

Management's Discussion and Analysis

Goldman Sachs is a leading global investment banking, securities and investment management firm that provides a wide range of services worldwide to a substantial and diversified client base that includes corporations, financial institutions, governments and high-net-worth individuals.

Our activities are divided into three segments:

- **investment banking** – This segment comprises Financial Advisory and Underwriting;
- **trading and principal investments** – This segment comprises Fixed Income, Currency and Commodities (FICC), Equities and Principal Investments (Principal Investments primarily represents net revenues from our merchant banking investments); and
- **asset management and securities services** – This segment comprises Asset Management, Securities Services and Commissions.

Our Investment Banking and Trading and Principal Investments activities were previously aggregated into one reporting segment —Global Capital Markets.

All references to 2002, 2001 and 2000 refer to our fiscal year ended, or the date, as the context requires, November 29, 2002, November 30, 2001 and November 24, 2000, respectively.

When we use the terms “Goldman Sachs,” “we,” “us” and “our,” we mean The Goldman Sachs Group, Inc., a Delaware corporation, and its consolidated subsidiaries.

In this discussion, we have included statements that may constitute “forward-looking statements” within the meaning of the safe harbor provisions of The Private Securities Litigation Reform Act of 1995. These forward-looking statements are not historical facts but instead represent only our belief regarding future events, many of which, by their nature, are inherently uncertain and beyond our control. These statements relate to our future plans and objectives, among other things. By identifying these statements for you in this manner, we are alerting you to the possibility that our actual results may differ, possibly materially, from the results indicated in these forward-looking statements. Important factors, among

others, that could cause our results to differ, possibly materially, from those indicated in the forward-looking statements are discussed below under “—Results of Operations—Certain Factors That May Affect Our Results of Operations.”

BUSINESS ENVIRONMENT

The sharp slowdown in the global economy in 2001 proved short lived, but the pace of recovery in 2002 was modest. An acceleration in U.S. production in early 2002 as inventory liquidation slowed led to a strong increase in global economic growth in the first quarter, but momentum eased sharply the following quarter. Continued weakness in capital spending, combined with an erosion of corporate and investor confidence and increased geopolitical risks, was accompanied by significant declines in global equity prices and corporate activity. In addition, the U.S. Congress passed the Sarbanes-Oxley Act of 2002, in response to concerns regarding recent corporate scandals and several large corporate bankruptcies. The provisions of Sarbanes-Oxley, combined with rules and rule proposals (if adopted) of the U.S. Securities and Exchange Commission, New York Stock Exchange and Nasdaq, necessitate significant changes to corporate governance and public disclosure. In addition, investment banks have been and continue to be the subject of increased regulatory scrutiny regarding research and initial public offering practices. This difficult economic and regulatory environment, combined with a second consecutive year of declines in investment banking activity, continued to provide a challenging business climate for financial institutions. Reflecting this environment, during our fiscal year, industry-wide completed mergers and acquisitions declined 49%, industry-wide initial public offerings declined 17% and industry-wide equity underwriting volume declined 7%.⁽¹⁾ The fixed income markets, which generally performed well for a second straight year, were characterized by a steep yield curve, low interest rates and significant volatility in credit spreads.

⁽¹⁾ Source: Thomson Financial Securities Data – December 1, 2001 through November 29, 2002 and November 25, 2000 through November 30, 2001.

The U.S. economy recovered gradually from the recession in 2001. A slowing of inventory liquidation in late 2001 led to a sharp rise in production in early 2002, but underlying growth in demand remained weak. Real gross domestic product growth in the 2002 calendar year rose to approximately 2.4%, an increase from 0.3% in 2001 but well below the pace of most recoveries. Corporations remained cautious and investment continued to decline, while consumer and housing spending held up relatively well. Concerns about the quality of corporate earnings and the extent of the economic recovery prompted further declines in U.S. equity markets. Despite a rebound near year end, major indices ended the year well below 2001 year-end levels. After cutting overnight interest rates aggressively during 2001 (25 basis points of which fell in the first month of our 2002 fiscal year), the U.S. Federal Reserve left rates unchanged until November 2002, when renewed signs of economic weakness prompted a 50 basis point cut in the overnight lending rate. Long-term yields remained low, as evidenced by the 10-year U.S. Treasury yield hitting its lowest level in 40 years in October 2002.

The European economy remained weak in 2002, with the German economy showing particular weakness. An initial rise in business confidence in early 2002 did not translate into a meaningful recovery in activity. Real gross domestic product growth in Europe for the 2002 calendar year was approximately 1.1%, lower than the 1.6% recorded in 2001. European equity markets recorded particularly sharp declines through the year. The European Central Bank and Bank of England left interest rates unchanged throughout our 2002 fiscal year, but in response to continued economic weakness, the European Central Bank lowered interest rates by 50 basis points shortly after the end of our fiscal year.

In Japan, economic growth accelerated in the first half of 2002, but appears to have decelerated towards the end of 2002. Export demand and industrial production rebounded quite strongly in the middle of 2002, driving overall growth rates positive, as global demand

improved and an improvement in other Asian economies lifted Japanese exports. In addition, consumer spending held up relatively well, despite falling personal incomes. The Bank of Japan continued to provide substantial liquidity by expanding purchases of government bonds and increasing money market operations, but concerns lingered as to the state of Japan's banking system and budget deficit. Equities markets in Japan rose early in 2002 but fell sharply as the outlook for a sustained recovery receded.

Growth in other Asian economies picked up sharply in late 2001, reflecting an improvement in technology demand in the United States and, in some countries, an increase in domestic spending. Export growth decelerated later in 2002, leading to renewed pressure on some economies, but the region generally remained stronger than other areas. China, in particular, has continued to record strong growth and its strength has benefited other regional trading partners. Despite large falls in global equities markets, most Asian equity markets (outside of Japan) performed better than those in other regions.

RESULTS OF OPERATIONS

The composition of our net revenues has varied over time as financial markets and the scope of our operations have changed. The composition of net revenues can also vary over the shorter term due to fluctuations in U.S. and global economic and market conditions. Over the last two years, we have been operating in a challenging economic and business environment. Industry-wide declines in the volume of equity underwritings and mergers and acquisitions have adversely affected the results of our Underwriting and Financial Advisory businesses, and continued weakness in global equities markets has adversely affected the results of certain of our Trading and Principal Investments businesses. In addition, our operating results have been affected by Goldman Sachs' combination with SLK LLC (SLK) in October 2000. As a result, period-to-period comparisons may not be meaningful.

Financial Overview

The following table sets forth an overview of our financial results:

FINANCIAL OVERVIEW

(\$ IN MILLIONS, EXCEPT PER SHARE AMOUNTS)	YEAR ENDED NOVEMBER		
	2002	2001	2000 ⁽¹⁾
Net revenues	\$13,986	\$15,811	\$16,590
Pre-tax earnings	3,253	3,696	5,020
Net earnings	2,114	2,310	3,067
Diluted earnings per share	4.03	4.26	6.00
Return on average shareholders' equity ⁽²⁾	11.3%	13.0%	26.9%
Return on average tangible shareholders' equity ⁽³⁾	15.3%	17.8%	28.9%

⁽¹⁾ As part of the combination with SLK, a \$702 million retention pool of restricted stock units was established for SLK employees. A charge of \$290 million (\$180 million after taxes) related to restricted stock units for which future service was not required as a condition to the delivery of the underlying shares of common stock was included in our operating results in 2000. Excluding this charge, our diluted earnings per share were \$6.35.

⁽²⁾ Return on average shareholders' equity is computed by dividing net earnings by average monthly shareholders' equity. Return on average shareholders' equity for 2000 excludes the charge related to our combination with SLK.

⁽³⁾ Tangible shareholders' equity equals total shareholders' equity less goodwill and identifiable intangible assets. We believe that return on average tangible shareholders' equity is a meaningful measure of our financial performance because it reflects the return on the equity deployed in our businesses. Return on average tangible shareholders' equity is computed by dividing net earnings by average monthly tangible shareholders' equity. Return on average tangible shareholders' equity for 2000 excludes the charge related to our combination with SLK. The following table sets forth the reconciliation of average shareholders' equity to average tangible shareholders' equity:

(IN MILLIONS)	YEAR ENDED NOVEMBER		
	2002	2001	2000
Average shareholders' equity	\$18,659	\$17,704	\$12,078
Less: Average goodwill and identifiable intangible assets	4,837	4,727	818
Average tangible shareholders' equity	\$13,822	\$12,977	\$11,260

The following table sets forth the net revenues, operating expenses and pre-tax earnings of our segments:

OPERATING RESULTS BY SEGMENT

(IN MILLIONS)		YEAR ENDED NOVEMBER		
		2002	2001	2000
Investment Banking	Net revenues	\$ 2,830	\$ 3,836	\$ 5,371
	Operating expenses	2,454	3,117	3,645
	Pre-tax earnings	\$ 376	\$ 719	\$ 1,726
Trading and Principal Investments	Net revenues	\$ 5,249	\$ 6,349	\$ 6,627
	Operating expenses	4,273	5,134	4,199
	Pre-tax earnings	\$ 976	\$ 1,215	\$ 2,428
Asset Management and Securities Services	Net revenues	\$ 5,907	\$ 5,626	\$ 4,592
	Operating expenses	3,794	3,501	3,008
	Pre-tax earnings	\$ 2,113	\$ 2,125	\$ 1,584
Total	Net revenues	\$13,986	\$15,811	\$16,590
	Operating expenses ⁽¹⁾	10,733	12,115	11,570
	Pre-tax earnings	\$ 3,253	\$ 3,696	\$ 5,020

⁽¹⁾ Includes the following expenses that have not been allocated to our segments: (i) amortization of employee initial public offering awards of \$212 million, \$363 million and \$428 million for the years ended November 2002, November 2001 and November 2000, respectively, and (ii) nonrecurring acquisition awards of \$290 million related to our combination with SLK for the year ended November 2000.

Net revenues in our segments include allocations of interest income and interest expense to specific securities, commodities and other positions in relation to the cash generated by, or funding requirements of, such underlying positions. See Note 15 to the consolidated financial statements for further information regarding our segments.

The cost structures of each of our segments are broadly similar to that of Goldman Sachs taken as a whole in that they are primarily influenced by discretionary compensation, headcount and levels of business activity. Our overall compensation and benefits expenses are generally targeted at 50% (plus or minus a few percentage points) of consolidated net revenues. A substantial portion of our compensation expense represents discretionary bonuses. Compensation expense within our segments reflects, among other factors, the overall performance of

Goldman Sachs as well as the performance of individual business units.

Investment Banking

Goldman Sachs provides a broad range of investment banking services to a diverse group of corporations, financial institutions, governments and individuals. The activities of our Investment Banking segment are divided into two categories:

- **financial advisory** – Financial Advisory includes advisory assignments with respect to mergers and acquisitions, divestitures, corporate defense activities, restructurings and spin-offs; and
- **underwriting** – Underwriting includes public offerings and private placements of equity and debt securities.

The following table sets forth the operating results of our Investment Banking segment:

INVESTMENT BANKING OPERATING RESULTS

(IN MILLIONS)	YEAR ENDED NOVEMBER		
	2002	2001	2000
Financial Advisory	\$1,499	\$2,070	\$2,592
Underwriting	1,331	1,766	2,779
Total net revenues	2,830	3,836	5,371
Operating expenses	2,454	3,117	3,645
Pre-tax earnings	\$ 376	\$ 719	\$1,726

2002 versus 2001

Net revenues in Investment Banking were \$2.83 billion for the year compared with \$3.84 billion in 2001. Net revenues in Financial Advisory decreased 28% from the prior year to \$1.50 billion, reflecting a 49% decline in industry-wide completed mergers and acquisitions.⁽¹⁾ Net revenues in our Underwriting business declined 25% to \$1.33 billion, primarily reflecting a 17% decline in industry-wide initial public offerings and a 7% decline in industry-wide total equity underwriting volume,⁽¹⁾ as well as a decline in Goldman Sachs' market share in global debt underwriting. The reduction in Investment Banking net revenues was primarily due to lower levels of activity across all sectors, particularly communications, media and entertainment, natural resources, high technology and healthcare. Our investment banking backlog at the end of 2002 was significantly lower than at the end of 2001.⁽²⁾

⁽¹⁾ Source: Thomson Financial Securities Data – December 1, 2001 through November 29, 2002 and November 25, 2000 through November 30, 2001.

