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Switzerland: UBS Restructuring, 2008¹

Anmol Makhija²

Yale Program on Financial Stability Case Study
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Abstract

UBS incurred write-downs totaling USD 50 billion during the Global Financial Crisis, mostly on exposures to securities linked to US subprime mortgages. On October 16, 2008, the Swiss National Bank (SNB) announced that it would set up a special purpose vehicle, StabFund, to purchase up to USD 60 billion of troubled assets from UBS. The Swiss government also subscribed to 6 billion Swiss francs (CHF; USD 5.3 billion) of mandatory convertible notes (MCNs) issued by UBS. Between December 2008 and April 2009, UBS transferred USD 38.7 billion in assets and contingent liabilities to StabFund in three tranches. In August 2009, the government sold its entire stake in UBS for CHF 7.2 billion. The SNB and UBS jointly managed and wound down the portfolio transferred to StabFund and achieved their objective of stabilizing the Swiss financial system and UBS. In November 2013, after StabFund fully repaid the SNB loan, UBS paid USD 3.8 billion to the SNB to purchase StabFund's entire equity. The SNB also gained interest income of USD 1.6 billion over the term of the loan.

Keywords: Global Financial Crisis, restructuring, SNB, Switzerland, UBS

¹ This case study is part of a Yale Program on Financial Stability (YPFS) selection of New Bagehot Project modules considering bank resolutions and restructurings. A survey of all the cases in this series (McNamara et al. 2024) and the individual cases underlying it are available from the *Journal of Financial Crises* at <https://elischolar.library.yale.edu/journal-of-financial-crises/vol6/iss1>.

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Overview

This paper describes the restructuring of UBS during the Global Financial Crisis of 2007–2009 (GFC). See Makhija (forthcoming) for a study of the capital injection provided to UBS during the GFC by the Swiss government.

In 2008, UBS was the eighth-largest bank in the world and the largest bank in Switzerland, with more than 2 trillion Swiss francs (CHF; USD 1.8 trillion)³ in assets (Erkens, Hung, and Matos 2009; Global Finance 2009).

Beginning in the second half of 2007, UBS incurred significant write-downs on exposures related to US real estate and other credit positions (see Figure 1). By 2009, the write-downs had increased to USD 50 billion (Mombelli 2018). The losses, mostly from UBS's exposure to the US mortgage market, led to a net loss of CHF 5.3 billion in 2007 and CHF 21.3 billion in 2008 (UBS 2009b).

In October 2008, following the collapse of Lehman Brothers in mid-September, the Swiss authorities assessed that UBS's situation was critical, given its large exposure to illiquid securitized loans that had suffered sizable losses, deteriorating market confidence, a sharp increase in client fund outflows, and low capital base (SNB 2013b). On October 16, 2008, the Swiss Federal Council,⁴ Swiss National Bank (SNB), and Swiss Federal Banking Commission (SFBC) announced a series of measures to stabilize the Swiss financial system and restore confidence. The federal government and the SNB undertook two interlinked measures to strengthen UBS's balance sheet.

Key Terms

Purpose: “(i) to strengthen the long-term funding position of [UBS] within the SNB’s statutory mandate to provide liquidity, (ii) to signal confidence in [UBS] and (iii) to address potential risks associated with [UBS]’s non-Swiss real estate and asset-backed exposures” (SNB 2008d, 3)

Size and Nature of Institution	UBS was the eighth-largest bank in the world and the largest bank in Switzerland, with over CHF 2 trillion in assets
Source of Failure	High exposure to illiquid securitized loans, deteriorating confidence, and risk of insolvency
Start Date	Announcement: October 16, 2008; Transfer of first tranche: December 16, 2008
End Date	November 7, 2013
Approach to Resolution and Restructuring	UBS transferred illiquid assets to an SNB-owned SPV for management and orderly liquidation
Outcomes	UBS paid USD 3.8 billion to SNB to repurchase the SPV. The SNB also earned USD 1.6 billion of interest income
Notable Features	SNB and UBS's joint management of assets held by StabFund

³ According to BIS, USD 1 = CHF 1.13 on October 16, 2008.

⁴ The Federal Council is the executive body of the federal government of the Swiss Confederation. Since 1848, the Federal Council has always been made up of seven councilors who govern Switzerland together (Swiss Federal Council 2022).

First, the SNB announced a plan to establish a special purpose vehicle (SPV) named SNB StabFund Limited Partnership for Collective Investment (StabFund). UBS could then transfer up to USD 60 billion in illiquid assets to StabFund for orderly liquidation (Swiss Federal Council 2008a). According to the plan, the SNB would capitalize StabFund with up to USD 6 billion (10% of maximum total assets) provided by UBS and a nonrecourse loan of up to USD 54 billion (90% of maximum total assets) provided by the SNB.⁵

The second relief measure provided to UBS was a capital injection of CHF 6 billion (USD 5.3 billion) in the form of mandatory convertible notes (MCNs), which allowed the bank to maintain a strong Tier 1 capital ratio even after planning to provide up to USD 6 billion to the StabFund (UBS 2008). In August 2009, the government sold its entire stake in UBS for approximately CHF 7.2 billion, after accounting for transaction costs (UBS n.d.).

