

Un Fond Souverain pour la Suisse?

Didier Sornette

Department of Management, Technology and Economics, ETH Zurich, Scheuchzerstrasse 7, 8092 Zurich, Switzerland

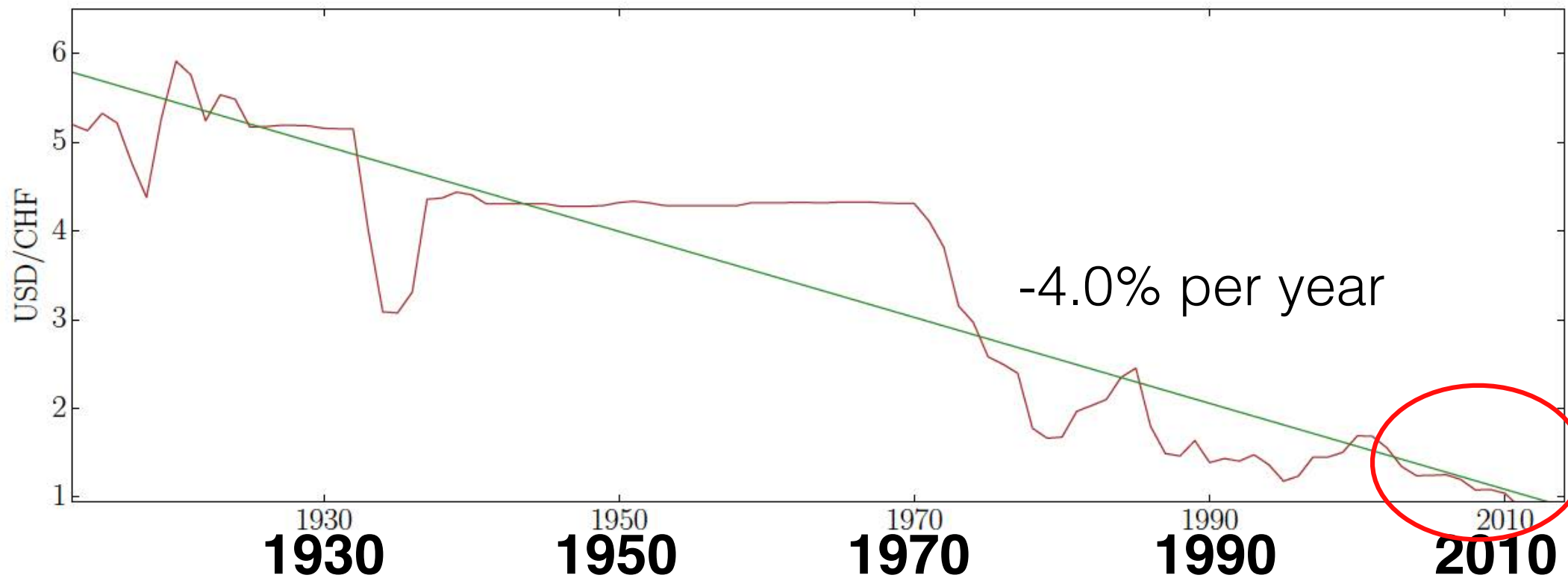
avec Richard Senner (Phd student, ETH Zurich)

