Intended and unintended consequences:
The Swiss National Bank's decision to remove the floor on the CHF against the EUR
An integrated case study in business, economics, and politics

SoTL Seminar
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Alfred Mettler

Switzerland … a Small Open Economy
Agenda

- How it all started ...
  - Jan 15, 2015: Build-up and decision
  - Many possible case discussion points
  - Areas for potential finance research
  - Where and how could the case be used?
  - Q&A
How it all started … Jan 2010 – Sep 2011

- Low growth rates globally
- Weakening of EUR and USD
- CHF as "save haven"
- Fear of Recession in Switzerland
- Fear of negative Inflation rates in Switzerland
- Pressure from export industry
- Pressure from unions

How it all started … Sep 6, 2011

The current massive overvaluation of the Swiss franc poses an acute threat to the Swiss economy and carries the risk of a deflationary development.

The Swiss National Bank (SNB) is therefore aiming for a substantial and sustained weakening of the Swiss franc. With immediate effect, it will no longer tolerate a EUR/CHF exchange rate below the minimum rate of CHF 1.20. The SNB will enforce this minimum rate with the utmost determination and is prepared to buy foreign currency in unlimited quantities.

Even at a rate of CHF 1.20 per euro, the Swiss franc is still high and should continue to weaken over time. If the economic outlook and deflationary risks so require, the SNB will take further measures.
How it all started … Sep 2011 – Jan 2015

CHF/EUR


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Build-up and decision (1)

SNB Official Reserve Assets (MVs, million CHF)

Comparison: GDP ~ CHF 650,000 million,

Build-up and decision (2)

- Second half of 2014
  - EUR weakens against USD, from 1.40 to 1.15 (USD per EUR)
  - Because of the minimum CHF/EUR exchange rate CHF weakens against USD as well
  - Discussions about Grexit surfacing again
  - Economic decline in Russia
- And most of all: The European Central Bank discusses a possible quantitative easing program which would possibly
  - lower EUR interest rates
  - increase downward pressure on EUR and therefore upward pressure on CHF ...
- Regardless, the SNB continues to publicly defend and uphold its policy ....
Build-up and decision (3)

- What should the SNB do?
- What would possible consequences be if the SNB kept the minimum exchange rate of 1.20 CHF/EUR?
- What would possible consequences be if the SNB kept the minimum exchange rate at a lower level, for example at 1.15 or 1.10 CHF/EUR?
- What would possible consequences be if the SNB no longer kept a minimum exchange rate?
- Should the SNB consult with the Swiss government or other affected parties?

Build-up and decision (4)

- Thursday, Jan 15, 2015:
  At 10:30 am a SNB press release announces that the SNB will discontinue the minimum exchange rate and at the same time lower interest rates to -0.75%
- What will this mean for
  - Exchange rates
  - Financial markets
  - Swiss economy and trade
  - Financial services industry
  - Retail businesses
  - etc. etc.
Swiss National Bank discontinues minimum exchange rate and lowers interest rate to −0.75%
Target range moved further into negative territory

The Swiss National Bank (SNB) is discontinuing the minimum exchange rate of CHF 1.20 per euro. At the same time, it is lowering the interest rate on sight deposit account balances that exceed a given exemption threshold by 0.5 percentage points, to −0.75%. It is moving the target range for the three-month Libor further into negative territory, to between −1.25% and −0.25%, from the current range of between −0.75% and 0.25%.

The minimum exchange rate was introduced during a period of exceptional overvaluation of the Swiss franc and an extremely high level of uncertainty on the financial markets. This exceptional and temporary measure protected the Swiss economy from serious harm. While the Swiss franc is still high, the overvaluation has decreased as a whole since the introduction of the minimum exchange rate. The economy was able to take advantage of this phase to adjust to the new situation.

Recently, divergences between the monetary policies of the major currency areas have increased significantly – a trend that is likely to become even more pronounced. The euro has depreciated considerably against the US dollar and this, in turn, has caused the Swiss franc to weaken against the US dollar. In these circumstances, the SNB concluded that enforcing and maintaining the minimum exchange rate for the Swiss franc against the euro is no longer justified.

The SNB is lowering interest rates significantly to ensure that the discontinuation of the minimum exchange rate does not lead to an inappropriate tightening of monetary conditions. The SNB will continue to take account of the exchange rate situation in formulating its monetary policy in future. If necessary, it will therefore remain active in the foreign exchange market to influence monetary conditions.
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Many possible case discussion points (1)

• Central Bank Independence
  • What does it mean?
  • How is it measured
  • What does research show about the degree of independence for different Central Banks?
  • How is the SNB typically ranked?