In November 2013, after StabFund fully repaid the SNB loan, UBS paid USD 3.8 billion to the SNB to purchase StabFund. The SNB also gained interest income of USD 1.6 billion over the term of the loan (SNB 2013b). Figure 1 provides a timeline of important events for UBS during the GFC.

Figure 1: Timeline of Important Events for UBS during the GFC

Date	Event
Aug. 2007	UBS reports significant write-downs on exposures related to US real estate and other credit positions in its fixed income trading business. The SFBC and SNB increase supervision of the big banks in Switzerland, and the SFBC provisionally raises capital requirements for UBS and Credit Suisse.
Jan. 2008	The presidents of the SNB and SFBC inform the head of the Federal Department of Finance (FDF) that UBS is facing very serious difficulties and plans for government interventions are being drawn up. The SFBC initiates an investigation into the causes of the write-downs incurred by UBS.
March 2008	The SFBC calls for the resignation of Marcel Ospel, chairman of the board of UBS.
April 23, 2008	Marcel Ospel resigns during UBS's annual general meeting.
Sept. 20, 2008	The presidents of the SNB and SFBC separately inform the head of the FDF that the situation at UBS has deteriorated significantly following the bankruptcy of Lehman Brothers.
Oct. 14, 2008	UBS officially requests government intervention to ensure its survival.
Oct. 15, 2008	The Federal Council determines the measures to stabilize the Swiss financial system, including the details of the UBS aid package. The SNB and UBS also sign an agreement to allow UBS to transfer up to USD 60 billion of illiquid assets to an SNB-owned SPV for management and orderly liquidation.

⁵ Jean-Pierre Roth, former chairman of the Governing Board of the SNB, said the Swiss authorities offered a similar rescue package to Credit Suisse, Switzerland's second-largest bank at the time. However, the bank declined the aid and instead raised CHF 10 billion from the private market (Gelnar 2008).

Oct. 16, 2008	The Federal Council and SFBC announce a CHF 6 billion capital injection into UBS. The Federal Council issues an ordinance to authorize the capital injection. The SNB announces a plan to separate illiquid assets from UBS's balance sheet, thereby relieving UBS from the risks associated with these assets.
Nov. 5, 2008	The Federal Council sends a report to the Federal Assembly outlining the measures announced to stabilize the financial system and highlighting the importance of aid to stabilize UBS.
Nov. 26, 2008	SNB announces that the special purpose vehicle for UBS assets is to be domiciled in Switzerland.
Nov. 27, 2008	UBS holds an extraordinary general meeting to approve the capital injection.
Dec. 9, 2008	UBS issues the MCNs and places them with the Swiss Confederation.
Dec. 15, 2008	The Federal Assembly of the Swiss Confederation issues a decree to give retrospective approval for the capital injection.
Dec. 16, 2008	UBS transfers the first tranche of illiquid assets worth USD 16.4 billion to StabFund.
Feb. 10, 2009	The SNB and UBS agree to transfer USD 39.1 billion instead of USD 60 billion to StabFund.
April 3, 2009	UBS concludes the transfer of USD 38.7 billion in illiquid assets to StabFund.
July 23, 2009	StabFund's board of directors sets the fund's liquidation strategy.
Aug. 15, 2013	StabFund fully repays the SNB's loan.
Nov. 7, 2013	UBS exercises its option to repurchase StabFund. The SNB receives USD 3.8 billion for its equity interest in StabFund and USD 1.6 billion in interest income over the term of the loan.

Source: Author's analysis.

Summary Evaluation

Jean-Pierre Roth, then-chairman of the Governing Board of the SNB, stated in a speech at a general meeting of shareholders of the SNB that the government was aware of the financial risk associated with the assets StabFund purchased. However, the rescue decision was based solely on stabilizing the financial system and economy and not on financial considerations (Roth 2009). The SNB restated in 2013, when UBS purchased StabFund, that the program's financial success was not reason enough to endorse government bailouts of banks, and the objective of the program was to stabilize UBS and the Swiss financial system (SNB 2013b).

Thomas Jordan, a member of the Governing Board of the SNB and former president of StabFund's board of directors, categorized the rescue measure as "both appropriate and absolutely necessary," since the market value of the assets deteriorated rapidly after StabFund assumed the asset risk. Jordan emphasized that the SNB's actual risk exposure was considerably lower than expected, since the volume of assets transferred to StabFund was lower than originally planned, and that the SNB had the balance sheet to absorb these risks. Jordan also acknowledged that the rescue measure was unconventional; however, he stated that "extraordinary times call for extraordinary measures" (Jordan 2009, 5).

Marcel Zimmermann, former head of StabFund unit and general manager of StabFund, and Zoltan Szelyes, a member of StabFund's executive management, point out that in October

2008, credit default swap (CDS) spreads for UBS skyrocketed, and its equity price plunged. However, after the stabilization package was adopted, UBS's CDS premia narrowed, and its equity price strengthened. Zimmermann and Szelyes mention that a disciplined asset management strategy and stable funding from the SNB allowed StabFund to preserve the value of the portfolio it purchased from UBS. They also note that although StabFund's management and operational structure required intensive involvement from the SNB, it was advantageous since it ensured that the SNB's interests as a senior lender were respected while providing flexibility to react quickly to changing market conditions (Szelyes and Zimmermann 2010).