Remerciements à Rezza Abhari, Christian Casal, Steffen Meister, Peter Wuffli

Symptoms

US\$-CHF 1913-2015

Chf per 1 US \$

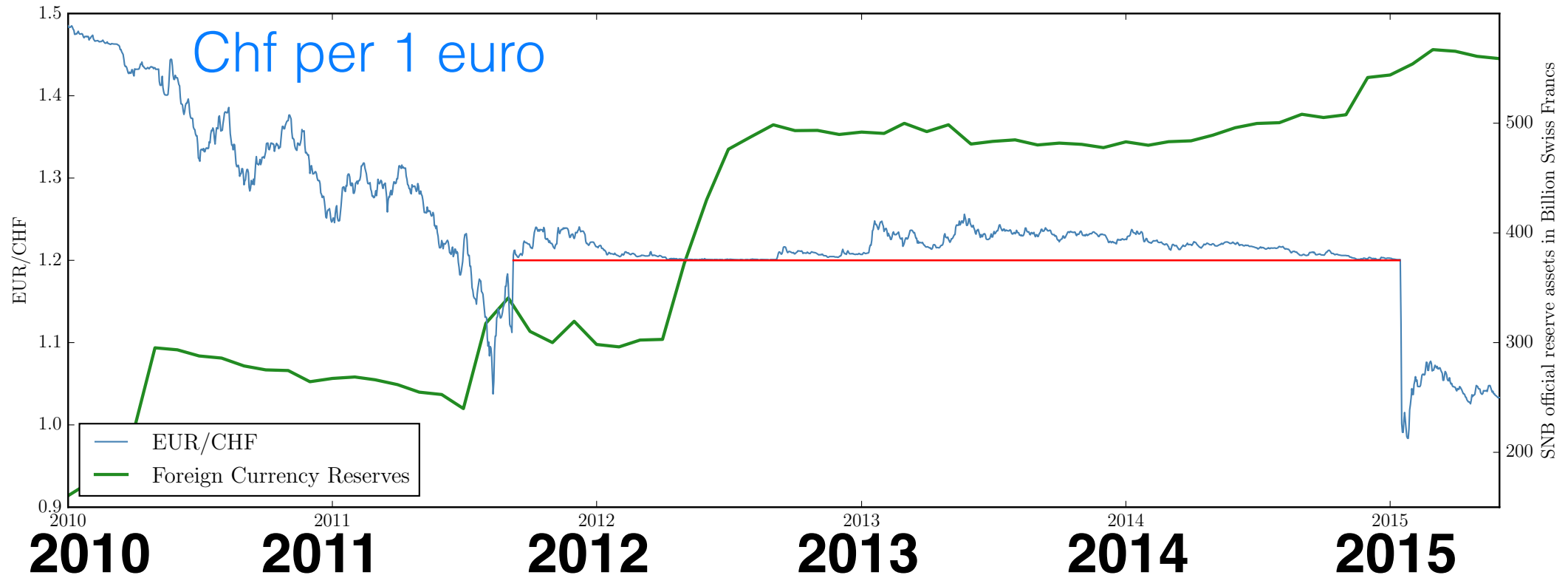


The euro/Swiss franc exchange rate from 1999 to 2015



- Inception in 1999: 1.58 Swiss francs per euro
- Peak in October 2007 at around 1.67 Swiss francs per euro
- Financial/Euro crisis: steady decline between 2008 and 2011
- Record low of 1.007 Swiss francs per euro on August 9, 2011
- Official target zone announcement on September 6, 2011 by the SNB
- Abandoning of (official) exchange rate defence on January 15, 2015
- rapid decline, then rebound and levelling around 1.05 Swiss francs per euro

The EUR/CHF and the SNB balance sheet



- the SNB has accumulated a portfolio of **weak** foreign currencies of a size comparable to the annual Swiss GDP