⁽²⁾ Our investment banking backlog represents an estimate of our future net revenues from investment banking transactions where we believe that future revenue realization is more probable than not.

Operating expenses decreased 21%, primarily due to decreased compensation and benefits expenses, reflecting lower discretionary compensation and lower employment levels. Market development and communications and technology expenses also decreased, reflecting the continued impact of expense reduction initiatives first implemented in 2001, reduced employment levels and lower levels of business activity. For a further discussion of operating expenses and our expense reduction initiatives, see “—Operating Expenses” below. Pre-tax earnings were \$376 million in 2002 compared with \$719 million in 2001.

2001 versus 2000

Investment Banking generated net revenues of \$3.84 billion compared with \$5.37 billion for 2000, as the slowdown in global economic growth led to significantly lower equity valuations and reduced investment banking activity. Net revenues in Financial Advisory decreased 20% from the prior year to \$2.07 billion, primarily reflecting a 31% decline in industry-wide completed

mergers and acquisitions.⁽¹⁾ Net revenues in our Underwriting business declined 36% to \$1.77 billion, primarily reflecting a 53% decline in industry-wide equity underwriting volumes.⁽¹⁾ Debt underwriting net revenues were essentially unchanged from 2000. The reduction in Investment Banking net revenues was primarily due to lower levels of activity in the communications, media and entertainment, telecommunications, high technology and industrial sectors. Our investment banking backlog at the end of 2001 was significantly lower than at the end of 2000.⁽²⁾

Operating expenses decreased 14%, primarily due to decreased compensation and benefits expenses as lower discretionary compensation more than offset the impact of the growth in employment levels in 2000. Pre-tax earnings were \$719 million in 2001 compared with \$1.73 billion in 2000.

Trading and Principal Investments

Our Trading and Principal Investments business facilitates customer transactions with a diverse group of corporations, financial institutions, governments and individuals and takes proprietary positions through market making in, and trading of, fixed income and equity products, currencies, commodities, and swaps and other derivatives. In addition, we engage in floor-based and electronic market making as a specialist on U.S. equities and options exchanges. The activities of our Trading and Principal Investments segment are divided into three categories:

- **ficc** – We make markets in and trade interest rate and credit products, currencies and commodities, structure and enter into a wide variety of derivative transactions, and engage in proprietary trading;
- **equities** – We make markets in, act as a specialist for, and trade equities and equity-related products,

structure and enter into equity derivative transactions, and engage in proprietary trading; and

- **principal investments** – Principal Investments primarily represents net revenues from our merchant banking investments.

Substantially all of our inventory is marked-to-market daily and, therefore, its value and our net revenues are subject to fluctuations based on market movements. In addition, net revenues derived from our principal investments in privately held concerns and in real estate may fluctuate significantly depending on the revaluation or sale of these investments in any given period. We also regularly enter into large transactions as part of our trading businesses. The number and size of such transactions may affect our results of operations in a given period.

In January 2002, we began to implement a new fee-based pricing structure in our Nasdaq trading business. Previously we did not charge explicit fees in this business but rather earned market-making revenues based generally on the difference between bid and ask prices. Such market-making net revenues are reported in our Equities trading results. As a result of the change to the fee-based pricing structure, a substantial portion of our Nasdaq net revenues is reported in Commissions below and in "Asset management and securities services" in the consolidated statements of earnings.

Net revenues from Principal Investments do not include management fees and the increased share of the income and gains from our merchant banking funds (merchant banking overrides) to which we are entitled when the return on investments exceeds certain threshold returns to fund investors. These management fees and increased shares of income and gains are included in the net revenues of the Asset Management and Securities Services segment.

The following table sets forth the operating results of our Trading and Principal Investments segment:

TRADING AND PRINCIPAL INVESTMENTS OPERATING RESULTS

(IN MILLIONS)	YEAR ENDED NOVEMBER		
	2002	2001	2000
FICC	\$4,470	\$4,047	\$3,004
Equities	1,008	2,923	3,489
Principal Investments	(229)	(621)	134
Total net revenues	5,249	6,349	6,627
Operating expenses	4,273	5,134	4,199
Pre-tax earnings	\$ 976	\$1,215	\$2,428

⁽¹⁾ Source: Thomson Financial Securities Data – November 25, 2000 through November 30, 2001 and November 27, 1999 through November 24, 2000.

⁽²⁾ Our investment banking backlog represents an estimate of our future net revenues from investment banking transactions where we believe that future revenue realization is more probable than not.

2002 versus 2001

Net revenues in Trading and Principal Investments were \$5.25 billion for the year compared with \$6.35 billion in 2001. FICC net revenues of \$4.47 billion increased 10% compared with 2001, reflecting strong performances in our currencies, mortgages, fixed income derivatives, and investment-grade credit businesses, partially offset by decreased net revenues in commodities and leveraged finance. Net revenues in Equities were \$1.01 billion compared with \$2.92 billion for 2001, primarily reflecting lower net revenues in our global shares businesses, which were affected by the continued weakness in the equities markets, the transfer of the Nasdaq fee-based business into Commissions and the negative effect of a single block trade in the first quarter of 2002. In addition, net revenues in equity derivatives and equity arbitrage were lower than the prior year. Principal Investments recorded negative net revenues of \$229 million, primarily due to declines in the value of certain investments in the high technology and telecommunications sectors, partially offset by real estate and energy sector disposition gains.

Operating expenses decreased 17%, primarily due to decreased compensation and benefits expenses, the transfer of the Nasdaq fee-based business to Commissions and the elimination of goodwill amortization. Communications and technology and market development expenses also decreased in 2002, reflecting the continued impact of expense reduction initiatives first implemented in 2001, reduced employment levels and lower levels of business activity. For a further discussion of operating expenses and our expense reduction initiatives, see "—Operating Expenses" below. Pre-tax earnings were \$976 million in 2002 compared with \$1.22 billion in 2001.

2001 versus 2000

Net revenues in Trading and Principal Investments were \$6.35 billion for 2001 compared with \$6.63 billion in 2000, as negative net revenues in Principal Investments and declines in Equities were partially offset by higher net revenues in FICC. Net revenues in FICC were \$4.05 billion, up 35% compared with 2000, as we capitalized on lower interest rates, increased volatility and strong customer demand. This increase in net revenues was driven by strong performances in commodities, currencies, our credit-sensitive businesses (which include high-yield debt, bank loans and investment-grade corporate debt) and fixed income derivatives. Equities net revenues were

\$2.92 billion compared with \$3.49 billion in 2000, primarily reflecting declining volatility and customer flow, the introduction of decimalization and lower net revenues in equity arbitrage, partially offset by the contribution from SLK. Principal Investments experienced negative net revenues of \$621 million for 2001 due to mark-to-market losses on both private and public investments, primarily in the high technology and telecommunications sectors.

Operating expenses increased 22%, primarily due to increased compensation and benefits expenses, higher brokerage, clearing and exchange fees, higher amortization of goodwill and identifiable intangible assets, and increased communications and technology, depreciation and occupancy expenses. These increases were principally due to the inclusion of SLK and the growth in employment levels in 2000, partially offset by lower discretionary compensation and the effect of expense reduction initiatives implemented in 2001. For a further discussion of operating expenses and our expense reduction initiatives, see "—Operating Expenses" below. Pre-tax earnings were \$1.22 billion in 2001 compared with \$2.43 billion in 2000.

Asset Management and Securities Services

The components of our Asset Management and Securities Services segment are set forth below:

- **asset management** – Asset Management generates management fees by providing investment advisory services to a diverse client base of institutions and individuals;
- **securities services** – Securities Services includes prime brokerage, financing services and securities lending, and our matched book businesses, all of which generate revenues primarily in the form of interest rate spreads or fees; and
- **commissions** – Commissions includes fees from executing and clearing client transactions on major stock, options and futures markets worldwide. Commissions also includes revenues from the increased share of the income and gains derived from our merchant banking funds when the return on a fund's investments exceeds certain threshold returns.

The following table sets forth the operating results of our Asset Management and Securities Services segment:

ASSET MANAGEMENT AND SECURITIES SERVICES OPERATING RESULTS

(IN MILLIONS)	YEAR ENDED NOVEMBER		
	2002	2001	2000
Asset Management	\$1,653	\$1,473	\$1,345
Securities Services	981	1,133	940
Commissions	3,273	3,020	2,307
Total net revenues	5,907	5,626	4,592
Operating expenses	3,794	3,501	3,008
Pre-tax earnings	\$2,113	\$2,125	\$1,584

Assets under management typically generate fees based on a percentage of their value and include our mutual funds, separate accounts managed for institutional and

individual investors, our merchant banking funds and other alternative investment funds. Substantially all assets under management are valued as of calendar month end.

The following table sets forth our assets under management by asset class:

ASSETS UNDER MANAGEMENT BY ASSET CLASS

(IN BILLIONS)	AS OF NOVEMBER 30		
	2002	2001	2000
Money markets	\$108	\$122	\$72
Fixed income and currency	96	71	57
Equity	86	96	107
Alternative investments ⁽¹⁾	58	62	58
Total	\$348	\$351	\$294

⁽¹⁾ Includes merchant banking, quantitative asset allocation and other similar funds that we manage, as well as funds where we recommend one or more subadvisors for our clients.

The following table sets forth a summary of the changes in our assets under management:

ASSETS UNDER MANAGEMENT

(IN BILLIONS)	YEAR ENDED NOVEMBER 30		
	2002	2001	2000
Balance, beginning of year	\$351	\$294	\$258
Net assets inflows	9	67	40
Net market depreciation	(12)	(10)	(4)
Balance, end of year	\$348	\$351	\$294

2002 versus 2001

Net revenues in Asset Management and Securities Services were \$5.91 billion for the year, 5% higher than 2001. Asset Management net revenues of \$1.65 billion increased 12% compared with last year, primarily reflecting an 8% increase in average assets under management and increased incentive income. Assets under management were \$348 billion at the end of 2002, essentially flat compared with the end of 2001. Market depreciation of \$12 billion, primarily in equity assets, was partially offset by net asset inflows of \$9 billion, primarily in fixed income and equity assets. The decline in net asset inflows compared with 2001 was primarily due to a reduction in money market net inflows, which were particularly

strong in 2001. Securities Services net revenues were \$981 million compared with \$1.13 billion for 2001, primarily reflecting lower net revenues in our margin lending business and fixed income matched book. Commissions were \$3.27 billion, up 8% compared with 2001, primarily due to increased net revenues from equity commissions, in part due to the transfer of the Nasdaq fee-based business into Commissions, partially offset by lower merchant banking overrides (i.e., an increased share of a fund's income and gains when the return on the fund's investments exceeds certain threshold returns) and reduced clearing fees.

Operating expenses increased 8%, primarily due to the transfer of the Nasdaq fee-based business to Commissions, increased compensation and benefits expenses, higher occupancy expenses, brokerage, clearing and exchange fees, and depreciation expenses, partially offset by the elimination of goodwill amortization. For a further discussion of operating expenses, see "—Operating Expenses" below. Pre-tax earnings in Asset Management and Securities Services were \$2.11 billion in 2002 compared with \$2.13 billion in 2001.

