

Elizabeth Beshel Robinson, Treasurer, Goldman Sachs

MEMORANDUM FOR THE RECORD (MFR)

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INTERVIEWER(s): Tom Stanton (NYC), together with Joel Miller, who prepared MFR, and Melana Vickers in D.C.

LOCATION: Offices of Goldman Sachs in NYC, and by teleconference FCIC in D.C.

NON-FCIC PARTICIPANTS: Janet Broeckel, Managing Director/Associate General Counsel of Goldman Sachs, Stephen Labaton, Adviser, Goldman Sachs, Richard Klapper and other Sullivan & Cromwell lawyers. **Pursuant to prior agreement between FCIC and Goldman counsel, no tape recording was made of this interview.**

The summary below includes summaries that are close to quotes and covers the following subjects: liquidity risk management; balance sheet; cash pool assets; asset/liability management; short and long-term funding; Lehman bankruptcy week; contingent capital

SUMMARY OF INTERVIEW:

Impact of the financial crisis on Goldman? Not as bad as portrayed in the press.

Liz Beshel Robinson has been the Global Treasurer of GS for five or six years. She has spent her professional career focusing on liquidity risk management at GS, joining the GS treasurer's office in 1993. Market Risk and Credit Risk are left to GS's traders. They take these risks in the course of business, according to the firm's risk appetite. By contrast, liquidity risk, like reputation risk, is a risk to try to mitigate rather than take in the course of business. She accomplished this by keeping lots of cash on hand and having good asset-liability management. This is expensive,; it amounts to buying a life insurance policy for GS.

Management of GS's asset pool.

In the early 1990s, GS managed liquidity risk with cash on hand. In 1990-91 GS used undrawn bank lines as a backstop. GS realized that this was not a good way to raise cash when it needed to. Today GS raises cash by issuing long term unsecured debt and equity and investing in liquid assets to get same-day liquidity. GS's asset pool has grown from \$1 bil. in the early '90s to about \$175 bil. today. Primarily invested in government securities, agencies, repo and reverse repo, UK/French/German/Japanese sovereigns, overnight cash. No equities, corporate or money market funds. Quantitative models designed to capture all potential (contractual and contingent) outflows. They use stress tests of market stress and specific GS stress. E.g., they anticipated a 2-notch downgrade in Fall 2008, similar to what happened in Fall 1998 [?].

Unlike some others, GS operated with no off-balance sheet entities; no conduits, SIVs. (1) Reserve for risk – assume \$0 inflow of cash; and (2) ensure operational liquidity – timing mismatches; settlement

issues. As debt matured, the company needed to address counterparty confidence and to show a strong face to the market. They took on risk by buying back GS asset management funds.

There are operational/liquidity requirements to have cash on hand to make settlements globally.

Asset-Liability Mgt. – marked assets to market daily. Not run like a commercial bank where their balance sheet is 20 year loans; everything was marked to mkt. and therefore they were very liquid and turned over their investments carefully through dynamic management. Every asset had a top down and bottom up look.

There is quarterly balance sheet management. There are 40 trading desk managers. They [allocate pricing to] aged assets vs. business returns and mark them to the size of balance-sheet leverage targets.

"The strict set of limits forces tremendous dialogue." There is a lot of reporting. The firm has a daily view around 6pm to support its risk management metrics. That this is a normal process helps GS to work through a stressed environment.

Liabilities: They wanted more liabilities for a longer period of time. ("More/longer" is their liability funding motto.) Borrow long and invest in short term assets. GS sold little short term debt; they lend with short, almost daily turnover assets and this implicit daily put helps to maintain investor confidence. Mostly promissory notes for 6 to 9 month periods (about \$ 5 billion). They borrow in the unsecured debt markets at maturities of 7-8 years. Also used repos as a tool for collateralized financing – but almost all was > 100 days weighted average, with longer term for less transparent collateral. Liability bucketing every day- long tail – Aug. 2008 - \$111 bil. By 11/30/08, bal. sheet up to \$884 billion.