EUROPEAN CENTRAL BANK
EUROSYSTEM

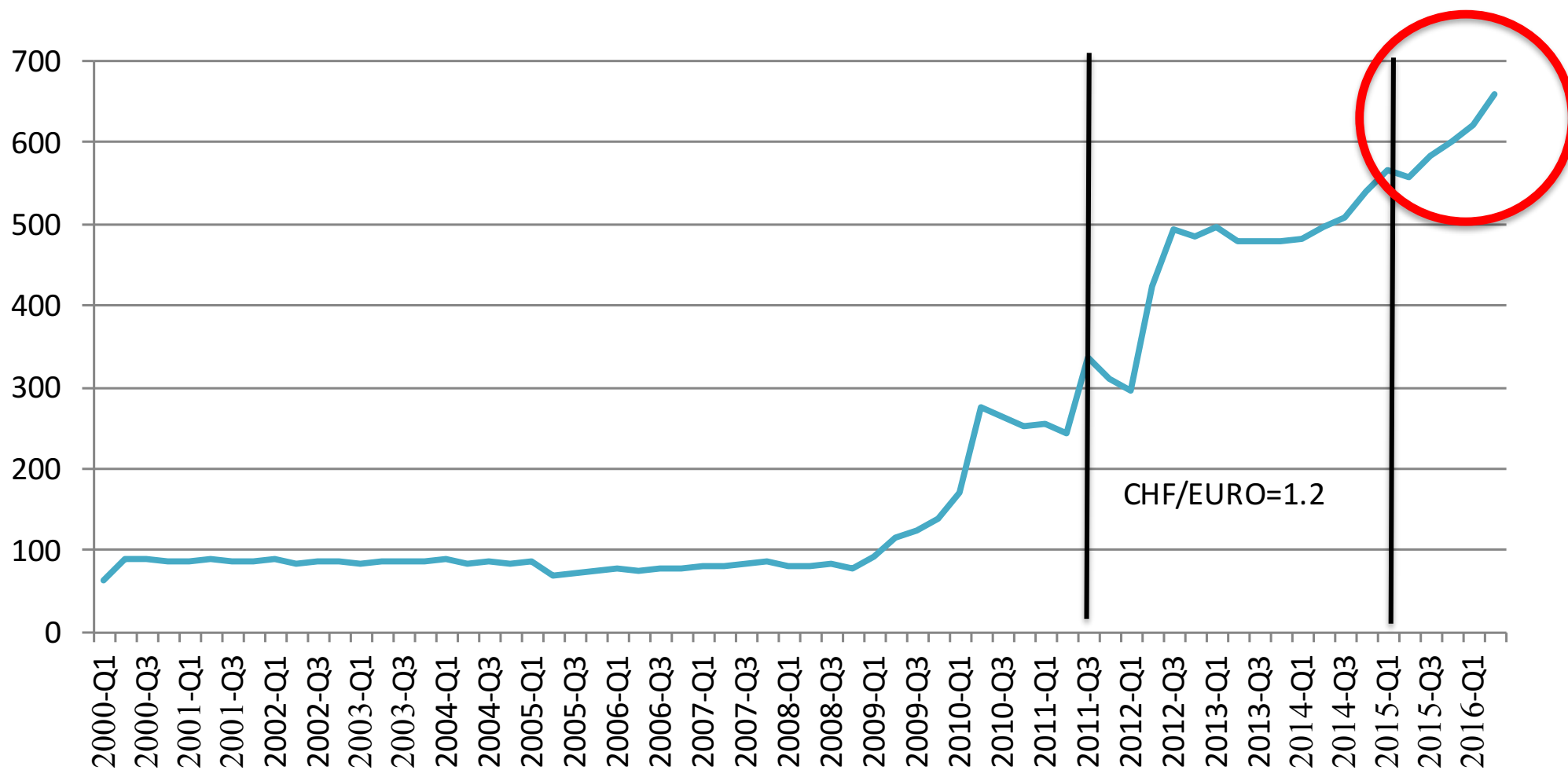
Chf per 1 euro





The CHF is NOT free floating as some people think. SNB continues to intervene after 15/01/2015

~100 Billion ChF per year

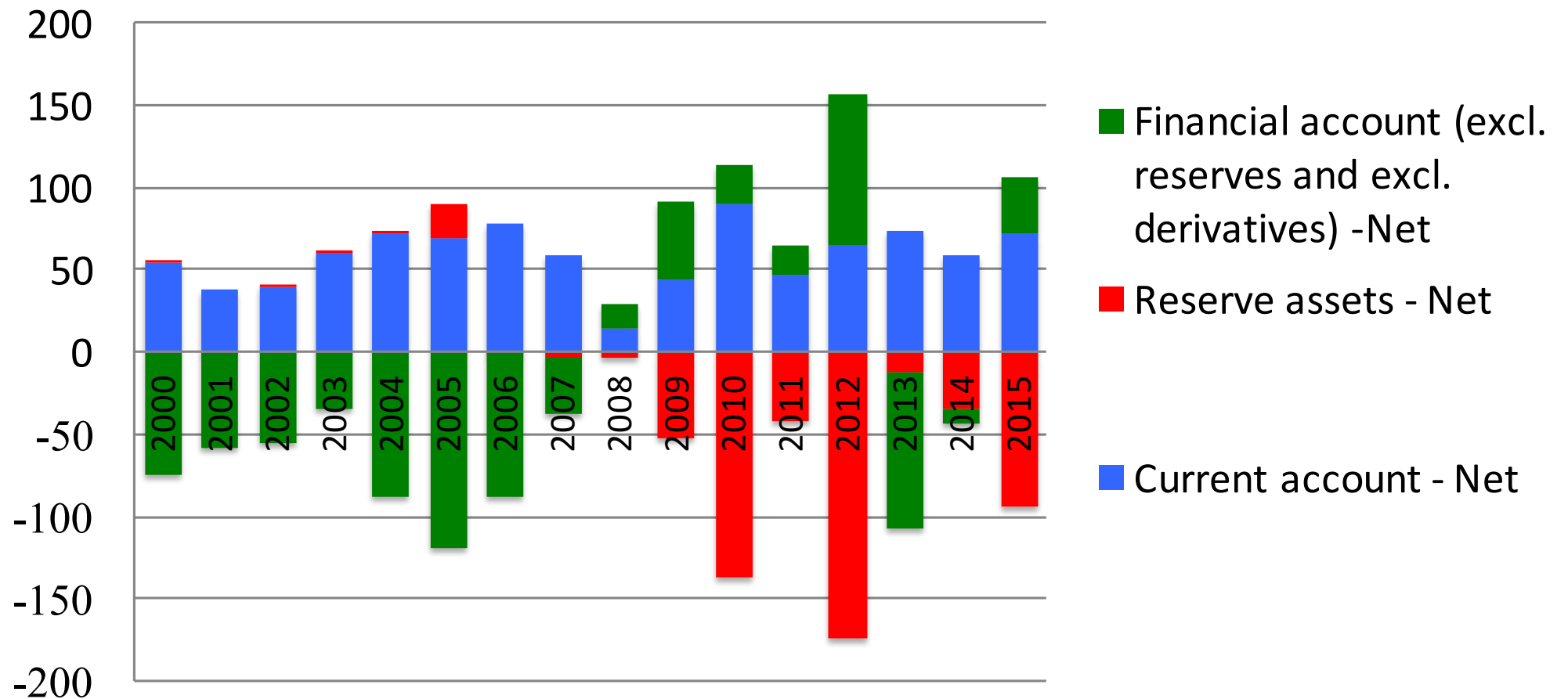
Total reserve assets, in billion CHF. Source: SNB