2001 versus 2000

Net revenues in Asset Management and Securities Services were \$5.63 billion, an increase of 23% compared with 2000. All major components of the business contributed to the net revenue growth in 2001. Asset Management net revenues of \$1.47 billion increased 10% compared with 2000, primarily reflecting an increase of 11% in average assets under management. Net asset inflows of \$67 billion, principally in money market assets, were partially offset by declines in equity asset values due to market

depreciation. Securities Services net revenues of \$1.13 billion increased 21% over 2000, primarily due to increased spreads in our fixed income matched book and the contribution from SLK, partially offset by lower net revenues in securities lending and margin lending. Commissions increased 31% compared with 2000 to \$3.02 billion, principally reflecting the contribution from SLK's clearing and execution business.

Operating expenses increased 16%, primarily due to increased compensation and benefits expenses, higher communications and technology expenses, higher amortization of goodwill and identifiable intangible assets, and increased brokerage, clearing and exchange fees and occupancy and depreciation expenses. These increases were principally due to the inclusion of SLK and the growth in employment levels in 2000, partially offset by lower discretionary compensation and the effect of expense reduction initiatives implemented in 2001. Pre-tax earnings in Asset Management and Securities Services were \$2.13 billion in 2001 compared with \$1.58 billion in 2000.

Operating Expenses

The following table sets forth our operating expenses and number of employees:

OPERATING EXPENSES AND EMPLOYEES

(\$ IN MILLIONS)	YEAR ENDED NOVEMBER		
	2002	2001	2000
Compensation and benefits	\$ 6,744	\$ 7,700	\$ 7,773
Nonrecurring acquisition awards	—	—	290
Amortization of employee initial public offering and acquisition awards	293	464	428
Non-compensation expenses	3,696	3,951	3,079
Total operating expenses	\$10,733	\$12,115	\$11,570
Employees at year end ⁽¹⁾	19,739	22,677	22,627

⁽¹⁾ Excludes employees of Goldman Sachs' property management subsidiaries. Substantially all of the costs of these employees are reimbursed to Goldman Sachs by the real estate investment funds to which these companies provide property management services.

During 2002, we continued to focus on cost containment in light of the difficult business environment. We reduced employment levels and maintained our focus on the expense reduction initiatives first implemented in 2001. These initiatives were largely focused on reducing expenses in areas such as travel and entertainment, advertising, consulting, telecommunications and occupancy-related services. In addition, we canceled, deferred or scaled back some of our non-critical capital reinvestment plans in order to limit growth in our depreciation and amortization expense. Given the highly discretionary nature of the expenses impacted by our cost reduction initiatives, the effect of these initiatives on future operating results will be largely dependent upon the prevailing business environment.

2002 versus 2001

Operating expenses were \$10.73 billion for 2002, 11% below 2001. Compensation and benefits expenses of \$6.74 billion decreased 12% compared with the prior year, primarily due to lower discretionary compensation, reduced employment levels, and lower consultants and temporary staff expense. The ratio of compensation and benefits to net revenues for 2002 was 48% compared with 49% for 2001. Employment levels decreased 13% from November 2001. Employee equity-based compensation granted for 2002 included roughly equal amounts of restricted stock units and stock options. See "—Recent Accounting Developments" below as well as Note 2 and Note 12 to the consolidated financial statements for

further information regarding our stock-based compensation, including our adoption, beginning in fiscal 2003, of the fair value method of accounting for stock-based compensation.

Non-compensation-related expenses were \$3.70 billion for 2002, 6% below 2001. Excluding amortization of goodwill and identifiable intangible assets, these expenses decreased 3% compared with last year, primarily reflecting lower market development and communications and technology expenses due to the continued impact of expense reduction initiatives first implemented in 2001, reduced employment levels and lower levels of business activity. These reductions were partially offset by higher occupancy expenses primarily related to new leases and one-time costs related to the postponement of construction plans for a smaller facility adjacent to our office building currently under construction in Jersey City, New Jersey. Amortization of goodwill and identifiable intangible assets was lower than in 2001, reflecting the adoption of the goodwill non-amortization provisions of Statement of Financial Accounting Standards (SFAS) No. 142, "Goodwill and Other Intangible Assets."

2001 versus 2000

Operating expenses were \$12.12 billion for 2001, 7% above 2000 excluding the SLK charge of \$290 million. Compensation and benefits of \$7.70 billion were essentially unchanged from the prior year as lower discretionary compensation was offset by incremental expense related to the inclusion of SLK. The ratio of compensation and benefits to net revenues for 2001 was 49% compared with 47% for 2000. Employment levels were essentially unchanged from November 2000. Substantially all of the equity-based compensation granted for 2001 was in the form of stock options. See "—Recent Accounting Developments" below as well as Note 2 and Note 12 to the consolidated financial statements for further information regarding our stock-based compensation.

Non-compensation expenses were \$3.95 billion, an increase of 28% compared with 2000, primarily due to higher brokerage, clearing and exchange fees, intangible asset amortization, communications and technology costs and occupancy and depreciation expenses partially offset by reduced market development expenses. In addition to the inclusion of SLK, the increase in our non-compensation expenses in 2001 was primarily due to growth in employment levels during 2000 partially offset by the effect of expense reduction initiatives implemented in 2001.

Certain properties occupied by Goldman Sachs were affected by the terrorist attack of September 11, 2001.

We recorded expenses related to the attack in 2001, which were not material and were wholly offset by an expected insurance recovery. These expenses, and the related insurance recovery, pertain to write-offs of damaged technology and telecommunications equipment, certain employee-related expenditures and other business recovery costs.

Provision for Taxes

The effective income tax rate for 2002 was 35.0%, down from 37.5% in 2001. The decline in the effective income tax rate compared with 2001 was primarily due to a change in our geographic earnings mix combined with ongoing efforts to convert major operating subsidiaries around the world to corporate form and an increase in tax-exempt income and domestic tax credits.

The effective tax rate for 2001 was 37.5% compared with 38.9% in 2000. The decline in the effective tax rate in 2001 was primarily due to lower state and local taxes.

Our effective tax rate can vary from period to period depending on, among other factors, the geographic and business mix of our earnings. These same and other factors, including our history of pre-tax earnings, are taken into account in assessing our ability to realize our net deferred tax assets. See Note 13 to the consolidated financial statements for further information regarding our provision for taxes.

Certain Factors That May Affect Our Results of Operations

As an investment banking, securities and investment management firm, our businesses are materially affected by conditions in the financial markets and economic conditions generally, both in the United States and elsewhere around the world. In the last year, we have been operating in a very challenging environment: the number and size of securities underwritings and mergers and acquisition transactions have declined significantly; the equities markets in the United States and elsewhere have been volatile and are at levels substantially below their record highs; investors have exhibited concerns over the integrity of the U.S. financial markets as a result of recent, highly publicized financial scandals; and the attention of management of many clients has been diverted from capital-raising transactions and acquisitions and dispositions in part as a result of corporate governance regulations, such as the Sarbanes-Oxley Act of 2002, and related uncertainty in capital markets. It is unclear how long this environment will last, but so long as it does, our businesses will be adversely affected.

These types of economic and market conditions have in the past adversely affected, and may in the future adversely affect, our business and profitability in many ways, including the following:

- We generally maintain large trading, specialist and investment positions. Market fluctuations and volatility may adversely affect the value of those positions, including our interest rate and credit products, currency, commodity and equity positions and our merchant banking investments, or may reduce our willingness to enter into some new transactions.
- A continuation of the industry-wide declines in the volume of equity underwritings and mergers and acquisitions is likely to have a continuing adverse effect on our revenues and, because we may be unable to reduce expenses correspondingly, our profit margins. In particular, because a significant portion of our investment banking revenues are derived from our participation in large transactions, a decrease in the number of large transactions due to uncertain or unfavorable market conditions may adversely affect our investment banking business.
- Declines in the volume and number of investment banking transactions may continue to increase price competition.
- Reductions in the level of the equities markets also tend to reduce the value of our clients' portfolios, which in turn may reduce the fees we earn for managing assets. Even in the absence of uncertain or unfavorable economic or market conditions, investment performance by our asset management business below the performance of benchmarks or competitors could result in a decline in assets under management and therefore in the fees we receive.
- Concentration of risk in the past has increased the losses that we have incurred in our proprietary trading, market-making, block trading, merchant banking, underwriting and lending businesses and may continue to do so in the future.
- The volume of transactions that we execute for our customers and as a specialist may decline, which would reduce the revenues we receive from commissions and spreads. In our specialist businesses, we are obligated by stock exchange rules to maintain an orderly market, including by purchasing shares in a declining market. This may result in trading losses and an increased need for liquidity. Finally, further weakness in global equities markets could adversely impact our trading businesses and impair the value of our goodwill and identifiable intangible assets.

If any of the variety of instruments and strategies we utilize to hedge or otherwise manage our exposure to various types of risk are not effective, we may incur losses. Our hedging strategies and other risk management techniques may not be fully effective in mitigating our risk exposure in all market environments or against all types of risk.

Liquidity (i.e., ready access to funds) is essential to our businesses. Our liquidity could be impaired by an inability to access the long-term or short-term debt markets, an inability to access the repurchase and securities lending markets, or an inability to sell assets. This situation may arise due to circumstances that we may be unable to control, such as a general market disruption, perceptions about our creditworthiness, or an operational problem that affects third parties or us. Further, our ability to sell assets may be impaired if other market participants are seeking to sell similar assets at the same time.

Our credit ratings are important to our liquidity. A reduction in our credit ratings could adversely affect our liquidity and competitive position, increase our borrowing costs or trigger our obligations under certain bilateral provisions in some of our trading and collateralized financing contracts. Under such provisions, counterparties could be permitted to terminate contracts with Goldman Sachs or require us to post additional collateral. Termination of our trading and collateralized financing contracts could cause us to sustain losses and impair our liquidity by requiring us to find other sources of financing or to make significant cash payments or securities movements.

The Goldman Sachs Group, Inc. (Group Inc.) is a holding company and, therefore, it depends on dividends, distributions and other payments from its subsidiaries to fund dividend payments and to fund all payments on its obligations, including debt obligations. Many of our subsidiaries, including Goldman, Sachs & Co., are subject to laws that authorize regulatory bodies to block or reduce the flow of funds from those subsidiaries to Group Inc. Regulatory action of that kind could impede access to funds that Group Inc. needs to make payments on obligations, including debt obligations, or dividend payments.

We are exposed to the risk that third parties that owe us money, securities or other assets will not perform their obligations. These parties may default on their obligations to us due to bankruptcy, lack of liquidity, operational failure or other reasons. The amount and duration of our credit exposures have been increasing over the past several years, as has the breadth of the entities to which we have such exposure. As a clearing member firm, we finance our customer positions and we could be

held responsible for the defaults or misconduct of our customers. In addition, we have experienced, due to competitive factors, pressure to extend credit and price more aggressively the credit risks we take. In particular, corporate clients sometimes seek to require credit commitments from us in connection with investment banking assignments. Although we regularly review credit exposures to specific clients and counterparties and to specific industries, countries and regions that we believe may present credit concerns, default risk may arise from events or circumstances that are difficult to detect or foresee. In addition, concerns about, or a default by, one institution could lead to significant liquidity problems, losses or defaults by other institutions, which in turn could adversely affect Goldman Sachs.

Our ability to conduct business may be adversely impacted by a disruption in the infrastructure that supports our businesses and the communities in which they are located. This may include a disruption involving electrical, communications, transportation or other services used by Goldman Sachs or third parties with which we conduct business.

Substantial legal liability or a significant regulatory action against Goldman Sachs could have a material adverse financial effect or cause significant reputational harm to Goldman Sachs, which in turn could seriously harm our business prospects. We face significant legal risks in our businesses, and the volume of claims and amount of damages claimed in litigation against financial intermediaries are increasing. Our experience has been that legal claims by customers and clients increase in a market downturn. In addition, employment related claims typically increase in periods when we have reduced the total number of employees.

For additional important factors that may affect our results of operations, see "Business—Certain Factors That May Affect Our Business" in our Form 10-K for our fiscal year ended November 29, 2002.