The SNB gave a presentation on the rescue measure when UBS purchased StabFund and the program concluded. During this presentation, the SNB argued that the rescue was successful since the market recovered, StabFund's portfolio was not liquidated under time pressure, the asset management approach adopted by StabFund was disciplined, and the SNB had a good collaboration with UBS on the asset management approach (SNB 2013b).

In 2017, Martin Hellwig, then-director of the Max Planck Institute for Research on Collective Goods, presented a paper to the European Parliament stating that it was vital that the solvency problems of UBS were addressed separately by the capital injection from the Swiss government. Hellwig attributes StabFund's success to the simultaneous capital injection and asset transfer, which helped avoid conflicts of interests by allowing StabFund to acquire the impaired assets without any distortions in pricing because UBS's solvency concerns were addressed by the capital injection. Hellwig also attributes the program's success to a number of other factors, including the government's timing of the intervention, having realistic transfer prices for the impaired assets, and the SNB's ability to wait for the improvement in markets before liquidating assets. Hellwig notes that although the program was successful, the SNB carried a significant risk because it provided funds equivalent to one-fifth of the SNB's balance sheet and was exposed to exchange rate risks (Hellwig 2017).

Context: Switzerland, UBS AG 2008-2009	
Assets	CHF 2,000 billion as of Dec. 31, 2008 CHF 1,340 billion as of Dec. 31, 2009
Liabilities	CHF 1,974 billion as of Dec. 31, 2008 CHF 1,291 billion as of Dec. 31, 2009
Deposits	CHF 475 billion as of Dec. 31, 2008 CHF 410 billion as of Dec. 31, 2009
Capital Ratio (Tier 1)	11% as of Dec. 31, 2008 15.4% as of Dec. 31, 2009
Nonperforming Loans	CHF 4.7 billion as of Dec. 31, 2008 CHF 5.4 billion as of Dec. 31, 2009
Market Share	Data N/A Data N/A
Banking System, % of GDP	157.6% as of Dec. 31, 2008 166.4% as of Dec. 31, 2009

Sources: UBS 2009b; UBS 2010; World Bank Global Financial Development Database.

Key Design Decisions

- Purpose: The SNB set up StabFund to strengthen the long-term funding position of UBS, signal confidence in the bank, and address potential risks associated with its non-Swiss real estate and asset-backed exposures.**

Following the collapse of Bear Stearns in March 2008, the SNB, in cooperation with the SFBC and the Swiss federal government, prepared a plan to purchase illiquid assets from UBS (SNB 2009). A month after Lehman Brothers collapsed in mid-September, there was a severe deterioration in market conditions, and capital markets dried up due to increasing uncertainty. To restore confidence and provide stability, the Federal Council, SNB, and SFBC announced a series of measures to strengthen the Swiss financial system (Swiss Federal Council 2008c). Some of these measures aimed specifically at rescuing UBS, which was in a critical state due to an outsized exposure to bad assets that suffered large losses, declining confidence, and a high risk of insolvency (SNB 2013b).

A central element of the UBS rescue package consisted of a plan to create an SNB-controlled SPV, StabFund, and allow UBS to transfer up to USD 60 billion in bad assets to StabFund. This measure provided UBS with liquidity while relieving its balance sheet of risky assets. The SNB could bear these risky assets since it had a longer-term horizon and could wait for the markets to recover before liquidating them (Swiss Federal Council 2008b). At the news conference announcing the rescue measures, SNB Chairman Roth said that the rescue operation was highly unusual in its scope and reasons. Chairman Roth also said that a properly functioning banking system was essential to the Swiss economy, and it was better to carry out the rescue measures sooner rather than later under potentially more adverse conditions (Roth 2008).

Overall, StabFund acquired approximately USD 24.8 billion in securities and USD 5.4 billion in loans (SNB 2010b). UBS also transferred USD 8.8 billion in contingent liabilities to StabFund, which did not require any immediate financing (SNB 2013b). UBS's book value for these assets on September 30, 2008, and the valuation determined by independent experts established two prices for the assets transferred, and StabFund paid the lower of these two values in each transaction. The independent valuation experts used several methods to consider as many price-related aspects as possible (SNB 2009).

The decision to purchase illiquid assets from UBS was made solely by the Governing Board of the SNB since the Governing Board alone is responsible for the conduct of "monetary policy" (Swiss Government 2003, arts. 6, 46).

- Part of a Package: The Swiss federal government injected CHF 6 billion into UBS to strengthen its capital base.**

The Swiss Federal Council announced that the Swiss federal government (Swiss Confederation) would subscribe to CHF 6 billion of MCNs issued by UBS on the same day that the SNB announced the StabFund plan. This measure was intended to recapitalize UBS and

ensure that its capital base was not impaired by the financing of StabFund (Swiss Federal Council 2008c; UBS 2008). The SNB stipulated the recapitalization of UBS as a condition for the StabFund transaction (SNB 2008d; SNB 2009). The Federal Assembly of the Swiss Confederation authorized the capital injection on December 15, 2008 (Swiss Government 2008).