| Rank ↕ | Country ↕ | Foreign exchange reserves (Millions of US\$) ↕ | Figures as of ↕ |
|---------------------|--|--|---|
| 1 |  China ^[8] | 3,121,000 | October 2016 ^[1] |
| 2 |  Japan | 1,242,792 | October 2016 ^[2] |
| — |  Eurozone | 761,679 | February 2016 ^[3] |
| 3 |  Switzerland | 685,559 | October 2016 ^[4] |
| 4 |  Saudi Arabia | 535,900 | October 2016 ^{[5][6]} |
| 5 |  Taiwan | 435,263 | October 2016 ^{[5][7][8]} |
| 6 |  Russia | 385,700 | 25 November 2016 ^{[9][10][10][10][11][12][13][14][15]} |
| - |  <i>Hong Kong (China)</i> | 383,145 | 31 October 2016 ^{[16][17]} |
| 7 |  South Korea | 375,170 | October 2016 ^{[18][19]} |
| 8 |  Brazil | 365,556 | 30 November 2016 ^{[20][21]} |
| 9 |  India | 365,500 | 18 November 2016 ^{[22][23]} |
| 10 |  Singapore | 251,364 | October 2016 ^{[5][24]} |
| 11 |  Germany | 200,394 | April 2016 ^[25] |
| 12 |  Thailand | 182,668 | August 2016 ^[26] |
| 13 |  Mexico | 176,600 | August 2016 ^[27] |
| 14 |  United Kingdom | 164,003 | March 2016 ^[28] |
| 15 |  France | 153,890 | March 2016 ^[29] |
| 16 |  Italy | 143,183 | March 2016 ^[30] |
| 17 |  Iran | 125,900 | December 2015 ^[31] |
| 18 |  Turkey | 123,440 | November 2016 ^{[32][33]} |
| 19 |  Algeria | 121,900 | October 2016 ^[34] |
| 20 |  United States | 116,184 | 18 November 2016 ^[35] |
| 21 |  Indonesia | 115,000 | October 2016 ^[36] |
| 22 | Poland | 100,530 | March 2016 ^[37] |

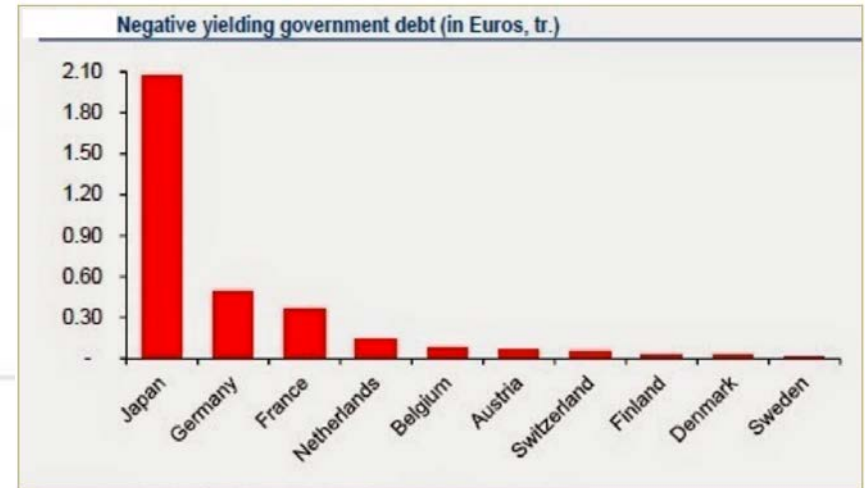
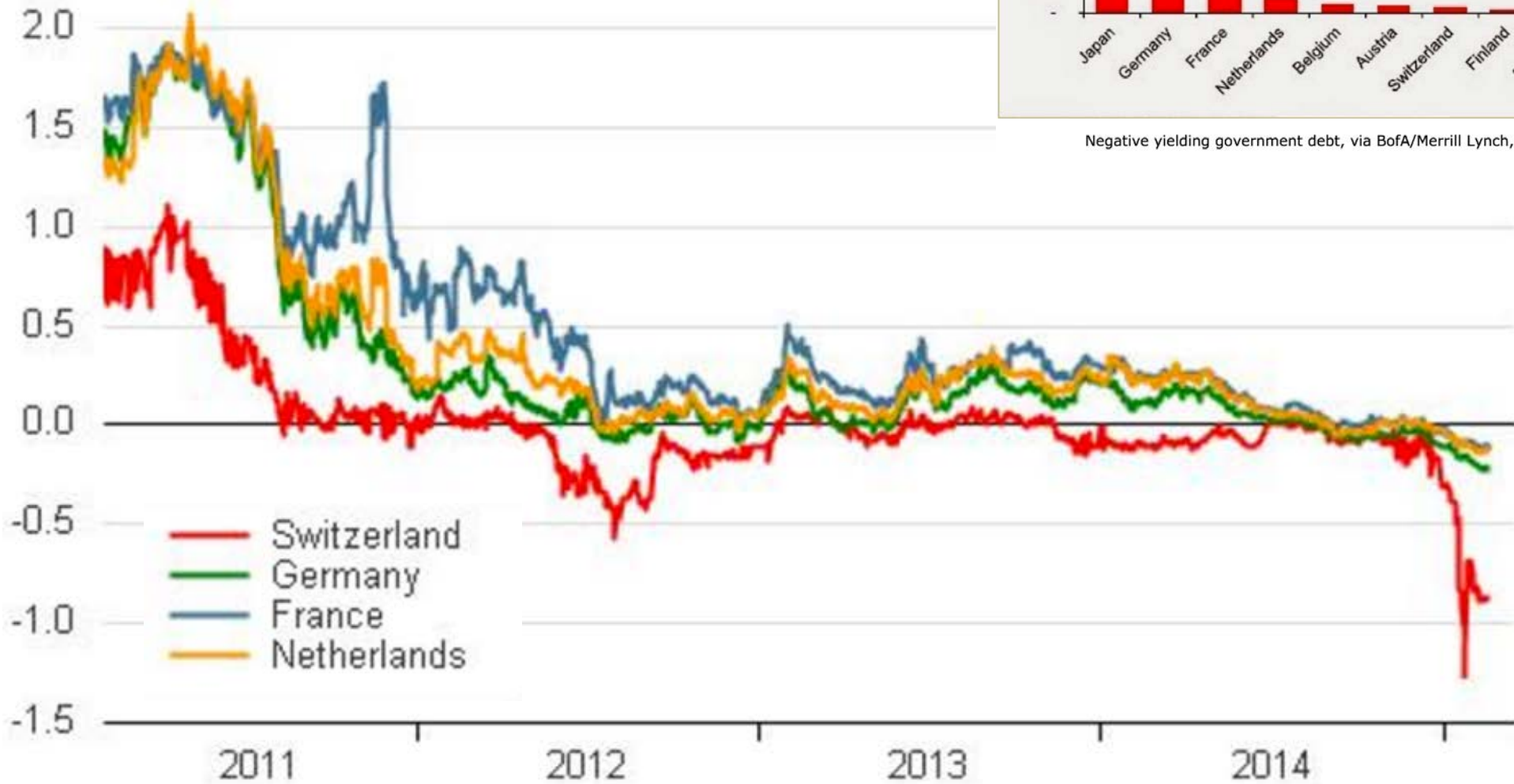
Private sector capital flows no longer mirror the current account surpluses: The SNB steps in