GEOGRAPHIC DATA

For a summary of the net revenues, pre-tax earnings and identifiable assets of Goldman Sachs by geographic region, see Note 15 to the consolidated financial statements.

CASH FLOWS

Our cash flows are primarily related to the operating and financing activities undertaken in connection with our trading and market-making businesses. We have reclassified net cash flows from "Securities sold under agreements to repurchase, net of agreements to resell" as

operating activities, because secured funding is an integral aspect of our day-to-day operations. Previously, these cash flows were reported as financing activities.

year ended november 2002

Cash and cash equivalents decreased to \$4.82 billion in 2002. Cash of \$10.08 billion was used for operating activities, primarily reflecting an increase in financial instruments owned, partially offset by an increase in financial instruments sold, but not yet purchased. Cash of \$1.10 billion was used for investing activities, primarily for leasehold improvements and the purchase of telecommunications and technology-related equipment. Cash of \$9.09 billion was provided by financing activities, reflecting proceeds from the issuances of long-term and net short-term borrowings, partially offset by repayments of long-term borrowings (including the current portion of long-term borrowings) and common stock repurchases.

year ended november 2001

Cash and cash equivalents increased to \$6.91 billion in 2001. Cash of \$2.87 billion was provided by operating activities. Cash of \$1.91 billion was used for investing activities, primarily for leasehold improvements and the purchase of telecommunications and technology-related equipment. Cash of \$2.08 billion was provided by financing activities, reflecting proceeds from the issuances of long-term and net short-term borrowings, partially offset by repayments of long-term borrowings (including the current portion of long-term borrowings) and common stock repurchases.

year ended november 2000

Cash and cash equivalents increased to \$3.87 billion in 2000. Operating activities provided cash of \$1.61 billion. Cash of \$3.66 billion was used for investing activities, primarily for our combination with SLK and purchases of technology-related equipment. Cash of \$2.86 billion was provided by financing activities as proceeds from the issuances of long-term borrowings were partially offset by repayments of long-term borrowings (including the current portion of long-term borrowings).

LIQUIDITY RISK MANAGEMENT

Liquidity is of critical importance to companies in the financial services sector. Most failures of financial institutions have occurred in large part due to insufficient liquidity. Accordingly, Goldman Sachs has in place a comprehensive set of liquidity and funding policies that are intended to maintain significant flexibility to address both firm-specific and broader industry or market liquidity events. Our principal objective is to be able to fund Goldman Sachs and to enable our core businesses

to continue to generate revenue and provide services to our clients, even under adverse circumstances.

Management has implemented a number of policies that are designed to achieve this objective. Our liquidity policies are intended to be conservative and, accordingly, reflect the following general assumptions:

- During a liquidity crisis, credit-sensitive funding, including unsecured debt and some types of collateralized financing agreements, may be unavailable and the terms or availability of other types of secured financing may change.
- Liquidity needs will come in different forms and may occur simultaneously; therefore, we assume that the same pool of funds cannot satisfy multiple liquidity needs.
- Because legal and regulatory requirements can restrict the flow of funds between entities, unless legally provided for, we assume funds or securities are not freely available from a subsidiary to the parent company.

Our liquidity policies are focused on the maintenance of excess liquidity and conservative asset-liability management.

Excess Liquidity Policies

maintenance of a pool of highly liquid securities

Our most important liquidity policy is to maintain excess liquidity in the form of unencumbered, highly liquid securities. This liquidity is intended to allow us to meet immediate obligations without needing to sell other assets or depend on additional funding from credit-sensitive markets.

Our primary liquidity cushion consists of cash and unencumbered U.S. government and agency securities and highly liquid mortgage securities that may be sold or pledged to provide same-day liquidity. This pool of highly liquid assets averaged \$30.06 billion during 2002 and \$24.55 billion during 2001. We also maintain smaller pools of unencumbered French, German, United Kingdom and Japanese government bonds that can be used in a similar fashion to address local market crises. These pools, in the aggregate, averaged \$6.73 billion during 2002.

The size of our liquidity cushion is determined by an internal liquidity model together with a qualitative assessment of the condition of the financial markets and Goldman Sachs. The liquidity model identifies and estimates potential uses of liquidity over a short-term horizon, including:

- upcoming maturities of unsecured debt;
- potential buybacks of a portion of our outstanding negotiable debt;
- collateral outflows, assuming that collateral that has not been called by counterparties, but is available to them, will be called and all counterparties that can call collateral through marking transactions to market will do so continually;
- draws on our unfunded commitments; and
- upcoming cash outflows, such as tax or bonus payments.

In addition to the liquidity risk assumptions described above, we assume that no assets other than the liquidity cushion are available to source liquidity and that committed or advised bank facilities will be unavailable.

other unencumbered assets

In addition to the liquidity cushion described above, we maintain a significant amount of other unencumbered securities in the United States, Europe and Asia, including other government bonds, high-grade money market securities, corporate bonds and marginable equities.

maintenance of liquidity ratio

Our policy is to maintain total unencumbered assets, including our liquidity cushion and other unencumbered assets described above, in an amount that, if pledged or sold, is intended to provide the funds necessary to replace at least 100% of unsecured obligations that are scheduled to mature (or where holders have the option to redeem) within the coming year. This "liquidity ratio" of unencumbered assets at loan value divided by short-term unsecured liabilities is intended to ensure that we could fund our positions on a secured basis in the event we were unable to replace our unsecured debt maturing within one year. In calculating this ratio, we assume conservative loan values (the estimated amount of cash that would be advanced by counterparties against securities we own) that are based on stress-scenario borrowing capacity. The estimated loan value of the aggregate of our liquidity cushion and the other unencumbered assets averaged \$68.55 billion during 2002.

committed bank facilities

While we assume committed or advised bank facilities will be unavailable in the event of a liquidity crisis, Goldman Sachs maintains over \$1 billion in undrawn bank facilities as an additional liquidity resource.

Asset-Liability Management Policies

maintenance of a highly liquid balance sheet

Goldman Sachs seeks to maintain a highly liquid balance sheet. Many of our assets are readily funded in the repurchase agreement and securities lending markets, which generally have proven to be a consistent source of funding, even in periods of market stress. Substantially all of our inventory is marked-to-market daily.

Our balance sheet fluctuates significantly between financial statement dates and is lower at fiscal year end than would be observed on an average basis. We require our businesses to reduce balance sheet usage on a quarterly basis to demonstrate compliance with limits set by management, thereby providing a disincentive to committing our capital over longer periods of time. These balance sheet reductions are generally achieved during the last several weeks of each fiscal quarter through ordinary-course, open-market transactions in the most liquid portions of our balance sheet, principally U.S. government and agency securities, securities of foreign sovereigns, and mortgage and money market instruments, as well as through the roll-off of repurchase agreements and certain collateralized financing arrangements. Accordingly, over the last six quarters, our total assets and adjusted assets at quarter end have been, on average, 18% lower and 16% lower, respectively, than amounts that would have been observed, based on a weekly average, over that period. These differences, however, have not resulted in material changes to our credit risk, market risk or excess liquidity position because they are generally in highly liquid assets that are typically financed on a secured basis.

funding of assets with longer term liabilities

While Goldman Sachs' liquidity policies generally do not rely on sales of assets (other than the liquidity cushions) to maintain liquidity in a distressed environment, we recognize that orderly asset sales may be prudent, and could be necessary, in a persistent liquidity crisis. As a result, we seek to manage the composition of our asset base and the maturity profile of our funding such that we should be able to liquidate our assets prior to our liabilities coming due, even in times of prolonged or severe liquidity stress.

We seek to maintain total capital (long-term borrowings plus shareholders' equity) substantially in excess of our less liquid assets. Our total capital of \$57.71 billion and \$49.25 billion as of November 2002 and November 2001, respectively, exceeded the assets that we believe may be more difficult to fund or sell, particularly during times of market stress. Such assets include, but are not limited to, bank loans, high-yield debt securities, emerging market debt securities and principal investments.

As of November 2002 and 2001, we held \$2.97 billion and \$3.45 billion, respectively, in bank loans, \$1.94 billion and \$1.78 billion, respectively, in high-yield debt securities and \$0.76 billion and \$1.32 billion, respectively, in emerging market debt securities. As of November 2002 and 2001, the aggregate carrying value of our principal investments held directly or through our merchant banking funds was \$1.78 billion and \$2.85 billion, respectively. These carrying values were comprised of corporate principal investments with an aggregate carrying value of \$1.04 billion and \$1.85 billion, respectively, and real estate investments with an aggregate carrying value of \$0.74 billion and \$1.00 billion, respectively. In addition, we held other financial assets such as certain mortgage whole loans, certain mortgage-backed securities and other distressed assets that could be less liquid, particularly during times of market stress.

In addition, we had illiquid non-financial assets of \$12.30 billion and \$12.01 billion as of November 2002 and November 2001, respectively. These assets, which are reported as "Other assets" in the consolidated statements of financial condition, include goodwill and identifiable intangible assets, property, plant and equipment, deferred tax assets, prepaid assets and our equity method investments.

diversification of funding sources

Goldman Sachs seeks to maintain broad and diversified funding sources globally. These sources include insurance companies, mutual funds, banks, bank trust departments, corporations, individuals and other asset managers. We have imposed internal guidelines on how much of our commercial paper can be owned by any single investor or group of investors. We believe that our relationships with our creditors are critical to our liquidity.

We access funding in a variety of markets in the United States, Europe and Asia. We make extensive use of the repurchase agreement and securities lending markets, arrange for letters of credit to be issued on our behalf and raise funding in the public and private markets. In particular, we issue debt through syndicated U.S. registered offerings, U.S. registered and 144A medium-term notes programs, offshore medium-term notes offerings and other bond offerings, U.S. and non-U.S. commercial paper and promissory note issuances, and other methods.

avoidance of debt maturity concentrations

We seek to structure our liabilities to avoid maturity concentrations. To that end, we have created internal guidelines on the principal amount of debt maturing on any one day or during any single week or year. We also have average maturity targets for our long-term and total unsecured debt programs.

subsidiary funding and foreign exchange policies. Most of our unsecured funding is raised by our parent company, The Goldman Sachs Group, Inc. The parent company then lends the necessary funds to its subsidiaries. We manage our intercompany exposure by generally requiring intercompany loans to have maturities equal to or shorter than the maturities of the aggregate borrowings of the parent company. This policy ensures that the subsidiaries' obligations to the parent company will generally mature in advance of the parent company's third-party long-term borrowings. In addition, many of our subsidiaries and affiliates pledge collateral to cover their intercompany borrowings. We generally fund our equity investments in subsidiaries with equity capital.

Our capital invested in foreign subsidiaries is generally exposed to foreign exchange risk, which we selectively hedge. In addition, we generally hedge the nontrading exposure to foreign exchange risk that arises from transactions denominated in currencies other than the transacting entity's functional currency.

CAPITAL AND FUNDING

Capital

Our capital requirements are determined by factors such as subsidiary regulatory requirements, rating agency guidelines, our capital policies regarding asset composition, leverage and risk of loss, business opportunities, and capital availability and cost. Goldman Sachs' total capital increased 17% to \$57.71 billion as of November 2002 compared with \$49.25 billion as of November 2001.

The increase in total capital resulted primarily from an increase in long-term borrowings to \$38.71 billion as of November 2002 from \$31.02 billion as of November 2001. The weighted average maturity of our long-term borrowings as of November 2002 was approximately 5 years. We swap a substantial portion of our long-term borrowings into U.S. dollar obligations with short-term floating interest rates in order to minimize our exposure to interest rates and foreign exchange movements.

Shareholders' equity increased by 4% to \$19.00 billion as of November 2002 from \$18.23 billion as of November 2001. During 2002, we repurchased 19.4 million shares of our common stock. The principal purpose of our stock repurchase program is to substantially offset the dilutive effect of employee equity-based compensation. The repurchase program has been effected through regular open-market purchases, the sizes of which have been and will be influenced by, among other factors, prevailing prices and market conditions. As of November 2002, we were authorized to repurchase up to 19.3 million additional shares of common stock pursuant to our common stock repurchase program. The average price paid per

share for repurchased shares was \$76.49, \$88.22 and \$99.90 for the years ended November 2002, November 2001 and November 2000, respectively.

