Goldman Sachs and the Big Short: Time to Go Long?

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The housing market in the early 2000s

- The early 2000s were marked by a significant **economic and housing boom**, particularly in the real estate markets.
- Rising number of people owning and wanting to own houses, which in turn **increased loan demand**, namely for **subprime mortgages**.
- Subprime mortgage: a loan designed for **borrowers** with **poor credit risk** that usually carries **higher interest rates**, making it **profitable for lenders**.
- As the **market grew**, loan **originators** became increasingly **motivated to issue this** specific type of contract.

Mortgage-related securities

CDO

Type of asset-backed security with multiple “tranches” that are issued by special purpose entities and collaterized by debt obligations, including bonds and loans.

RMBS

Type of bond commonly issued in the U.S. security markets that are backed by mortgages on residential real estate.

ABX index

Index composed of securities backed by subprime mortgages. Tracked the overall movement of the subprime market.

CDS

Agreement in which the seller will compensate the buyer in cases of loan default or other credit event. In return, buyer would make regular payments

Timeline of events (1)

- In **early 2005**, managing director at GS, Joshua Birnbaum started noticing some **warning signs**: **rising CDS prices and increasing mortgage delinquencies**.

- By **mid-2006**, GS clearly understood that the **market fundamentals** in subprime and the **highly leveraged nature of CDOs** were going to have a very **unhappy ending.**

- **Problem**: the firm **held billions** of dollars in **subprime mortgage-related securities.**

- To **mitigate risk**, GS used synthetic **CDOs and CDSs** to **short** large portions of their holdings, but **by December 2006**, **net long position** was still **$6 billion.**

- As losses mounted, executives **sold off more subprime assets** and **hedged remaining exposure**, **reducing** subprime **inventory by two-thirds** by **early 2007**

Timeline of events (2)

- **Market further deteriorated** and **Goldman pivoted** to an **aggressive short position**, reaching **$10 billion in February 2007** and peaking at **$13.9 billion in June.**

- Around this time, major **subprime lenders** like New Century **collapsed**, **hedge funds failed**, and **mortgage securities plunged** in value.

- GS' short positions shielded it from massive losses, and by **July**, they began **covering shorts** to **lock in profits**.

- **Crisis deepened** globally by **August** and some **traders** within GS argued for **going long on undervalued mortgage securities**, leading to **internal debate** over what to do next.

Financial Condition of GS in Q3 2007

Exhibit 4: Goldman Sachs Selected Financial Information (Unaudited)

February 24, 2006 to August 31, 2007
(Dollars in Millions, except per share data and employees)

	At or for the Quarter Ended						
	02/24/2006	05/26/2006	08/25/2006	11/24/2006	02/23/2007	05/25/2007	08/31/2007
Revenues							
Investment Banking	$1,471	$1,526	$1,288	$1,344	$1,716	$1,721	$2,145
Asset Management and Securities	$1,980	$1,610	$1,455	$1,429	$1,597	$1,812	$1,960
Trading and Principle Investments							
FICC	$3,740	$4,316	$2,739	$3,104	$4,604	$3,368	$4,889
Equities	$2,449	$2,352	$1,551	$2,131	$3,087	$2,497	$3,129
Principal Investments	$695	$293	$430	$1,399	$1,726	$784	$211
Total Trading and Principal Investments	$6,684	$6,961	$4,720	$6,634	$9,417	$6,649	$8,229
Interest Income	$7,535	$8,544	$9,351	$9,756	$10,358	$11,282	$12,810
Total Revenues	$17,246	$18,002	$15,979	$18,126	$22,280	$20,351	$23,803
Interest Expense	$6,813	$7,761	$8,395	$8,719	$9,550	$10,169	$11,469
Net Revenues	$10,335	$10,097	$7,463	$9,407	$12,730	$10,182	$12,334
Operating Expenses							
Compensation and Benefits	$5,301	$5,086	$3,510	$2,505	$6,111	$4,887	$5,920
Non-Compensation Expenses	$1,345	$1,487	$1,591	$1,917	$1,760	$1,864	$2,155
Total Operating Expenses	$6,646	$6,573	$5,101	$4,422	$7,871	$6,751	$8,075
Provision for Taxes	$1,210	$1,212	$768	$1,833	$1,662	$1,098	$1,405
Net Earnings	$2,479	$2,286	$1,594	$3,152	$3,197	$2,333	$2,854
EPS Basic	$5.36	$5.08	$3.46	$7.06	$7.08	$5.25	$6.54
EPS Diluted	$5.08	$4.78	$3.26	$6.59	$6.67	$4.93	$6.13
Tangible Common Shareholders' Equity	$22,287	$23,425	$28,876	$24,845	$28,156	$29,336	$30,641