Swiss Balance of Payment, in billion CHF. Source: SNB



Negative bond yields

2-year benchmark government bond yield - percent



Negative yielding government debt, via BofA/Merrill Lynch, in € trn.

Manufacturers' new orders, change from the same quarter a year earlier, based on the Swissmem index



In response to the Swiss franc's strength, companies have sought to stay competitive through **extra working hours, pay freezes and stepped-up production.**

Diagnostic

Fundamental origins of the on-going economic crises

1945-1970: reconstruction boom and consumerism

1971-1980: Bretton Woods system termination and oil shocks / inflation shocks

1981-2007: Illusion of the “perpetual money machine” and virtual financial wealth

2008-2020s: New era of pseudo growth fueled by QEs and other Central Banks+Treasuries actions

- very low interest rate for a very long time (decades)

- net erosion even in the presence of apparent low (disguised) inflation

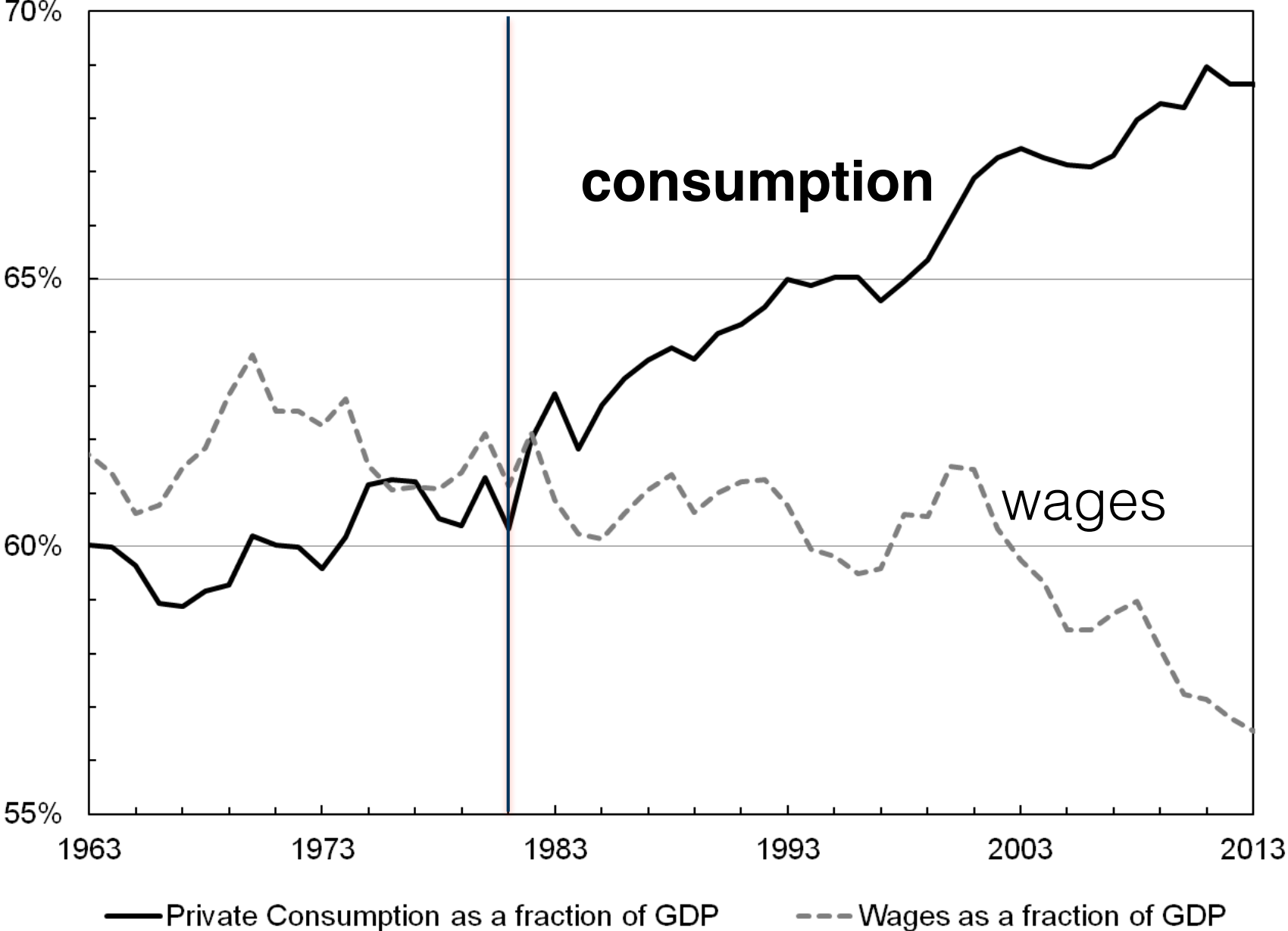
- reassessment of expectation for the social and retirement liabilities

- a turbulent future with many transient bubbles

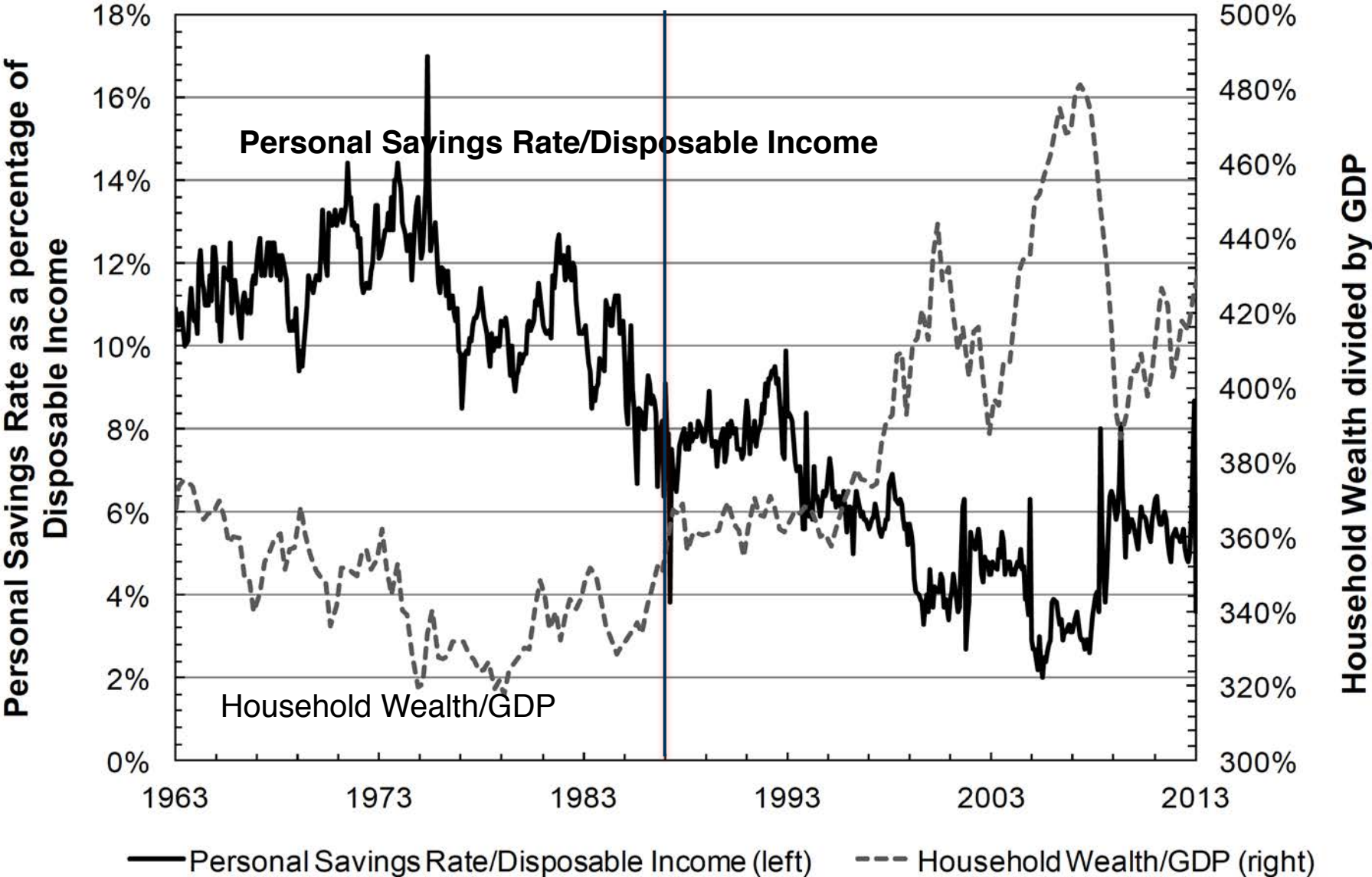
- need to capture value and be contrarian => exploit herding and fear