The following table sets forth information on our assets, shareholders' equity, leverage ratios and book value per share:

(\$ IN MILLIONS, EXCEPT PER SHARE AMOUNTS)	AS OF NOVEMBER	
	2002	2001
Total assets	\$355,574	\$312,218
Adjusted assets ⁽¹⁾	215,547	194,518
Shareholders' equity	19,003	18,231
Tangible shareholders' equity ⁽²⁾	14,164	13,423
Leverage ratio ⁽³⁾	18.7x	17.1x
Adjusted leverage ratio ⁽⁴⁾	15.2x	14.5x
Book value per share ⁽⁵⁾	\$ 38.69	\$ 36.33

⁽¹⁾ Adjusted assets excludes (i) low-risk collateralized assets generally associated with our matched book and securities lending businesses (which we calculate by adding our securities purchased under agreements to resell and securities borrowed, and then subtracting our nonderivative short positions), (ii) cash and securities we segregate in compliance with regulations and (iii) goodwill and identifiable intangible assets. The following table sets forth a reconciliation of total assets to adjusted assets:

(IN MILLIONS)	AS OF NOVEMBER	
	2002	2001
Total assets	\$ 355,574	\$ 312,218
Deduct: Securities purchased under agreements to resell	(45,772)	(27,651)
Securities borrowed	(113,579)	(101,164)
Add: Financial instruments sold, but not purchased, at fair value (excluding derivatives)	44,552	38,057
Deduct: Cash and securities segregated in compliance with U.S. federal and other regulations	(20,389)	(22,134)
Goodwill and identifiable intangible assets	(4,839)	(4,808)
Adjusted assets	\$ 215,547	\$ 194,518

⁽²⁾ Tangible shareholders' equity equals total shareholders' equity less goodwill and identifiable intangible assets. The following table sets forth a reconciliation of shareholders' equity to tangible shareholders' equity:

(IN MILLIONS)	AS OF NOVEMBER	
	2002	2001
Shareholders' equity	\$19,003	\$18,231
Deduct: Goodwill and identifiable intangible assets	4,839	4,808
Tangible shareholders' equity	\$14,164	\$13,423

⁽³⁾ Leverage ratio equals total assets divided by shareholders' equity.

⁽⁴⁾ Adjusted leverage ratio equals adjusted assets divided by tangible shareholders' equity. We believe that the adjusted leverage ratio is a more meaningful measure of our capital adequacy because it excludes certain low-risk collateralized assets that are generally supported with little or no capital and reflects the tangible equity deployed in our businesses.

⁽⁵⁾ Book value per share is based on common shares outstanding, including restricted stock units granted to employees with no future service requirements, of 491.2 million as of November 2002 and 501.8 million as of November 2001.

Short-Term Borrowings

Goldman Sachs obtains unsecured short-term borrowings principally through issuance of promissory notes, commercial paper and bank loans. Short-term borrowings also include the portion of long-term borrowings maturing within one year.

The following table sets forth our short-term borrowings:

SHORT-TERM BORROWINGS

(IN MILLIONS)	AS OF NOVEMBER	
	2002	2001
Promissory notes	\$20,433	\$15,281
Commercial paper	9,463	8,353
Bank loans and other	4,948	6,794
Current portion of long-term borrowings	5,794	7,169
Total	\$40,638	\$37,597

Our liquidity depends to an important degree on our ability to refinance these borrowings on a continuous basis. Investors who hold our outstanding promissory notes and commercial paper have no obligation to purchase new instruments when the outstanding instruments mature. As part of our overall liquidity policies, we maintain unencumbered assets in an amount that, if pledged or sold, would provide the funds necessary to replace unsecured obligations that are scheduled to mature (or where holders have the option to redeem) within the coming year. For a discussion of factors that could impair our ability to access these and other markets, see “—Results of Operations—Certain Factors That May Affect Our Results of Operations.” See Note 5 to the consolidated financial statements for further information regarding our short-term borrowings.

Credit Ratings

Goldman Sachs relies upon the short-term and long-term debt capital markets to fund a significant portion of its day-to-day operations. The cost and availability of debt financing is influenced by our credit ratings. Credit ratings are important when we are competing in certain markets and when we seek to engage in longer term transactions, including over-the-counter (OTC) derivatives. We believe our credit ratings are determined primarily based on the credit rating agencies' assessment of the external operating environment, our liquidity, market and credit risk management practices, the level and variability of our earnings, our franchise, reputation and management and our capital base. An adverse change in any of these factors could result in a reduction in our credit ratings which, in turn, could increase our borrowing costs and limit our access to the capital markets or require us to post additional collateral and permit counterparties to terminate transactions, pursuant to our obli-

gations under bilateral provisions in certain of our trading and collateralized financing contracts. This could reduce our earnings and adversely affect our liquidity.

As of November 2002, additional collateral that would have been callable in the event of a one level reduction in our long-term credit ratings, pursuant to bilateral agreements with certain counterparties, was not material.

The following table sets forth our credit ratings as of November 2002:

	SHORT-TERM DEBT	LONG-TERM DEBT
Fitch ⁽¹⁾	F1+	AA-
Moody's Investors Service ⁽²⁾	P-1	Aa3
Standard & Poor's ⁽³⁾	A-1	A+

⁽¹⁾ On May 17, 2002, Fitch affirmed Goldman Sachs' credit ratings but revised its outlook for the long-term debt rating from “stable” to “negative.”

⁽²⁾ On August 9, 2002, Moody's Investors Service upgraded Goldman Sachs' long-term debt rating from A1 to Aa3.

⁽³⁾ On October 17, 2002, Standard & Poor's lowered Goldman Sachs' short-term debt rating from A-1+ to A-1. Standard & Poor's affirmed our long-term debt rating of A+ and revised its outlook for the long-term debt rating from “negative” to “stable.”

Management Oversight of Liquidity, Capital and Funding

Goldman Sachs has established management and infrastructure to oversee our liquidity, capital and funding. The Finance Committee establishes and assures compliance with our liquidity policies and has oversight responsibility for liquidity risk, the size and composition of our balance sheet, our capital base and our credit ratings. The Committee regularly reviews our funding position and capitalization and makes adjustments in light of current events, risks and exposures. See “—Risk Management—Risk Management Structure” below for a further description of the committees that participate in our risk management process.

Goldman Sachs maintains a Liquidity Crisis Plan that identifies a structure for analyzing and responding to a liquidity-threatening event. The Liquidity Crisis Plan provides the framework to estimate the likely impact of a liquidity event on Goldman Sachs and outlines which and to what extent liquidity maintenance activities should be implemented based on the severity of the event. It also lists the crisis management team and internal and external parties to be contacted to ensure effective distribution of information.

Contractual Obligations and Contingent Commitments

Goldman Sachs has contractual obligations to make future payments under long-term debt and long-term noncancelable lease agreements and has contingent commitments under a variety of commercial arrangements as disclosed in the notes to the consolidated financial statements.

The following table sets forth our contractual obligations as of November 2002:

CONTRACTUAL OBLIGATIONS

(IN MILLIONS)	2003	2004-2005	2006-2007	2008- THEREAFTER	TOTAL
Long-term borrowings by contract maturity	\$ —	\$15,909	\$4,642	\$18,160	\$38,711
Minimum rental commitments	350	620	505	1,827	3,302

As of November 2002, our long-term borrowings were \$38.71 billion. Substantially all of our long-term borrowings were unsecured and consisted principally of senior borrowings with maturities extending through 2032. See Note 6 to the consolidated financial statements for further information regarding our long-term borrowings.

As of November 2002, our minimum rental commitments, net of minimum sublease rentals, under non-cancelable leases were \$3.30 billion. These lease commitments, principally for office space, expire on various dates through 2029. Certain agreements are subject to periodic escalation provisions for increases in real estate taxes and other charges.

Our occupancy expenses include costs associated with office space held in excess of our current requirements, primarily due to the impact of the levels of current business activity on our previously anticipated growth in headcount. This excess space is being held for potential future growth. We continually review our space requirements and may, from time to time, reduce capacity through the use of sublease contracts or early termination agreements. We may incur costs in connection with such reductions in our global office space. Where we have unoccupied space that we may occupy in the future, we will continue to charge the underlying operating costs to earnings as incurred.

The following table sets forth our contingent commitments as of November 2002:

CONTINGENT COMMITMENTS

(IN MILLIONS)	AMOUNT OF COMMITMENT EXPIRATION BY PERIOD				TOTAL
	2003	2004-2005	2006-2007	2008- THEREAFTER	
Commitments to extend credit	\$ 6,126	\$1,224	\$1,089	\$ 975	\$ 9,414
Commitments under letters of credit issued by banks to counterparties	11,607	15	10	—	11,632
Other commercial commitments ⁽¹⁾	572	832	1	493	1,898
Total	\$18,305	\$2,071	\$1,100	\$1,468	\$22,944

⁽¹⁾ Includes our merchant banking commitments and guarantees related to construction-related obligations and our fund management activities.

As of November 2002, we had commitments to enter into forward secured financing transactions, including certain repurchase and resale agreements and secured borrowing and lending arrangements, of \$40.04 billion.

See Note 7 to the consolidated financial statements for further information regarding our commitments and contingencies.

REGULATED SUBSIDIARIES

Many of our principal subsidiaries are subject to extensive regulation in the United States and elsewhere. Goldman, Sachs & Co. and Spear, Leeds & Kellogg, L.P. are registered U.S. broker-dealers and futures commissions merchants, and their primary regulators include the Securities and Exchange Commission, the Commodity Futures Trading Commission, the Chicago Board of Trade, the New York Stock Exchange and The National Association of Securities Dealers, Inc. Goldman Sachs International, a registered U.K. broker-dealer, is subject to regulation by The Financial Services Authority. Goldman Sachs (Japan) Ltd., a Tokyo-based broker-dealer, is subject to regulation by the Financial Services Agency, the Tokyo Stock Exchange, the Osaka Securities Exchange, the Tokyo International Financial Futures Exchange and the Japan Securities Dealers Association. Several other subsidiaries of Goldman Sachs are regulated by securities, investment advisory, banking, and other regulators and authorities around the world, such as the Federal Financial Supervisory Authority (BaFin) and the Bundesbank in Germany, the Securities and Futures Commission in Hong Kong and the Monetary Authority of Singapore. Compliance with the rules of these regulators may prevent us from receiving distributions, advances or repayment of liabilities from these subsidiaries. See Note 14 to the consolidated financial statements for further information regarding our regulated subsidiaries.

RISK MANAGEMENT

Goldman Sachs has a comprehensive risk management process to monitor, evaluate and manage the principal risks assumed in conducting its activities. These risks include market, credit, liquidity, legal, reputational and other operational exposures.

Risk Management Structure

Goldman Sachs seeks to monitor and control its risk exposure through a variety of separate but complementary financial, credit, operational and legal reporting systems. We believe that we have effective procedures for evaluating and managing the market, credit and other risks to which we are exposed. Nonetheless, the effectiveness of our policies and procedures for managing risk exposure can never be completely or accurately predicted or fully assured. For example, unexpectedly large or rapid movements or disruptions in one or more markets or other unforeseen developments can have a material adverse effect on our results of operations and financial condition. The consequences of these developments can include losses due to adverse changes in inventory values, decreases in the liquidity of trading positions, higher volatility in our earnings, increases in our credit exposure

to customers and counterparties, an inability to engage in new transactions and increases in general systemic risk.

Goldman Sachs has established risk control procedures at several levels throughout the organization. Trading desk managers have the first line of responsibility for managing risk within prescribed limits. These managers have in-depth knowledge of the primary sources of risk in their individual markets and the instruments available to hedge our exposures.