Approximately eight months later, on August 19, 2009, the Swiss Confederation announced its intention to exercise the right to convert the MCNs to equity and sell the shares received through conversion to institutional investors. The Confederation agreed to waive the right to receive coupon payments on the MCNs in exchange for approximately CHF 1.8 billion (UBS 2009a). The Confederation placed the newly issued shares with private institutional investors for approximately CHF 5.5 billion (Hänni 2010). The Confederation, therefore, received approximately CHF 7.2 billion when it sold its entire stake in UBS and the right to receive coupon payments on the MCNs, after accounting for transaction fees (Martinuzzi and Wille 2009; UBS 2009a). See Makhija (2023) for further details regarding the capital injection.

On December 20, 2008, the Swiss government enacted the Depositor Protection Reinforcement Act to strengthen the Swiss deposit guarantee system and revise the maximum amount of deposits guaranteed to CHF 100,000 per customer (esisuisse n.d.).

3. Legal Authority: Articles 5 and 9 of the Swiss National Bank Act provided the legal basis for the rescue measure.

A legal opinion by the SNB evaluated whether the transaction was covered under the SNB's statutory mandate and business scope to establish that the rescue measure had a legal basis in central bank law (SNB 2009). We summarize the expert opinion analysis in this section.

Statutory Mandate

Article 5 Paragraphs 2(a) and (e) of the National Bank Act (NBA) give the SNB the responsibility of providing the Swiss franc money market with liquidity and contributing to the stability of the financial system (Swiss Government 2003). The legal opinion concludes that the SNB derives its role as the lender of last resort (LOLR) from Article 5 Paragraphs 2(a) and (e), and this role has been repeatedly emphasized by the Federal Council.

The SNB's Governing Board set guidelines for the conditions under which the SNB can grant emergency liquidity assistance (ELA) in its function as the LOLR (SNB 2023). The conditions to grant ELA are as follows:

- The bank or group of banks seeking credit must be of importance for the stability of the financial system.
- The bank seeking credit must be solvent.
- The liquidity assistance must be fully covered by sufficient collateral at all times. The SNB determines what collateral is sufficient (SNB 2023).

The guidelines define banks as systemically important if their insolvency would seriously impair the functioning of the domestic financial system or significant parts of it and adversely affect the real economy. In 2008, UBS accounted for one-third of the transactions on the Swiss interbank credit market, and its failure was expected to destabilize the entire Swiss payment system, create significant losses for other banks, and affect households and businesses. International studies also estimate that the default of a bank as large as UBS would carry an economic cost of 15%–30% of GDP in the short term and 60%–300% of GDP in the long term (Swiss Federal Council 2008c).

Since it is difficult to distinguish between solvency and liquidity problems during a crisis, the SNB based its assessment of UBS's solvency on a statement from the SFBC indicating that UBS was solvent under applicable supervisory rules (SNB 2009, 77). Establishing UBS's solvency was a prerequisite to the transaction since the SNB can grant only liquidity assistance, not solvency aid. The legal opinion also highlighted that the loan to StabFund did not represent liquidity assistance in the traditional sense since the SNB indirectly assumed the risk on the assets transferred to StabFund. However, the transaction allowed UBS to exchange illiquid assets for liquid assets, thus having a substantial liquidity effect (SNB 2008d).

The third condition for ELA regarding sufficient collateral was also met since Article 9 of the NBA grants the SNB extensive discretion in deciding what collateral is sufficient within the context of ELA. The Governing Board of the SNB could exercise this discretionary power (SNB 2009).

Business Scope

Article 9 Paragraph 1(e) outlines that it is within the SNB's business scope to enter into credit transactions with banks and other financial market participants on condition that sufficient collateral is provided for the loans (Swiss Government 2003). StabFund was actively engaged in financial markets since it managed and liquidated the portfolio of assets transferred from UBS, and thus could be classified as a financial market participant. The SNB's agreement with UBS regarding the transfer of illiquid assets to StabFund also provided the SNB with loss protection mechanisms, such as warrants and regulation of payment flows, that could be classified as sufficient security (SNB 2008d).

The SNB's purchase of illiquid assets from UBS's balance sheet also had a legal basis through Article 9 Paragraph 1(c) of the NBA, which states that the SNB can "buy and sell, in the financial markets, Swiss franc or foreign currency denominated receivables and securities ... or enter into lending operations therewith" (SNB 2008d, 9–10; Swiss Government 2003, art. 9).

4. Administration: The SNB administered StabFund's purchase of illiquid assets from UBS.

The Governing Board of the SNB decided to provide aid to UBS by purchasing its illiquid assets since the Governing Board is solely responsible for "monetary policy" (Swiss

Government 2003, arts. 6, 46; SNB 2009, 81). The SFBC licensed StabFund, and the SNB established and managed it.

StabFund had an operational management team staffed by the SNB and led by a general manager. The general manager was appointed by StabFund's board of directors and was supported by six specialists. The operational management team was based in Zurich and responsible for risk control, portfolio management and market intelligence, legal and compliance, and corporate secretariat duties. The SNB was responsible for the financial and fund accounting, taxation, and other infrastructure services and was compensated by StabFund (SNB 2010b).