2020s-20xx: Interconnection of many systemic risks

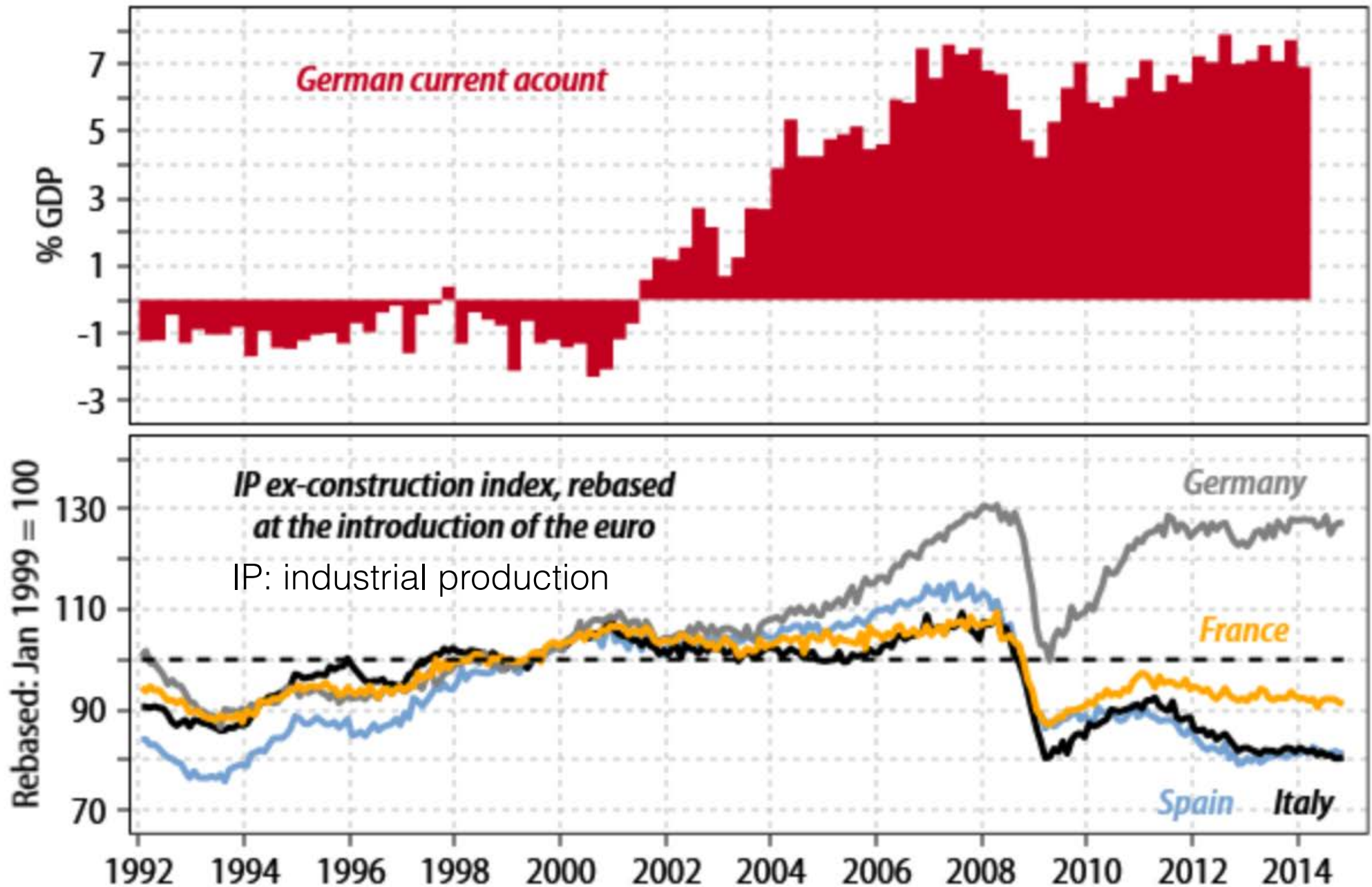
The share of wages and of private consumption as a percentage of the Gross Domestic Product (GDP) for the U.S. from 1963 until 2013. Source of data: Ameco, the Annual Macro-Economic Database of the European Commission, and Michel Husson.