Financial Condition of GS in Q3 2007

Exhibit 4: continued

Total Shareholders' Equity	$28,724	$30,082	$32,618	$33,034	$36,900	$38,459	$39,118
Long Term Borrowings	$114,650	$125,590	$129,330	$122,840	$132,730	$141,480	$151,070
Total Capital	$143,570	$157,390	$162,820	$158,630	$169,630	$179,940	$190,190
Assets Under Management							
Money Markets	$106,000	$108,000	$111,000	$118,000	$129,000	$133,000	$164,000
Fixed Income	$165,000	$172,000	$186,000	$198,000	$213,000	$221,000	$230,000
Equity	$181,000	$185,000	$193,000	$215,000	$230,000	$253,000	$251,000
Alternative Investments	$119,000	$128,000	$139,000	$145,000	$147,000	$151,000	$151,000
Total	$571,000	$593,000	$629,000	$676,000	$719,000	$758,000	$796,000
Average Daily Value at Risk							
Interest Rates	$40	$49	$55	$51	$57	$81	$96
Equity Prices	$69	$83	$61	$75	$96	$101	$97
Currency Rates	$18	$29	$21	$14	$18	$20	$23
Commodity Prices	$30	$31	$31	$29	$30	$24	$24
Diversification Effect	$(65)	$(80)	$(76)	$(63)	$(74)	$(93)	$(101)
Total Value at Risk	$92	$112	$92	$106	$127	$133	$139
# of Employees at Period End	23,641	24,013	25,647	26,467	26,959	28,012	29,905

Source: Goldman Sachs Quarterly Press Releases

Note: Numbers are unaudited.

Financial Condition of GS in Q3 2007

- As of the **3rd Quarter of 2023**, Goldman Sachs was in a **strong financial position when compared to many of its peers in the financial industry**, since it had significantly profited from its decision to short the subprime mortgage market

- The **Structured Products Group Trading Desk** reported a **1$ billion profit in July 2007,** contributing to the firm's overall resilience during the early stages of the financial crisis

- This strategic position **helped Goldman Sachs mitigate risks** and **avoid the substantial losses** that plagued competitors like Bear Stearns and Lehman Brothers

Risk Management in Goldman Sachs

Cultural Emphasis on Risk Discipline

- **Risk management** was seen as a **core** part of the **firm's success**, but it also created **tension** with **traders**, who sometimes felt **constrained** by risk limits.
- Goldman encouraged "**seamless horizontal and vertical communication**", guaranteeing that risk-related information flowed across departments.
- Compared to other banks like Deutsche Bank and Morgan Stanley, Goldman was noted for its **integrated risk approach**, avoiding the pitfalls of siloed risk management.

Strong Risk Oversight and Governance

- Various committees responsible for risk, including **Firm-Wide Risk Committee** co-chaired by **CFO David Viniar** and **partner E. Gerald Corrigan.**

Rigorous Risk Monitoring

- This committee **met weekly** to review business activities, approve risk limits, and analyse scenario risks, including extreme market conditions.
- Goldman Sachs implemented a **daily revision of profit & loss statements**.