StabFund outsourced the asset management to a 75-member team from UBS based in New York and London and several UBS personnel that provided operational support. UBS had several incentives to fulfill its asset management function appropriately since it could participate in the profits of StabFund after the fund repaid the SNB loan and would not be compensated for its asset management services unless the SNB loan was repaid. The SNB could also replace UBS as the asset manager (Szelyes and Zimmermann 2010). Martin Hellwig also notes in his paper to the European Parliament that this incentive structure was a reason for StabFund's success (Hellwig 2017).

StabFund appointed Northern Trust as its custodian and for some accounting and reporting functions (SNB 2010b). StabFund also appointed PricewaterhouseCoopers Ltd (PwC) as its auditor (SNB 2009).

StabFund contracted several independent valuation experts in the US, Europe, and Japan, and received support from external advisors on legal, organizational, and asset management issues.

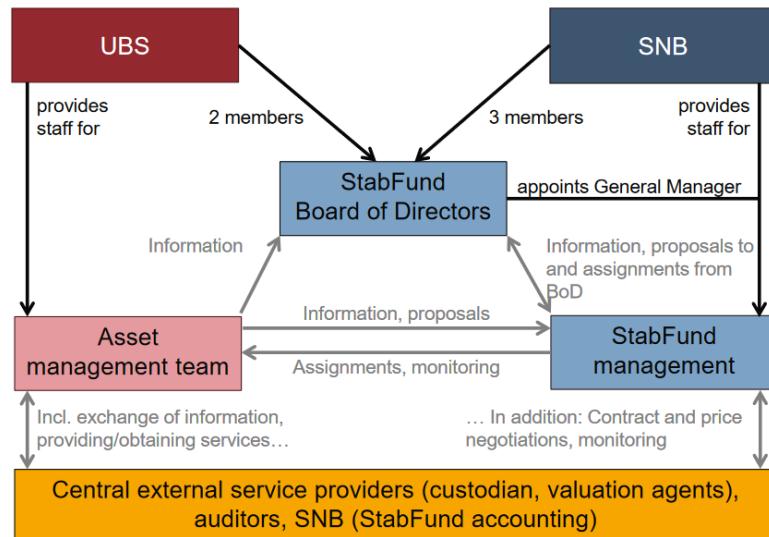
5. Governance: StabFund was governed by a five-member board of directors, and the Swiss National Bank Council monitored its investment, risk control, and accounting practices.

StabFund's board of directors consisted of three representatives from the SNB and two from UBS and was responsible for overall management, supervision, and control of the fund (see Figure 2). The board of directors established liquidation guidelines on July 23, 2009, for the assets transferred and reviewed them every quarter. The investment guidelines adopted by the board of directors set reporting requirements for UBS and required UBS to disclose any conflicts of interest in its function as a bank and investment manager. The board of directors also set limits for sales volumes and potential losses from sales for the investment and general manager (SNB 2010b). The Swiss National Bank Council's Risk Committee⁶ supervised the effectiveness and adequacy of the investment and risk control process. The

⁶ The SNB Council oversees and controls the conduct of business by the Swiss National Bank while the Governing Board is the executive body responsible for monetary policy, asset investment strategy, and international monetary cooperation (SNB n.d., 1).

SNB Council's Audit Committee monitored compliance with International Financial Reporting Standards (IFRS) accounting and operational risk rules (SNB 2009).

Figure 2: Organizational Structure of StabFund



Source: SNB 2013b, 17.

The Governing Board of the SNB was solely responsible for the conduct of “monetary policy” and was not permitted to seek or accept instructions from the Federal Council or Federal Assembly (SNB 2009, 81). However, according to Article 7 Paragraph 2 of the NBA, the SNB had to provide annual reports on this rescue measure to the Swiss Federal Assembly since the intervention fell under the scope of the SNB’s statutory mandate (Swiss Government 2003; SNB 2008d).

6. Communication and Disclosure: The Swiss authorities communicated that the decision to aid UBS was based solely on the objective to stabilize the financial system and economy.

On October 16, 2008, the Federal Council, SNB, and SFBC issued a press release outlining the rescue measures provided to UBS. Through this press release, the Swiss authorities communicated that the measures were taken to stabilize the Swiss financial system and restore market confidence (Swiss Federal Council 2008a). Chairman Roth also spoke at a news conference on October 16, 2008, and stated that the measures were implemented to restore confidence and stability in the Swiss banking sector (Roth 2008). Later, in a speech at a general meeting of shareholders of the SNB, he said that the rescue decision was based solely on stabilizing the financial system and economy, and not on financial considerations (Roth 2009). The SNB restated that the rescue measures should not be judged on their financial success, and their primary objective was stabilizing the financial system when UBS purchased StabFund.

The SNB also communicated changes to details of the program, such as StabFund's domicile and reduction in the amount of assets transferred, through various press releases and in its annual reports between 2008 and 2013.

When the government intervention in UBS ended, Thomas Jordan, a member of the Governing Board of the Swiss National Bank and former president of StabFund's board of directors, reiterated that although the program was financially successful for the Swiss government, its primary objective was to stabilize UBS and the Swiss financial system (SNB 2013b).

The former president of the Swiss Confederation decided that no Federal Council meeting minutes would be taken regarding the UBS case to preserve confidentiality (Control Committees 2010).