There are two sides to balance sheet management; you need to understand not only maturity but also why you're holding an asset. If it's a hedge or for a client, you may not want to close the position quickly. GS charges its businesses for the funding they use; traders pay for their funding needs. That discourages a carry business.

They were willing to pay a price for this insurance going out on the yield curve. Quality of funding is critical; GS wants repeat investors. Term is also important. Price is the last question. There is a long tail. You need to know which assets just don't go away, such as the building.

One needs cash for the immediate phase of the crisis. There can be a run-on-the-bank scenario and one needs to restore confidence. You can manage the counterparty, but you still need to think of confidence. A pool of cash serves both. You want to change the tone and dynamic in the market.

Lehman meltdown: When asked about press reports that GS and Morgan Stanley had only two weeks of liquidity, GS Treasurer responded somewhat evasively. After Lehman, some counterparties sought to mitigate their exposures to GS and MS. Acknowledged there was a heightened degree of concern with GS and MS. Some counterparties expressed concern with their degree of exposure. Some hedge funds chose to move cash to a different broker. GS actively made a market in its own long term debt. They cut off questions of confidence by responding quickly. GS went about restoring confidence in two ways: raised cash through offering to the market (\$5.75 billion) and \$5.25 billion offering to Warrant Buffett,

to show market confidence . Converted from investment bank to BHC structure – consistent with their evolving business strategy. Also had become comfortable with Fed examiners who had moved in since previous March (Bear). “Market expressed a greater degree of confidence with the Fed model.”

Would not comment on how many “days to zero” they had left. Could not recall details; will provide August, September, and October daily liquidity reports. Their flows were modeled. She contends they had a large pool of cash and only raised more cash to demonstrate market confidence. Customers like hedge funds moved to prime brokerage cash and away from international prime brokerage to U.S. prime. Unlike their peers, who had lots of short term debt, they had been disciplined and had little CP; 100 day+ repo. People raised haircuts and rolled for shorter periods.

Repo markets: September '08 – repo market challenged. Issues with counterparties ; sec-lenders; MMFs; euro banks. Long term debt markets a problem. GS took an aggressive stance – leveraged process to reduce certain assets.

They used some of the govt. facilities that came into play. TARP \$10 billion. PLGF – thought it was better to take funding when it was offered to you and at attractive rates. Reduced assets. Crisis validated their macro approach to have long term funding in cash and a liquid balance sheet. Their models were not perfect; they looked back to previous crises (including Bear) but did not fully anticipate this one.

Post Bear (Spring '08) – became more conservative. Less of an immediate knock-on effect than Lehman.

Early '09 – revisions to model: anticipate more volatility; anticipate categories of risk they had not seen before – derivatives counterparties; and moved up percentage of cash as compared to hedge fund and prime brokerage cash. Recalibrated.

In response to question about how do you protect firm against major risk – spoke about “The Federation” – the non revenue generating side of the firm as being an equal to the revenue producers. Risk is the firm’s lifblood. Took risk in the markets; took some risk in credit (derivatives book); never traded liquidity risk.

In expectation of a crisis, plan that there will be (1) a short-term crisis cash drain; one must expect and plan for it, and (2) there will be a shift in confidence which leads to a slow burn period. Then one adapts to the degraded financial environment and uses asset-liability management.

Thus, the GS balance sheet was \$ 1.1 trillion in the second week of September '08 and had dropped to \$ 884 billion by November 30. They shed the harder-to-fund and riskier assets and looked forward to see the viability and risks of the remaining assets. Their peers needed to roll over short term debt. Goldman had the discipline of a 100+ day repo book and an 8-day debt book. They had \$ 1.5 billion of 30-60-day commercial paper and \$ 8 billion with a six-month average life.