• Did the SNB react independently?
• Who knew about it?
Many possible case discussion points (2)

- **Central Bank Credibility**
  - What does it mean?
  - Should central banks give guidance, and if yes, how much?
  - Until a few weeks before Jan 15, 2015, the SNB regularly declared to keep the minimum exchange rate for the long term. The Jan 15 decision was a complete surprise.
    - Should it have been communicated differently?
    - Did the SNB lose its credibility?
    - Does it affect the credibility of other central banks?


Many possible case discussion points (3)

- **Sovereign Wealth Funds**
  - What do they do?
  - Why do they exist?
  - Which are the most important and largest Sovereign Wealth Funds?
  - How big are they, relative to the GDP of the countries involved?
  - How are they managed?
  - From 2008 to 2014 the SNB’s Official Reserve Assets have grown by 400% to an amount close to the Swiss GDP. Should the SNB create a Sovereign Wealth Fund? Why, or why not?
Many possible case discussion points (4)

- **Exchange rates and cross rates dynamics**
  - How much and in which direction will the CHF change against the EUR once the minimum exchange rate is no longer maintained? Why?
  - What will happen to the USD, especially the USD/EUR or the USD/CHF rates?
  - What will happen to the currencies of EU countries which are not members of the EUR, for example Sweden, Hungary, Poland, Czech Republic?
  - Have there been precedents in the past when major currencies adjusted quickly to a new situation?

Many possible case discussion points (5)

- **Exchange rate equilibrium and market efficiency**
  - What determines market efficiency?
  - Are FX-markets considered to be efficient markets? Why or why not?
  - How long will it take until a new CHF/EUR equilibrium will be reached?
  - What will happen to the volatility of the mostly affected currencies?
  - What will happen to the liquidity of the FX-markets?
  - Will there be arbitrage opportunities?
Many possible case discussion points (6)

- **Exchange rates and interest rates**
  - With the removal of the minimum exchange rate, the SNB lowered the interest rate on sight deposit account balances that exceed a given exemption threshold by 0.5 percentage points, to −0.75%.
  - Lowering interest rates should help “… to ensure that the discontinuation of the minimum exchange rate does not lead to an inappropriate tightening of monetary conditions”.
  - Why would the SNB lower interest rates at the same time it is removing the minimum exchange rate?

Many possible case discussion points (7)

- **Negative interest rates**
  - Negative interest rates are a relatively new phenomenon. Have there ever been negative interest rates before the financial crisis? If yes, where and when?
  - What do negative interest rates mean for institutional investors and asset managers?
  - Could there be negative interest rates on savings and deposit accounts?
  - What could for example the consequences be for
    – the circulation of paper currency, or
    – the demand for safe deposit boxes?
Many possible case discussion points (8)

- **Possible economic consequences for Switzerland:**
Looking at the composition of the Swiss GDP: What could possible consequences for the domestic economy be?

<table>
<thead>
<tr>
<th>GDP of Switzerland (in million CHF)</th>
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<tbody>
<tr>
<td>Year</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>2012</td>
</tr>
<tr>
<td>2013</td>
</tr>
<tr>
<td>2014</td>
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Many possible case discussion points (9)

- **Effects on share prices of Swiss companies**
  - Switzerland as a small open economy is heavily dependent on exports/imports
  - Major global companies are headquartered in Switzerland (Nestle, Roche, Novartis, …), but have significant business abroad
  - Credit Suisse and UBS as global banks generate significant earnings abroad in USD and EUR
  - What will the reaction of the stock market be?
  - Which companies will react most, and why?
Many possible case discussion points (10)

• **People’s reactions …**
  • What will happen to the demand for EUR?
  • What will happen to the shopping habits?
  • What will happen to the retail businesses close to the border?
  • What will happen to public transportation
  • What will happen to border controls?
  • What will happen to tax revenues in selected cities?
  • Is anybody prepared, or is chaos to be expected?