7. Source and Size of Funding: StabFund's acquisition of the assets was financed through a contribution by UBS and a loan provided by the SNB.

The SNB committed to fund StabFund up to USD 60 billion with a combination of loans and capital upon each asset transfer. It covered 90% of the costs of each asset transfer with a loan and 10% in the form of StabFund equity. Upon each asset transfer, UBS financed the SNB's purchase of StabFund equity by buying from the SNB a call option to purchase the fund's equity (UBS 2009c). The price of the call option was set at an amount equal to the SNB's equity contribution to the fund on that date, and UBS had the right to exercise the call option upon repayment of the SNB's loan (SNB 2009). Through that mechanism, the SNB carried the risk of loss on its loan to the fund but not on its equity in the fund (UBS 2009b).

The SNB required UBS to raise capital to cover the cost of the call option. Owing to the urgency of the capital injection following the announcement of the rescue package and the lack of private sector interest, private sector capitalization did not seem possible, and the Confederation agreed to recapitalize UBS (Bäumle 2008). The Federal Council announced that the government would subscribe to CHF 6 billion of MCNs issued by UBS to help the bank retain a strong Tier 1 capital ratio after providing the funding to SNB to capitalize StabFund via the call option (Swiss Federal Council 2008c).

This funding mechanism was slightly different compared to the original funding structure announced on October 16, 2008 (SNB 2008a). The change in funding strategy allowed UBS to report it purchased a derivative for CHF 4.8 billion and the derivative's fair value was CHF 1.2 billion, for a loss of CHF 3.6 billion, instead of reporting UBS purchased equity capital in StabFund for CHF 4.8 billion and incurred a CHF 4.8 billion loss on the capital by selling the equity to the SNB for CHF 1 (UBS 2009c).

Between December 2008 and April 2009, UBS transferred a total of USD 38.7 billion in assets and contingent liabilities in three tranches (SNB 2010b). This transfer of assets to StabFund was financed by a combination of loans and capital from the SNB, as noted. The remaining USD 8.8 billion in contingent liabilities did not require financing immediately. The SNB's loan was nonrecourse to UBS, and the SNB charged an interest rate equal to the one-month USD London Interbank Offered Rate (LIBOR) plus 250 basis points (bps) (SNB 2008a; UBS

2009b). The SNB's loan to StabFund was secured by StabFund's assets, the equity contribution, and through a warrant the SNB received for 100 million shares of UBS (representing 3.41% of total UBS equity at the time), which could be exercised if the SNB incurred a loss on the loan and served as a second loss protection. The exercise price of the warrants was CHF 0.1 per share, the par value of the shares. The SNB's loan to StabFund was for a term of eight years, but it could be extended to a maximum of 12 years to allow for an orderly liquidation of assets (SNB 2008a).

The SNB had to verify that sufficient eligible collateral was provided for this transaction, and the National Bank Act grants broad discretionary power to the Governing Board of the SNB to decide which collateral it considers sufficient within the context of an emergency liquidity supply facility (SNB 2009).

In November 2013, after StabFund fully repaid the SNB loan, UBS exercised its call option to purchase StabFund's equity, paying USD 3.8 billion. The SNB also gained interest income of USD 1.6 billion over the term of the loan. The total compensation generated from the management of StabFund was USD 5.2 billion for the SNB, which represented a yield of 8% per annum (p.a.) on the average loan or a yield of 6.1% p.a. on average risk exposure (SNB 2013b).

8. Approach to Resolution and Restructuring: UBS transferred illiquid assets to an SNB-owned SPV for management and orderly liquidation.

On October 15, 2008, the SNB and UBS signed a term sheet laying out the details of the restructuring plan involving a sale of bad assets from UBS's balance sheet to an SNB-owned SPV (SNB 2009) (see Figure 3). Under the terms of the agreement, if there was a change of control of UBS, the SNB had the right to require UBS to purchase the outstanding loan at par plus accrued interest and to purchase StabFund's equity at 50% of its value at the time (UBS 2009b).

The agreement between the SNB and UBS originally planned for the SPV to be established as a limited partnership domiciled in the Cayman Islands. The SNB had used this structure in the past, so it could be implemented quickly. However, this structure for the SPV was met with some political criticism (Bäumle 2008). In cooperation with the Swiss federal government and the canton (state) of Berne, the SNB created a solution to establish the SPV as a limited partnership for collective investment under the Federal Act on Collective Investment Schemes and the Swiss Code of Obligations. This corporate structure satisfied the requirements regarding liability and ensured tax exemption (SNB 2009).

Ultimately, UBS injected the equity capital by paying a premium for an option to purchase StabFund after the SNB loan was fully repaid (SNB 2008b). UBS made the premium contributions in steps corresponding to the transfer of assets (SNB 2009).