Thus there was no big issue with financing in the immediate period. "With our paranoid hats on," GS looked to see what might go wrong. We didn't know what would happen with counterparties and the risk in the market. GS undertook an aggressive balance sheet reduction. Sold the harder assets. GS took

a good posture offensively and defensively. "You never had a trader say 'I don't want to take that loss'." [Side discussion: because GS marks to market every day the size of needed write-downs at time of sale of an asset was smaller than otherwise would have been the case].

GS signed up for government facilities, the PDCF, which was a discount window for broker dealers, and the TSLF, a longer short-term facility. GS signed up for the CPFF and did a test trade, but didn't use it. GS also took \$ 10 billion of TARP funds. The TLGP of the FDIC gave GS a \$ 35 billion allocation; GS had \$ 30 billion max outstanding and still has \$ 20 billion left. It is better to take funding available and offered to you rather than not and deeply regret it.

As GS reduced assets it increased its liabilities and built up a cash reserve. Liabilities were constrained as they shrank the balance sheet. Long-term sources were evaluated against their uses. GS continued derisking in spring of 2008, after Bear. Bear had less of a broad knock-on effect [than took place later]. The balance sheet shrank at that time from \$ 1.3 trillion to \$ 1.1 trillion. The "LCR" of Basel is similar to Goldman's "Global Liquidity Core."

Lessons learned: The experience validated the concept of cash and long-term funding and continued access to a liquid balance sheet. These held GS in good stead. The model for liquidity risk pre crisis and with Bear was that there was no incentive to be aggressive on the [liquidity?] model.

In the crisis there were tail events and new categories of risk. In the derivatives book initial margin counterparties would novate trades to GS so they could get the initial margin.

GS suddenly saw new kinds of risk. GS tweaked the level of risk and severity assumptions. They moved well above past experience and past assumptions. Also on asset liability management and diversity of commercial paper, learned that they could have been more diverse; funding came from US banks, Europeans, securities lenders.

GS took risk principally in market risk space and some in credit risk space. GS has never been willing to trade in liquidity risk. "I don't know why you would take that risk."

December '06- began mortgage derisking; Bear – Summer of '07 – began derisking of leveraged loan book. Looking forward, even beyond commitments. There were legacy assets that had to be addressed, such as corporate bonds or equities [on the books]. In 2008 – began to reduce legacy assets (commercial and residential mortgages; corporate bonds; equities).

Blue Chip equities were liquid and price transparent and therefore kept their value as repo collateral (because one could determine the appropriate haircut).

Securities Lending – no problems with govt. repo. No problems rolling it. Slightly wider haircuts and shorter maturities. Believes that blue chip equities had more liquidity and price transparency – easier to determine haircuts if they had to seize collateral. BONY-Mellon and JPM-C triparty repo. As custodians they priced the assets.

Q about Clayton – she was not familiar with it. Doesn't recall pricing of CDOs. BONY would do it. Not something she would handle or certainly invest in.

At the depths of crisis – they did not want their counterparties to be undercollateralized. Did not want to give collateral in repo that was worth less than they thought the value of the transaction warranted.

The decision to become a BHC – they had contingency plans – had thought about it for a long time. Consolidated supervisory framework actually worked for them. Made for a more logical regulator than the SEC. The weekend after Bear, in March '08 – Fed came in. Fed culture was terrific. A learning experience for them. [It was the playbook if the liquidity index goes to X and then to Y -- ???]

Q re: Living Will” or “Contingent Capital.” On the living will, it requires different analytical cuts and different reporting. It forces thought processes across a range of severity of actions. E.g. on 9/11 BONY had an operational crisis.

On contingent capital, not clear how you would structure it. The trigger is a huge issue; for example, does one use public or nonpublic information? Will the market buy it? Right now there is a big refi demand [???]. There is a lack of transparency and pricing, which means that first movers will pay more. This is not the same as common equity. As Treasurer of GS, she would not want to be the first company to use it.