In addition, a number of committees are responsible for establishing trading limits, for monitoring adherence to these limits and for general oversight of our risk management process. These committees, whose responsibilities as of 2003 are described below, meet regularly and consist of senior members of both our revenue-producing units and departments that are independent of our revenue-producing units.

management committee – All risk control functions ultimately report to the Management Committee. Through both direct and delegated authority, the Management Committee approves all of Goldman Sachs' operating activities, trading risk parameters and customer review guidelines.

risk committees – The Firmwide Risk Committee:

- reviews the activities of existing businesses;
- approves new businesses and products;
- approves divisional market risk limits and reviews business unit market risk limits;
- approves inventory position limits for selected country exposures and business units;
- approves sovereign credit risk limits and credit risk limits by ratings group; and
- reviews scenario analyses and approves limits based on abnormal or "catastrophic" market movements.

The FICC and Equities Risk Committees set market risk limits for their respective product lines based on a number of measures including Value at Risk (VaR), scenario analyses and inventory levels. The Asset Management Control Oversight and the Asset Management Risk Committees oversee various operational, credit, pricing and business practice issues.

global compliance and control committee – The Global Compliance and Control Committee assists management in the identification and review of certain compliance, reputational and other operational risks and in the development of policies and communication and training programs designed to mitigate these risks.

capital committee – The Capital Committee reviews and approves all transactions involving commitments of our capital. Such capital commitments include extensions of credit, liquidity commitments, bond underwritings, and other unusual financing structures and transactions that involve significant capital exposure. The Capital Committee is also responsible for ensuring that business and reputational standards for capital commitments are maintained on a global basis.

commitments committee – The Commitments Committee reviews and approves our underwriting and distribution activities and sets and maintains policies and procedures designed to ensure that legal, reputational, regulatory, and business standards are maintained in conjunction with these activities. In addition to reviewing specific transactions, the Commitments Committee periodically conducts strategic reviews of industry sectors and products and establishes policies in connection with transaction practices.

credit policy committee – The Credit Policy Committee establishes and reviews broad credit policies and parameters that are implemented by the Credit Department.

operational risk committee – The Operational Risk Committee provides oversight of the ongoing development and implementation of our operational risk policies, framework and methodologies, and monitors the effectiveness of operational risk management.

finance committee – The Finance Committee is responsible for oversight of our capital, liquidity and funding needs and for setting certain inventory position limits.

Segregation of duties and management oversight are fundamental elements of our risk management process. In addition to the committees described above, departments that are independent of the revenue-producing units, such as the Firmwide Risk, Credit, Controllers, Treasury, Global Operations, Compliance, Management Controls (Internal Audit) and Legal departments, in part perform risk management functions, which include monitoring, analyzing and evaluating risk. Furthermore, the Controllers Department, in conjunction with the Firmwide Risk Department, independently reviews, on a regular basis, internal valuation models and the pricing of positions determined by individual business units.

Risk Limits

Business unit risk limits are established by the various risk committees and may be further allocated by the business unit managers to individual trading desks.

Market risk limits are monitored on a daily basis by the Firmwide Risk Department, and are reviewed regularly by the appropriate risk committee. Limit violations are reported to the appropriate risk committee and the appropriate business unit managers.

Inventory position limits are monitored by the Controllers Department and position limit violations are reported to the appropriate business unit managers, the Finance Committee and the appropriate risk committee.

Market Risk

The potential for changes in the market value of our trading positions is referred to as “market risk.” Our trading positions result from underwriting, market-making, specialist and proprietary trading activities.

Categories of market risk include exposures to interest rates, equity prices, currency rates and commodity prices. A description of each market risk category is set forth below:

- Interest rate risks primarily result from exposures to changes in the level, slope and curvature of the yield curve, the volatility of interest rates, mortgage prepayment speeds and credit spreads.
- Equity price risks result from exposures to changes in prices and volatilities of individual equities, equity baskets and equity indices.
- Currency rate risks result from exposures to changes in spot prices, forward prices and volatilities of currency rates.
- Commodity price risks result from exposures to changes in spot prices, forward prices and volatilities of commodities, such as electricity, natural gas, crude oil, petroleum products, and precious and base metals.

We seek to manage these risk exposures through diversifying exposures, controlling position sizes and establishing hedges in related securities or derivatives. For example, we may hedge a portfolio of common stock by taking an offsetting position in a related equity-index futures contract. The ability to manage an exposure may, however, be limited by adverse changes in the liquidity of the security or the related hedge instrument and in the correlation of price movements between the security and related hedge instrument.

In addition to applying business judgment, senior management uses a number of quantitative tools to manage our exposure to market risk. These tools include:

- risk limits based on a summary measure of market risk exposure referred to as VaR;
- risk limits based on scenario analyses that measure the potential effects on our trading net revenues of various market events, including a large widening of credit spreads, a substantial decline in equities markets and significant moves in emerging markets; and
- inventory position limits for selected business units and country exposures.

var—VaR is the potential loss in value of Goldman Sachs' trading positions due to adverse market movements over a defined time horizon with a specified confidence level.

For the VaR numbers reported below, a one-day time horizon and a 95% confidence level were used. This means that there is a one in 20 chance that daily trading net revenues will fall below the expected daily trading net revenues by an amount at least as large as the reported VaR. Thus, shortfalls from expected trading net revenues on a single trading day greater than the reported VaR

would be anticipated to occur, on average, about once a month. Shortfalls on a single day can exceed reported VaR by significant amounts. Shortfalls can also accumulate over a longer time horizon such as a number of consecutive trading days.

The VaR numbers below are shown separately for interest rate, equity, currency and commodity products, as well as for our overall trading positions. These VaR numbers include the underlying product positions and related hedges that may include positions in other product areas. For example, the hedge of a foreign exchange forward may include an interest rate futures position, and the hedge of a long corporate bond position may include a short position in the related equity.

The modeling of the risk characteristics of our trading positions involves a number of assumptions and approximations. While management believes that these assumptions and approximations are reasonable, there is no uniform industry methodology for estimating VaR, and different assumptions and/or approximations could produce materially different VaR estimates.

We use historical data to estimate our VaR and, to better reflect current asset volatilities, we generally weight historical data to give greater importance to more recent observations. Given its reliance on historical data, VaR is most effective in estimating risk exposures in markets in which there are no sudden fundamental changes or shifts in market conditions. An inherent limitation of VaR is that the distribution of past changes in market risk factors may not produce accurate predictions of future market risk. Different VaR methodologies and distributional assumptions could produce a materially different VaR. Moreover, VaR calculated for a one-day time horizon does not fully capture the market risk of positions that cannot be liquidated or offset with hedges within one day.

The following tables set forth the daily VaR for substantially all of our trading positions:

AVERAGE DAILY VaR

(IN MILLIONS)

RISK CATEGORIES	YEAR ENDED NOVEMBER		
	2002	2001	2000
Interest rates	\$ 34	\$ 20	\$ 13
Equity prices	22	20	21
Currency rates	16	15	6
Commodity prices	12	9	8
Diversification effect ⁽¹⁾	(38)	(25)	(20)
Firmwide	\$ 46	\$ 39	\$ 28

Our average daily VaR increased to \$46 million in 2002 from \$39 million in 2001, primarily due to an increase in interest rate risk in response to higher levels of customer activity and increased market opportunities. The increase in average daily VaR to \$39 million in 2001 from \$28

million in 2000 was attributable to increased exposures in interest rates and currencies and higher measured interest rate volatility, particularly during the second half of the year.

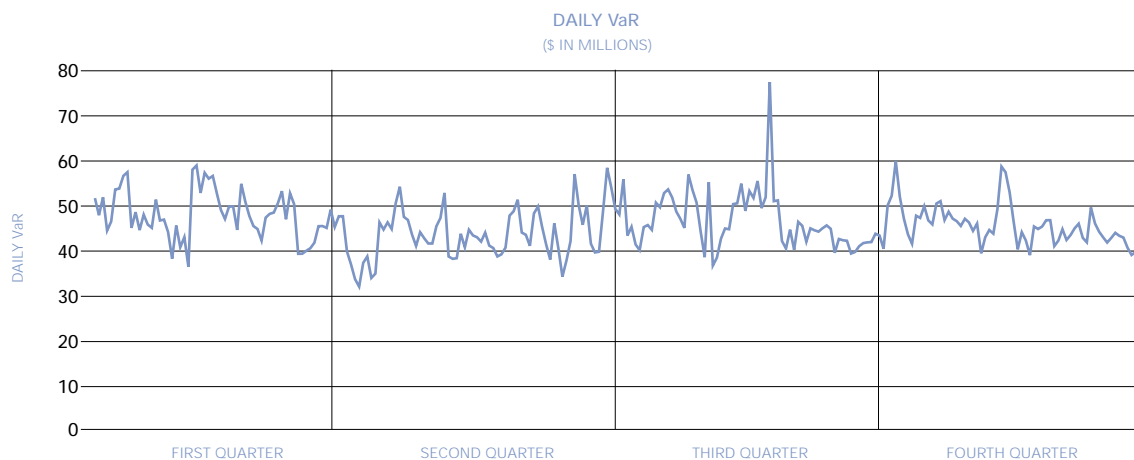
DAILY VaR

(IN MILLIONS)

RISK CATEGORIES	AS OF NOVEMBER		YEAR ENDED NOVEMBER 2002	
	2002	2001	HIGH	LOW
Interest rates	\$ 29	\$ 39	\$68	\$19
Equity prices	33	21	49	15
Currency rates	9	13	35	5
Commodity prices	14	12	17	8
Diversification effect ⁽¹⁾	(44)	(33)		
Firmwide	\$ 41	\$ 52	77	32

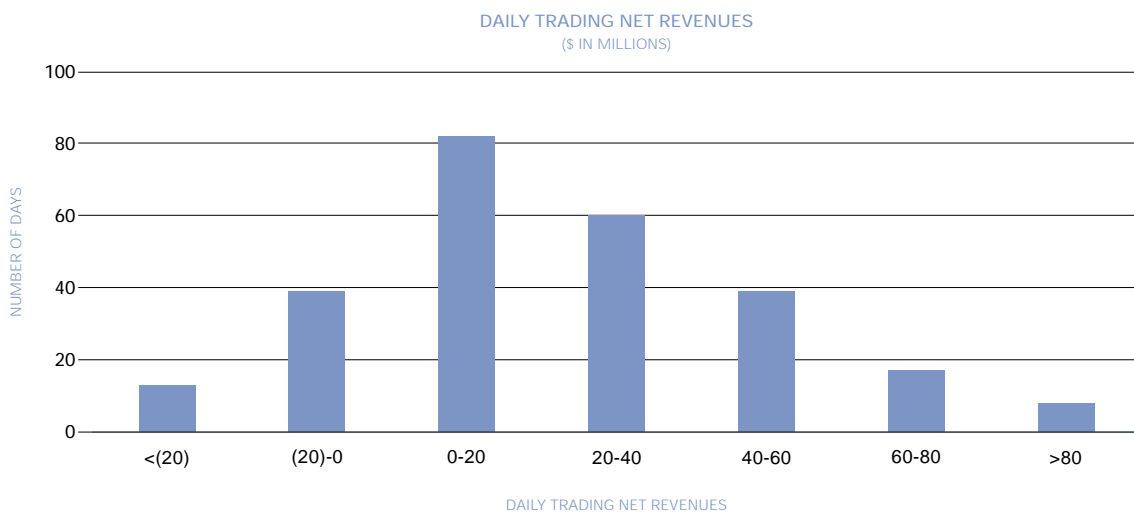
⁽¹⁾ Equals the difference between firmwide daily VaR and the sum of the daily VaRs for the four risk categories. This effect arises because the four market risk categories are not perfectly correlated.