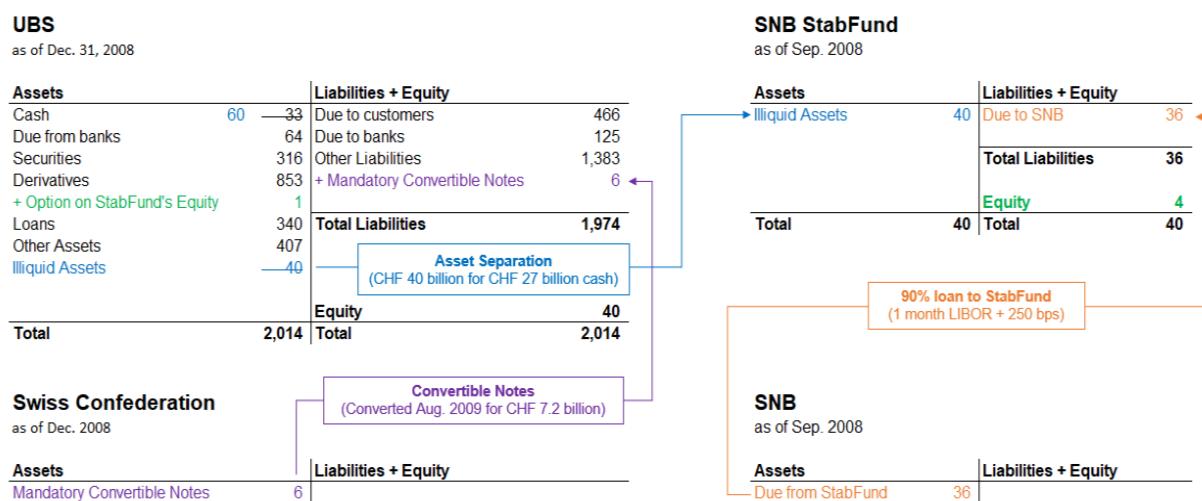
Although the SNB and UBS agreement allowed for an asset transfer of up to USD 60 billion, the SNB and UBS agreed in January 2009 not to transfer a portion of the initially planned assets. Between October 2008 and January 2009, the SNB conducted an extensive analysis and concluded that due to changes in international accounting standards, certain assets

could be classified as loans and receivables, which allowed UBS to not mark these assets to market. As a result, the SNB and UBS agreed to reduce the maximum permitted transfer amount to USD 39.1 billion from USD 60 billion (SNB 2009).

The assets transferred were financed by USD 3.9 billion (10% of asset transfer value) of capital provided by UBS, a loan of USD 25.8 billion provided by the SNB to StabFund, and the remainder of USD 8.8 billion consisted of contingent liabilities, which did not require any financing (SNB 2013b).

The SNB board members communicated that they were considering other restructuring plans. However, no details were released regarding these plans.

Figure 3: UBS AG Pro Forma Balance Sheet (CHF billions)



Source: Author's analysis.

9. Treatment of Creditors and Equity Holders: The SNB received a warrant for 100 million shares of UBS, which meant that equity holders faced potential dilution while creditors were not affected.

The agreement to purchase UBS's illiquid assets gave the SNB a warrant for 100 million shares of UBS at a nominal value (representing 3.41% of total UBS equity at the time), which the SNB could exercise if it incurred a loss on the loan. The exercise price of the warrants was CHF 0.1 per share, the par value of the shares (SNB 2010a; UBS 2009b; 2013). If the loan was not fully repaid, the SNB could have exercised this warrant, which would have been dilutive to existing equity holders.

10. Treatment of Clients: No depositors were affected, and certain borrowers had their loans transferred to StabFund.

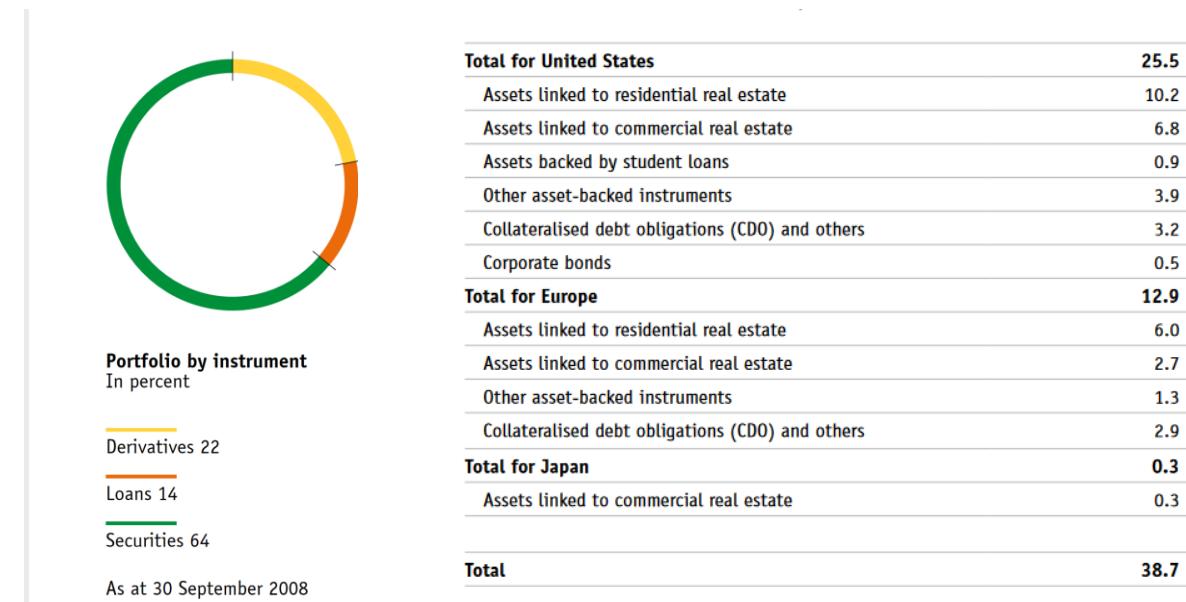
The transfer of assets did not affect any of UBS's depositors; however, some borrowers had their loans transferred to StabFund.