Many possible case discussion points (11)

• **Pricing of mortgages in a negative interest rate environment**
  • The Swiss mortgage system is different from the one in the U.S.
  • Typically Swiss mortgages are either LIBOR-based (with caps and floors, if desired), or they are fixed rate mortgages from 2 ..10 years (priced to market, with prepayment penalties, etc.)
  • What would you expect to happen to the interest rates on fixed rate mortgages? Why?
  • How will treasury departments in banks price fixed rate mortgages in a negative interest rate environment?
Many possible case discussion points (12)

- **FX mortgages – a retail carry trade**
  - Due to the historically low interest rates for CHF mortgages and car loans in CHF became popular in Eastern European countries
  - For example: Austria, Hungary, Poland, Ukraine, and others
  - How does a foreign exchange mortgage work? What are the risk-return characteristics for borrowers and lenders?
  - How did governments and central banks historically regulate foreign exchange loans?
  - How are the borrowers affected by the decision of the SNB?

Many possible case discussion points (13)

- **Foreign bonds – a municipality carry trade**
  - Due to the historically low interest rates for CHF bond issues in CHF became popular in European countries
  - For example: Municipalities in the German state of North Rhine-Westphalia had overall CHF bonds of more than CHF 500 million outstanding
  - How does a foreign bond work? What are the risk-return characteristics for issuers and investors?
  - How are foreign exchange loans regulated?
  - How are the German municipalities affected by the decision of the SNB?
Many possible case discussion points (14)

- **Cross-listed shares and ADRs**
  - Why would companies cross-list their shares?
  - What is the difference between cross-listing a share vs. cross-listing an ADR?
  - How will cross-listed stocks of Swiss companies be affected by the decision of the SNB?
  - Will there be arbitrage opportunities?

Many possible case discussion points (15)

- **Hedge Fund Strategies and FX**
  - What do Hedge Funds do?
  - Are Hedge Funds engaged in currency speculations?
  - Were Hedge Funds holding CHF positions?
  - By taking into consideration the CHF/EUR developments from Sep 2011 to Dec 2014: If Hedge Funds were holding CHF positions, would you expect them to have been long or short the CHF?
Many possible case discussion points (16)

- **Time zone effects**
  - What are the time zones of the most important financial centers?
  - In which time zone is Switzerland?
  - Companies are typically required to disclose relevant information after trading on a particular day has ended, or not yet begun
  - How will this work in a global market, like the one for currencies?
  - Did some market participants have a time zone advantage?

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- **Areas for potential Finance research**
- Where and how could the case be used?
- Q&A
Areas for potential Finance research (1)

- Central Bank independence
- Central Bank credibility
- Sovereign Wealth Funds
- Exchange rates and cross rates dynamics
- Exchange rate equilibrium and market efficiency
- Exchange rates and interest rates
- Negative interest rates
- Possible economic consequences for Switzerland

Areas for potential Finance research (2)

- Effects on share prices of Swiss companies
- People’s reactions
- Pricing of mortgages in a negative interest rate environment
- FX mortgages – a retail carry trade
- Foreign bonds – a municipality carry trade
- Cross-listed shares and ADRs
- Hedge Fund strategies and FX
- Time zone effects
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• Areas for potential Finance research
• **Where and how could the case be used?**
• Q&A

Where and how could the case be used? (1)

• **MBA program**
  • Central Bank independence
  • Sovereign Wealth Funds
  • Exchange rates and cross rates dynamics
  • Exchange rate equilibrium and market efficiency
  • Negative interest rates
  • Foreign bonds – a municipality carry trade
  • Cross-listed shares and ADRs
Where and how could the case be used? (2)

- **MS Finance program**
  - Central Bank independence
  - Sovereign Wealth Funds
  - Exchange rates and cross rates dynamics
  - Exchange rate equilibrium and market efficiency
  - Negative interest rates
  - Pricing of mortgages in a negative interest rate environment
  - Foreign bonds – a municipality carry trade
  - Hedge Fund strategies and FX

Where and how could the case be used? (3)

- **GPMBA**
  - Central Bank independence
  - Sovereign Wealth Funds
  - Exchange rates and cross rates dynamics
  - Negative interest rates
  - Foreign bonds – a municipality carry trade
  - Possible economic consequences for Switzerland
  - People’s reactions
Where and how could the case be used? (4)

- **EMBA**
  - Central Bank independence
  - Sovereign Wealth Funds
  - Exchange rates and cross rates dynamics
  - Foreign bonds – a municipality carry trade
  - Possible economic consequences for Switzerland
  - People’s reactions

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- Where and how could the case be used?
- **Q&A**