The following chart presents the daily VaR for substantially all of our trading positions during 2002:



Trading Net Revenues Distribution

Substantially all of our inventory positions are marked-to-market on a daily basis and changes are recorded in net revenues. The following chart sets forth the frequency distribution for substantially all of our daily trading net revenues for the year ended November 2002:



As part of our overall risk control process, daily trading net revenues are compared with VaR calculated as of the end of the prior business day. Trading losses incurred on a single day exceeded our 95% one-day VaR on one occasion during 2002.

Nontrading Risk

The market risk for financial instruments in our nontrading portfolio, including our merchant banking investments, is measured using a sensitivity analysis that estimates the potential reduction in our net revenues associated with a 10% decline in equity markets. This sensitivity analysis is based on certain assumptions regarding the relationship between changes in the stock price indices and changes in the fair value of the individual financial instruments in our nontrading portfolio. Different assumptions could produce materially different risk estimates. The sensitivity of our nontrading portfolio to a 10% equity market decline was \$80 million as of November 2002 compared with \$155 million as of November 2001, reflecting asset dispositions and market depreciation in the portfolio.

Credit Risk

Credit risk represents the loss that we would incur if a counterparty, or an issuer of securities or other instruments we hold, fails to perform under its contractual obligations to us. To reduce our credit exposures, we seek to enter into netting agreements with counterparties that permit us to offset receivables and payables with such counterparties. In addition, we attempt to further reduce credit risk with certain counterparties by entering into agreements that enable us to obtain collateral from a counterparty or to terminate or reset the terms of transactions after specified time periods or upon the occurrence of credit-related events, by seeking third-party guarantees of the counterparty's obligations, and through the use of credit derivatives and other structures and techniques.

For most businesses, counterparty credit limits are established by the Credit Department, which is independent of the revenue-producing departments, based on guidelines set by the Firmwide Risk Committee and the Credit Policy Committee. For most products, we measure and limit credit exposures by reference to both current and

potential exposure. We typically measure potential exposure based on projected worst-case market movements over the life of a transaction within a 95% confidence interval. For collateralized transactions we also evaluate potential exposure over a shorter collection period, and give effect to the value of received collateral. We further seek to measure credit exposure through the use of scenario analyses, stress tests and other quantitative tools. Our global credit management systems monitor current and potential credit exposure to individual counterparties and on an aggregate basis to counterparties and their affiliates. The systems also provide management, including the Firmwide Risk and Credit Policy Committees, with information regarding overall credit risk by product, industry sector, country and region.

Derivatives

Derivative contracts are financial instruments, such as futures, forwards, swaps or option contracts, that derive their value from underlying assets, indices, reference rates or a combination of these factors. Derivative instruments may be privately negotiated contracts, which are often referred to as OTC derivatives, or they may be listed and traded on an exchange.

Most of our derivative transactions are entered into for trading purposes. We use derivatives in our trading activities to facilitate customer transactions, to take proprietary positions and as a means of risk management. We also enter into derivative contracts to manage the interest rate and currency exposure on our long-term borrowings.

Derivatives are used in many of our businesses, and we believe that the associated market risk can only be understood relative to the underlying assets or risks being hedged, or as part of a broader trading strategy. Accordingly, the market risk of derivative positions is managed with all of our other nonderivative risk.

Derivative contracts are reported on a net-by-counterparty basis in our consolidated statements of financial condition where management believes a legal right of setoff exists under an enforceable netting agreement. For an OTC derivative, our credit exposure is directly with our counterparty and continues until the maturity or termination of such contract.

The following table sets forth the distribution, by credit rating, of substantially all of our exposure with respect to OTC derivatives as of November 2002, after taking into consideration the effect of netting agreements. The categories shown reflect our internally determined public rating agency equivalents.

OVER-THE-COUNTER DERIVATIVE CREDIT EXPOSURE

(\$ IN MILLIONS)

CREDIT RATING EQUIVALENT	EXPOSURE	COLLATERAL HELD ⁽²⁾	EXPOSURE NET OF COLLATERAL	PERCENTAGE OF EXPOSURE NET OF COLLATERAL
AAA/Aaa	\$ 3,747	\$ 170	\$ 3,577	13%
AA/Aa2	7,271	1,147	6,124	21
A/A2	12,831	996	11,835	41
BBB/Baa2	6,036	733	5,303	18
BB/Ba2 or lower	2,666	747	1,919	7
Unrated ⁽¹⁾	743	609	134	—
Total	\$33,294	\$4,402	\$28,892	100%

The following tables set forth our OTC derivative credit exposure, net of collateral, by remaining contractual maturity:

EXPOSURE NET OF COLLATERAL

(IN MILLIONS)

CREDIT RATING EQUIVALENT	0-6 MONTHS	6-12 MONTHS	1-5 YEARS	5-10 YEARS	10 YEARS OR GREATER	TOTAL ⁽³⁾
AAA/Aaa	\$ 233	\$ 112	\$1,033	\$ 884	\$1,315	\$ 3,577
AA/Aa2	1,424	508	1,472	1,408	1,312	6,124
A/A2	1,721	734	2,288	1,444	5,648	11,835
BBB/Baa2	1,241	672	2,252	727	411	5,303
BB/Ba2 or lower	693	185	711	274	56	1,919
Unrated ⁽¹⁾	111	14	7	1	1	134
Total	\$5,423	\$2,225	\$7,763	\$4,738	\$8,743	\$28,892

PRODUCT	0-6 MONTHS	6-12 MONTHS	1-5 YEARS	5-10 YEARS	10 YEARS OR GREATER	TOTAL ⁽³⁾
Interest rate contracts	\$ 779	\$ 452	\$5,237	\$4,039	\$8,563	\$19,070
Currency contracts	2,513	742	868	458	170	4,751
Commodity contracts	1,159	619	1,094	178	9	3,059
Equity contracts	972	412	564	63	1	2,012
Total	\$5,423	\$2,225	\$7,763	\$4,738	\$8,743	\$28,892

⁽¹⁾ In lieu of making an individual assessment of the credit of unrated counterparties, we make a determination that the collateral held in respect of such obligations is sufficient to cover a substantial portion of our exposure. In making this determination, we take into account various factors, including legal uncertainties and market volatility.

⁽²⁾ Collateral is usually received under agreements entitling Goldman Sachs to require additional collateral upon specified increases in exposure or the occurrence of adverse credit events.

⁽³⁾ Where we have obtained collateral from a counterparty under a master trading agreement that covers multiple products and transactions, we have allocated the collateral ratably based on exposure before giving effect to such collateral.

Derivatives transactions may also involve the legal risk that they are not authorized or appropriate for a counterparty, that documentation has not been properly executed or that executed agreements may not be enforceable against the counterparty. We attempt to minimize these risks by obtaining advice of counsel on the enforceability of agreements as well as on the authority of a counterparty to effect the derivative transaction.

Operational Risks

Operational risk is the risk of reputational damage, regulatory intervention or financial loss resulting from inadequate or failed internal processes or systems. Operational failures can occur in mechanical or technological systems or infrastructure, and they can take place during the ordinary course of business or as the result of extraordinary events, including events external to Goldman Sachs. They also may be caused by human error or by malfeasance.

Goldman Sachs manages operational risk through the application of control standards; the review, training and supervision of our people; the active participation and commitment of senior management; a continuous review of our processes designed to identify key operational risks; a commitment to continuous improvement; and a system of control departments each with responsibilities and processes for managing specific aspects of operational risk relevant to each department. Together, these elements comprise a strong firmwide control culture that helps Goldman Sachs remain focused on minimizing operational failures and the damage they can cause.

In 2000, we established an Operational Risk Management Department to monitor our firmwide operational risk. While each business unit has processes and systems in place to address operational risks within the unit, it is the job of Operational Risk Management to develop a framework for measuring our operational risk more broadly. Operational Risk Management's long-term goal is to provide consistent measures of operational performance so that it can evaluate that performance over time and across Goldman Sachs and identify areas that need special attention. In addition, it is the role of Operational Risk Management to report its findings to senior management to help them bring increased business focus on operational risk and facilitate improvements in operational risk management.

The Operational Risk Management Department works closely with other control and support areas – Compliance, Legal, Management Controls (Internal Audit), Technology, Human Capital Management, Controllers and Global Operations – as well as the business units to monitor, measure, and help them improve our overall operational risk management.

OFF-BALANCE-SHEET ARRANGEMENTS

In the normal course of business, Goldman Sachs enters into arrangements with unconsolidated entities. These arrangements may involve retained interests in assets transferred to special-purpose entities (SPEs) in connection with our securitization activities, variable interests in SPEs to which we did not transfer assets and obligations under certain guaranty contracts.

Goldman Sachs utilizes SPEs to securitize commercial and residential mortgages and home equity loans, government and corporate bonds and other types of financial assets. SPEs are critical to the functioning of several significant investor markets, including the mortgage-backed and asset-backed securities markets, since they provide market liquidity to financial assets by offering investors access to specific cash flows and risks created through the

securitization process. In addition to retained interests in assets that we transferred to SPEs, we also hold variable interests in similar SPEs to which we did not transfer assets. Our variable interests in these SPEs include the rights to specific cash flows from purchased interests as well as derivative transactions.

Certain of these SPEs are not consolidated for one or more of the following reasons: (i) the entity is a qualifying SPE under SFAS No. 140 to which we have transferred financial assets, (ii) the entity is not controlled by us, (iii) we do not have a majority of the entity's substantive risks and rewards or (iv) independent investors have substantive majority equity investments in legal form. Our retained and other variable interests in, and derivative transactions with, unconsolidated SPEs are accounted for at fair value, in the same manner as our other financial instruments. As of November 2002, we had no material additional financial commitments or guarantees in respect of these entities. In addition, we have not entered into any derivative contracts that are indexed or linked to our stock.

As discussed below in “—Recent Accounting Developments,” in January 2003, the Financial Accounting Standards Board (FASB) issued FASB Interpretation (FIN) No. 46, “Consolidation of Variable Interest Entities.” SPEs are generally considered variable interest entities under FIN No. 46. See Note 2 and Note 4 to the consolidated financial statements for additional information about our basis of presentation, our retained interests, securitization activities and variable interests in variable interest entities. See Note 7 to the consolidated financial statements for information about our guarantees to entities that are not SPEs.

CRITICAL ACCOUNTING POLICIES

“Financial instruments owned, at fair value” and “Financial instruments sold, but not yet purchased, at fair value” in the consolidated statements of financial condition are carried at fair value or amounts that approximate fair value, with related unrealized gains or losses recognized in our results of operations. The determination of fair value is fundamental to our statements of financial condition and earnings and, in certain circumstances, it requires management to make complex judgments.

How We Determine Fair Value

The fair value of a financial instrument is the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale.

Quoted market prices in active markets are the best evidence of fair value and we use them when available. Such prices provide the best price transparency and we typically obtain them through electronic quotations or published prices. If quoted market prices in active markets are not available, our estimate of fair value is based on, if available, quoted prices or recent transactions in less active markets and/or prices of similar instruments. These alternative pricing sources provide some price transparency and we typically obtain this type of information through broker quotes or third-party pricing services.

If prices are not readily available either through quoted market prices in active markets or alternative pricing sources, or if liquidating a position is reasonably expected to affect market prices, fair value is based on valuation models or management's estimate, using the

best information available, of amounts that could be realized under current market conditions, assuming an orderly liquidation over a reasonable period of time. Our valuation models consider, among other inputs, contractual and market prices, yield curves, credit, volatility factors, prepayment rates and/or correlations of the underlying positions. Examples of valuation models we use include the present value of estimated cash flows, option-pricing models, matrix pricing, option-adjusted spread models and fundamental analysis. The inputs to and the design of our valuation models incorporate assumptions that we believe other market participants would use in their estimates of fair values. However, different valuation models and assumptions could produce materially different estimates of fair value.