11. Treatment of Assets: StabFund purchased USD 38.7 billion in illiquid assets from UBS.

Between December 2008 and April 2009, UBS transferred more than 5,000 portfolio positions worth USD 38.7 billion of securities, loans, and derivatives, in three tranches (see Figure 4). The price of the assets transferred was approximately USD 1 billion below the book value of assets at UBS at the end of September 2008 (Jordan 2009). StabFund contracted several independent valuation agents based in the US, Europe, and Japan to provide a valuation for the assets transferred as of September 30, 2008, which was the date the SNB indirectly assumed the asset risk through StabFund. StabFund purchased the positions at the lower value of the UBS book value as of September 30, 2008, and the average valuation assigned by the independent valuation agents (Szelyes and Zimmermann 2010).

The derivatives StabFund acquired were primarily credit default swaps in which the StabFund acted as protection seller or buyer. StabFund took over the risks of the protection seller from UBS, and the income it received from these derivatives included the premium for selling protection. The amount StabFund might have had to pay in the event a CDS was triggered was held ready in bank deposits and regularly recalculated based on continuous valuations of the contracts. On December 31, 2009, the potential liabilities from these derivatives amounted to approximately USD 7 billion, and the deposited collateral was approximately USD 7 billion as well. If StabFund did not have sufficient liquid funds to service any outstanding payments, it could apply for an additional loan drawdown from the SNB (SNB 2010b).

Figure 4: Composition of Portfolio Transferred to StabFund, as of September 30, 2008



Source: SNB 2010b.

After the asset transfers concluded, StabFund's board of directors adopted guidelines on asset management and a liquidation strategy (SNB 2010b). The investment guidelines

outlined that assets should be sold only when sales proceeds were higher than the intrinsic values of assets or when factors such as excessive downside risk, concentration risk, or undue modeling uncertainty favored a sale. The intrinsic values for the assets were calculated using cash flow modeling, macroeconomic factors, default rates, and deal and bond structure, allowing StabFund to compare cash flow sensitivity to different economic scenarios and conduct stress tests (Szelyes and Zimmermann 2010). Over the next five years, the SNB and UBS jointly managed and wound down the portfolio of securities, loans, and derivatives held by StabFund.

12. Treatment of Board and Management: Several members of UBS's board of directors and group executive board resigned and voluntarily waived parts of their compensation.

Then-CEO of UBS Peter Wuffli stepped down following the announcement of large losses in 2007 (Creswell 2007). In March 2008, the SFBC called for then-chairman of the board of UBS Marcel Ospel to resign; he resigned in April 2008 during the bank's annual general meeting (Control Committees 2010). In addition, two other board members, Stephan Haeringer and Marco Suter, also resigned. These executives voluntarily waived or repaid part of their compensation, totaling CHF 45 million (Dealbook 2008).

13. Cross-border Cooperation: The SNB's loan to StabFund was partially refinanced through a swap facility with the Federal Reserve Bank of New York.

More than 80% of the SNB loan to StabFund was US dollar-denominated; however, the SNB could not use its foreign exchange reserves to finance the loan since it would have severely depleted the reserves. The SNB also wanted to make its loan in the same currencies as the assets purchased to reduce currency risk (SNB 2009). The SNB initially fully refinanced the loan through a swap facility with the Federal Reserve Bank of New York. In February 2009, the SNB sought a more market-oriented refinancing option for the loan and issued SNB debt denominated in US dollars (Szelyes and Zimmermann 2010). After July 2010, the SNB refinanced the loan using foreign exchange reserves (Jordan 2009).

14. Other Conditions: The SNB imposed restrictions on UBS's compensation structure.

The SNB and Federal Council imposed restrictions on UBS's compensation structure for bonuses and severance pay. The Swiss authorities also set directives for corporate governance at UBS and held regular meetings with the management; however, they did not place specific restrictions on pay structure or dividends (Swiss Government 2008; Voxant 2008). The SNB was also given the right to conduct additional risk management reviews at any time as long as the federal government held over a 3% stake in UBS related to the capital injection. These risk management reviews could include participation in internal meetings regarding risk management and control at all hierarchical levels, obtaining information through questionnaires and interviews with risk managers, and accessing internal data and documents related to risk management without providing prior notice (Swiss Federal Council 2008b).

15. Duration: The SNB's loan to StabFund was fully repaid on August 15, 2013, earlier than expected.

StabFund fully repaid the SNB's loan on August 15, 2013, and UBS exercised its option to repurchase the fund on November 7, 2013 (SNB 2013a). The SNB had projected that the loan would be fully repaid by October 2014, so the program concluded a year earlier than expected. When StabFund was wound up, it mainly consisted of cash equivalents, and no troubled assets were returned to UBS. The SNB did not bear any financial losses; in fact, it generated approximately USD 5.4 billion in profits and interest income (SNB 2013b).

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