Total provision for credit losses	**$ 17,424**	$ 6,738	$ 7,929
Deductions(1)			
Consumer credit losses	**$ 11,755**	$ 9,227	$ 10,586
Consumer credit recoveries	**(1,972)**	(1,965)	(1,903)
Net consumer loan losses	**$ 9,783**	$ 7,262	$ 8,683
Corporate credit losses	**$ 945**	$ 314	$ 375
Corporate credit recoveries	**(277)**	(232)	(652)
Net corporate credit losses (recoveries)	**$ 668**	$ 82	$ (277)
Other, net	**204**	(236)	(1,010)
Allowance for loan losses at end of year	**$ 16,117**	$ 8,940	$ 9,782
Allowance for credit losses on unfunded lending commitments, Beg (2)	**$ 1,100**	$ 850	$ 600
Provision for unfunded lending commitments	**150**	250	250
Allowance for credit losses on unfunded lending commitments, End	**$ 1,250**	$ 1,100	$ 850
Total allowance for credit losses	**$ 17,367**	$ 10,040	$ 10,632

(1) Consumer credit losses primarily relate to U.S. mortgages, revolving credit and installment loans. Recoveries primarily relate to revolving credit and installment loans.
(2) Represents additional credit loss reserves for unfunded corporate lending commitments and letters of credit recorded with Other Liabilities on the Consolidated Balance Sheet.

26. FAIR VALUE

Items Measured at Fair Value on a Recurring Basis

The following table presents for each of the fair-value hierarchy levels the Company's assets and liabilities that are measured at fair value on a recurring basis at December 31, 2007. The Company often hedges positions that have been classified in the Level 3 category with financial instruments that have been classified as Level 1 or Level 2. The Company also hedges items classified in the Level 3 category with instruments also classified in Level 3 of the fair value hierarchy. The effects of these hedges are presented gross in the following table.

In millions of dollars at year end	**Level 1**	**Level 2**	**Level 3**	**Gross Inventory**	**Netting**	**Net Balance**
Assets						
Federal funds sold and securities borrowed or purchased under agreements to resell	$ —	$ 132,383	$ 16	$ 132,399	$ (48,094)	$ 84,305
Trading account assets: Trading securities	151,684	234,846	75,573	462,103	—	462,103
Derivatives	7,204	428,779	31,226	467,209	(390,328)	76,881
Investments	64,375	125,282	17,060	206,717	—	206,717
Other	—	12,349	9,560	21,909	—	21,909
Total assets	**$ 223,263**	**$ 933,639**	**$ 133,435**	**$1,290,337**	**$(438,422)**	**$ 851,915**
Liabilities						
Interest-bearing deposits	$ —	$ 3,542	$ 56	$ 3,598	$ —	$ 3,598
Federal funds purchased and securities loaned or sold under agreements to repurchase	—	241,790	6,158	247,948	(48,094)	199,854
Trading account liabilities						
Securities sold, not yet purchased	68,928	9,140	473	78,541	—	78,541
Derivatives	8,602	447,119	33,696	489,417	(385,876)	103,541
Short-term borrowings	—	8,471	5,016	13,487	—	13,487
Long-term debt	—	70,359	8,953	79,312	—	79,312
Other financial liabilities	—	1,567	1	1,568	—	1,568
Total liabilities	**$ 77,530**	**$ 781,988**	**$ 54,353**	**$ 913,871**	**$(433,970)**	**$ 479,901**

Source: Citigroup, 2007 10-K Report (New York: Citigroup, 2008).