In determining fair value, we separate our financial instruments into three categories, cash trading instruments (i.e., non-derivative trading instruments), derivative contracts and principal investments, as set forth in the following table as of November 2002:

FINANCIAL INSTRUMENTS BY CATEGORY

(IN MILLIONS)	FINANCIAL INSTRUMENTS OWNED, AT FAIR VALUE	FINANCIAL INSTRUMENTS SOLD, BUT NOT YET PURCHASED, AT FAIR VALUE
Cash trading instruments	\$ 85,791	\$44,552
Derivative contracts	42,205	38,921
Principal investments	1,779	—
Total	\$129,775	\$83,473

Cash Trading Instruments

The fair values of cash trading instruments are generally obtained from quoted market prices in active markets, broker or dealer price quotations, or alternative pricing sources with a reasonable level of price transparency. The types of instruments valued in this manner include U.S. government and agency securities, sovereign government obligations, liquid mortgage products, investment-grade

corporate bonds, listed equities, money market securities, state, municipal and provincial obligations, and physical commodities. Certain cash trading instruments have little or no price transparency, including certain high-yield debt, corporate bank loans, whole loan mortgages and distressed debt.

The following table sets forth the valuation of our cash trading instruments by level of price transparency as of November 2002:

CASH TRADING INSTRUMENTS BY PRICE TRANSPARENCY

(IN MILLIONS)	FINANCIAL INSTRUMENTS OWNED, AT FAIR VALUE	FINANCIAL INSTRUMENTS SOLD, BUT NOT YET PURCHASED, AT FAIR VALUE
Quoted prices or alternative pricing sources with reasonable price transparency	\$81,125	\$44,357
Little or no price transparency	4,666	195
Total	\$85,791	\$44,552

We generally do not adjust the valuation assumptions for cash trading instruments with little or no price transparency unless there is substantial evidence supporting a change in value (for example, comparable third-party transactions) or if management determines that expected realizable value is less than carrying value.

Derivative Contracts

Derivative contracts consist of exchange-traded and OTC derivatives. The fair values of our exchange-traded derivatives are generally determined from quoted market prices. OTC derivatives are valued using valuation models.

The following table sets forth our exchange-traded and OTC derivative assets and liabilities as of November 2002:

DERIVATIVE ASSETS AND LIABILITIES

(IN MILLIONS)	ASSETS	LIABILITIES
Exchange-traded derivatives	\$ 8,911	\$ 8,630
OTC derivatives	33,294	30,291
Total	\$42,205	\$38,921

The fair values of our derivative assets and liabilities include cash we have paid and received (for example, option premiums) and will change significantly from period to period based on, among other factors, changes in our trading positions and market movements.

The following tables set forth the fair values of our OTC derivative assets and liabilities as of November 2002 by product and by remaining contractual maturity:

OTC DERIVATIVES

(IN MILLIONS)

ASSETS

PRODUCT	0-6 MONTHS	6-12 MONTHS	1-5 YEARS	5-10 YEARS	10 YEARS OR GREATER	TOTAL
Interest rate contracts	\$ 864	\$ 536	\$6,266	\$4,983	\$9,281	\$21,930
Currency contracts	2,955	917	1,007	486	211	5,576
Commodity contracts	1,200	632	1,145	185	11	3,173
Equity contracts	1,386	492	673	63	1	2,615
Total	\$6,405	\$2,577	\$9,091	\$5,717	\$9,504	\$33,294

LIABILITIES

PRODUCT	0-6 MONTHS	6-12 MONTHS	1-5 YEARS	5-10 YEARS	10 YEARS OR GREATER	TOTAL
Interest rate contracts	\$1,084	\$ 393	\$ 6,870	\$5,556	\$2,291	\$16,194
Currency contracts	3,134	751	1,478	935	603	6,901
Commodity contracts	1,432	836	977	62	2	3,309
Equity contracts	1,958	938	844	147	—	3,887
Total	\$7,608	\$2,918	\$10,169	\$6,700	\$2,896	\$30,291

Price transparency for OTC derivative model inputs varies depending on, among other factors, product type, maturity and the complexity of the contract. In general, there is significant price transparency for simple interest rate contracts. Price transparency for currency contracts varies by the underlying currencies, with the currencies of the leading industrialized nations having the most price transparency. Price transparency for commodity contracts varies by type of underlying commodity. Price transparency for equity contracts varies by market, with the equity markets of the leading industrialized nations having the most price transparency. For more complex structures, price trans-

parency is inherently more limited because they often combine one or more product types, requiring additional inputs such as correlations and volatilities.

The inputs used in our valuation models are based on quoted market prices in active markets, if available, or, if not, quoted market prices or recent transactions in less active markets and/or prices of similar instruments. Where such data is not readily available, inputs are derived from other market data, taking into account observable market movements that could reasonably be expected to affect the derived input.

Principal Investments

In valuing our corporate and real estate principal investments, we separate our portfolio into two categories – public securities and private securities. The following table sets forth the carrying value of our principal investments portfolio as of November 2002:

PRINCIPAL INVESTMENTS

(IN MILLIONS)	CORPORATE	REAL ESTATE	TOTAL
Private	\$ 881	\$736	\$1,617
Public	154	8	162
Total	\$1,035	\$744	\$1,779

Our public principal investments, which tend to be large, concentrated holdings that resulted from initial public offerings or other corporate transactions, are valued using quoted market prices discounted for restrictions on sale.

Our private principal investments, by their nature, have little to no price transparency. Such investments are initially carried at cost as an approximation of fair value. Adjustments to cost (above or below) are made if there are third-party transactions evidencing a change in value. Downward adjustments are also made if we determine that the expected realizable value of the investment is less than the carrying value. In reaching that determination, we consider many factors including, but not limited to, the operating cash flows and financial performance of the companies or properties relative to budgets or projections,

trends within sectors and/or regions, underlying business models, expected exit timing and strategy, and any specific rights or terms associated with the investment, such as conversion features and liquidation preferences.

Controls Over Valuation of Financial Instruments

Proper controls, independent of the trading and principal investing functions, are fundamental to ensuring that financial instruments are appropriately valued and the resulting fair value measurements are reliable, particularly where certain levels of price discovery may require additional analysis. These controls include independent review of valuation models and price verification by personnel with technical knowledge of relevant markets and products.

RECENT ACCOUNTING DEVELOPMENTS

In June 2002, the FASB issued SFAS No. 146, "Accounting for Costs Associated with Exit or Disposal Activities." The statement specifies the accounting for certain employee termination benefits, contract termination costs and costs to consolidate facilities or relocate employees and is effective for exit and disposal activities initiated after December 31, 2002. We do not expect the statement to have a material effect on our financial condition or results of operations.

Effective in fiscal 2003, we will begin to account for stock-based employee compensation in accordance with the fair-value method prescribed by SFAS No. 123, "Accounting for Stock-Based Compensation," as amended by SFAS No. 148, "Accounting for Stock-Based Compensation—Transition and Disclosure," using the prospective adoption method. Under this method of adoption, compensation expense will be recognized based on the fair value of stock options and restricted stock units granted for fiscal 2003 and future years over the related service period while stock options and restricted stock units granted for fiscal 2002 and prior years, unless modified, will continue to be accounted for under Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees," generally resulting in no recognition of compensation expense related to stock options granted with no intrinsic value. The amount of stock-based compensation to be recognized under SFAS No. 123 in fiscal 2003 and beyond is not currently determinable because the number and value of stock options and/or restricted stock units to be granted to employees in the future is not yet known, nor are the related future service provisions. We elected to adopt the disclosure provisions of SFAS No. 148 for the fiscal year-ended 2002. See Note 2 and Note 12 to the consolidated financial statements for additional information on our stock-based compensation.

In November 2002, the FASB issued FIN No. 45, "Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others." FIN No. 45 specifies the disclosures to be made about obligations under certain issued guarantees and requires a liability to be recognized for the fair value of a guarantee obligation. The recognition and measurement provisions of the interpretation apply prospectively to guarantees issued after December 31, 2002. The disclosure provisions are effective beginning with our first fiscal quarter in 2003. Adoption of the recognition and measurement provisions will not have a material effect on our financial condition or results of operations.

In January 2003, the FASB issued FIN No. 46, "Consolidation of Variable Interest Entities." FIN No. 46 requires a company to consolidate a variable interest entity (VIE) if the company has variable interests that give it a majority of the expected losses or a majority of the expected residual returns of the entity. Prior to FIN No. 46, VIEs were commonly referred to as SPEs. FIN No. 46 is effective immediately for VIEs created after January 31, 2003. Goldman Sachs must apply FIN No. 46 to VIEs created before February 1, 2003 as of the beginning of the fiscal 2003 fourth quarter. We are evaluating the impact of adoption but do not expect it to have a material effect on our financial condition or results of operations. We have disclosed information about our VIEs in Note 4 to the consolidated financial statements.

In November 2002, the Emerging Issues Task Force (EITF) reached a consensus on Issue No. 00-21, "Accounting for Revenue Arrangements with Multiple Deliverables." EITF Issue No. 00-21 addresses the accounting for arrangements under which a vendor will perform multiple revenue-generating activities. EITF Issue No. 00-21 is effective for revenue arrangements entered into beginning with our fourth fiscal quarter in 2003. We do not expect it to have a material effect on our financial condition or results of operations.

In November 2002, the EITF reached a consensus on EITF Issue No. 02-3, "Issues Involved in Accounting for Derivative Contracts Held for Trading Purposes and Contracts Involved in Energy Trading and Risk Management Activities." EITF Issue No. 02-3 precludes mark-to-market accounting for energy-trading contracts that are not derivatives pursuant to SFAS No. 133, "Accounting for Derivative Instruments and Hedging Activities." We have adopted the provisions of EITF Issue No. 02-3 related to energy-trading contracts as of the beginning of the fiscal 2003 first quarter and the effect of adoption was not material to our financial condition or results of operations. EITF Issue No. 02-3 also communicates the FASB staff's belief that the transaction price for a derivative contract is the best information available with which to estimate fair value at the inception of a contract when the estimate is not based on other observable market data. We are currently evaluating the impact of the FASB staff's view on our financial condition and results of operations.

SUBSEQUENT EVENTS

Research Settlement

On December 20, 2002, as part of a proposed global settlement involving the leading securities firms operating in the United States, agreements in principle were announced among Goldman Sachs' U.S. broker-dealer subsidiary Goldman, Sachs & Co. and various regulatory authorities to resolve their investigations of Goldman, Sachs & Co. relating to investment research analysts' conflicts of interest. Pursuant to the agreements in principle, Goldman, Sachs & Co. has agreed, among other things, to (i) pay \$50 million in retrospective relief, (ii) contribute \$50 million over five years to provide independent third-party research to clients, (iii) contribute \$10 million for investor education and (iv) adopt internal structural and other safeguards to further ensure the integrity of Goldman, Sachs & Co. investment research. The cost of the agreements in principle has been provided for in our consolidated financial statements. In connection with the agreements, we also expect to be joining the other leading securities firms who are part of the proposed global settlement in an initiative that generally will prohibit the allocation of shares in initial public offerings to executives and directors of public companies. Current or future civil lawsuits implicating investment research analysts' conflicts of interest were not settled as part of the agreements in principle. Our total potential liability in respect of such civil cases cannot be reasonably estimated but could be material to results of operations in a given period.

Transactions with Sumitomo Mitsui Financial Group, Inc.

On February 7, 2003, Goldman Sachs and Sumitomo Mitsui Financial Group, Inc. (together with its subsidiaries, "SMFG") entered into a series of related transactions with three primary components: (i) the purchase by Goldman Sachs of convertible preferred stock of SMFG having a liquidation preference equal to ¥150.3 billion (\$1.25 billion); (ii) the provision by SMFG to Goldman Sachs' affiliates of first loss credit protection up to an aggregate of \$1 billion and additional second loss credit protection of up to \$1.125 billion, in exchange for the underlying commitment fees, to mitigate in part the credit risk to Goldman Sachs associated with certain credit extensions to its investment-grade clients; and (iii) the enhancement and development of certain business cooperation understandings between SMFG and Goldman Sachs.