Value at Risk (VaR) as a Risk Metric

- The firm calculated **VaR at a 95% confidence level** with a **one-day horizon**

Risk Management during 2006–2007

Early Recognition of Market Distress

- The firm identified early signs of distress in the subprime mortgage market, including **increasing defaults** (sometimes Early Default Payments) and **mortgage originators** going **out of business**.

- Hedge Fund Paulson & Company made a **huge bet against the mortgage market**– key indicator

- Internal discussions, including concerns about **ABX long positions** and **ongoing losses** (Mortgage Desk lost money for 10 days in a row, around 5 million-30 million a day), indicating that some teams recognized the risks, even though the **broader market remained bullish.**

- Meeting with the **Firm-Wide Risk Committee** decided on a structured approach to assess risk.

Risk Management during 2006–2007

Strategic Shift to Reduce Exposure

- Initially, the firm held a **long position**, expecting mortgage-backed securities to rise. As the market declined, the original strategy was to "get closer to home” (moving toward a net **neutral position** without necessarily going short). However, the plan then shifted to taking a **very short position**. Firm took **advantage of market optimism** to **sell risky assets**.

- This change was critical to reduce exposure, and by February 2007, **subprime inventory** had been **reduced by two-thirds**.

- **$4 billion in securities sold** (December 2006 – February 2007).

- Goldman built a large **net short position: $10 billion** (February 2007).

Risk Management during 2006–2007

Risk Monitoring and Management

- Risk managers **monitored** the rising short positions, and senior management intervened to **reduce the short position by covering $3 billion.**
- **Internal tensions** about the **extent of short positions** prevailed.
- The department had **covered at least 4 billion in short positions**, overall **business net short**.
- By **Q1 2007**, the Mortgage Department reported **net revenues of $368M**.
- **VaR** increased from **$13 million in November 2006** to **$85 million in February 2007.**

Risk Management during 2006–2007

- Goldman Sachs’ risk management **approach** helped them **identify the crises early and take action**.
- Despite the **increasing VaR** during this period, even when the **position was short**, as the **market further deteriorated**, their efforts resulted in an **overall positive outcome**, especially when compared to the other participants in the market
- By **adjusting and readjusting their strategy**, they were able to **reduce losses** and even **profit** while other banks struggled.
- Their **strong risk monitoring, oversight and quick decision-making** helped them manage the financial crisis.

Conflict of Interest

- Goldman Sachs was **actively underwriting and selling mortgage-backed securities**, particularly **subprime** RMBS and CDOs, to investors. At the same time, it was also **taking short positions** on the same market.

- Goldman gave a **“hard sell”** to customers on its CDOs, promoting them as **solid investments**. For example, the marketing materials for Hudson Mezzanine Funding 2006-1 claimed that **Goldman had “aligned incentives” with investors**. However, in reality, Goldman had taken a **$2 billion short position** on the same CDO.

- **Abacus 2007-AC1** – Goldman and John Paulson designed it to fail, misleading investors while betting against the subprime loans within it.

- Investors later complained that Goldman had failed to disclose information about the poor quality of the underlying loans in the RMBS securities it sold.

Conflict of Interest

- Large financial institutions suffered significant losses due to Goldman Sachs' deceptive practices, leading the **SEC to charge the firm with fraud and misrepresentation**.

- The firm argued it was a **market maker**, not a fiduciary, claiming **sophisticated investors understood the risks** and managed their own financial decisions.

- Despite settling for **$550 million without admitting guilt,** Goldman Sachs' actions raised ethical concerns and underscored the need for stricter financial regulations

Viniar’s options and Birnbaum’s e-mail

- Option to go long on subprime mortgages -> To risky, uncertainty in the market
- Defer judgment on whether GS should go long on subprime mortgages -> Indifference, as the market was tumbling, and there was no end in sight
- Reject to long on subprime mortgages -> **Best choice**
- **Rejection**:
    - Lower tranches (B, BB, BBB) were failing already
    - Upper tranches (A, AA, AAA) were starting to fail, and losses would be exponentially higher