The share of wages and of private consumption as a percentage of the Gross Domestic Product (GDP) for the U.S. from 1963 until 2013. Source of data: Ameco, the Annual Macro-Economic Database of the European Commission, and Michel Husson.



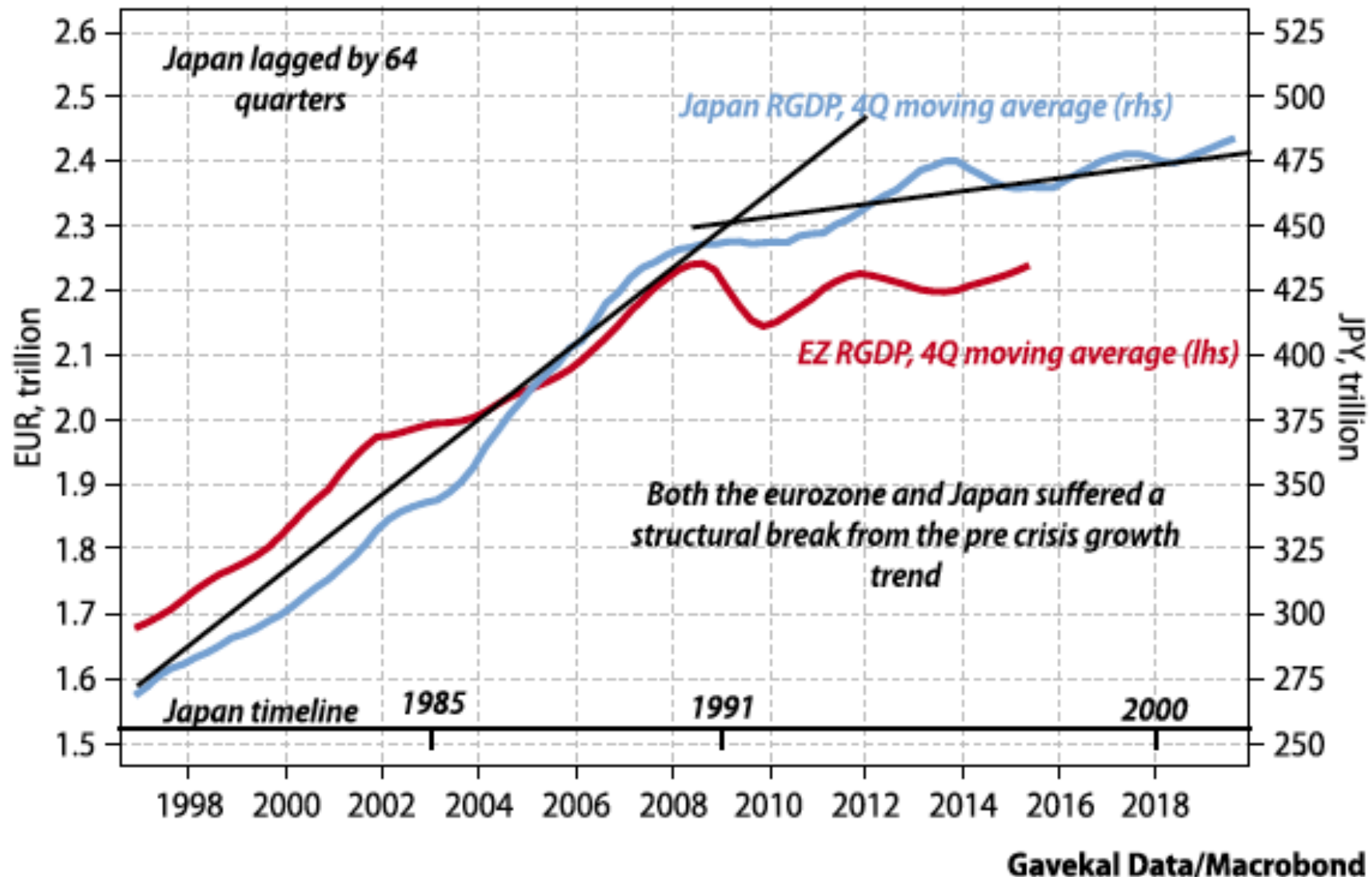
Diverging competitiveness



Risks and uncertainties in Europe

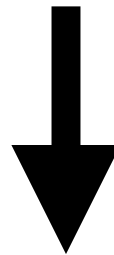
- PIGS countries (Portugal, Ireland, Greece, Spain)
- Italy (political, banks, enormous debt) and then... France
- BREXIT
- Growing productivity divergence
- Absence of will for fiscal transfer
- The euro “Frankenstein monster”
- Inequality and impoverishment of the bottom 95%
- Political shifts (“populism”) and social instabilities

The “new normal” and slow growth / euro instabilities are with us for the long term!



Diagnostic:

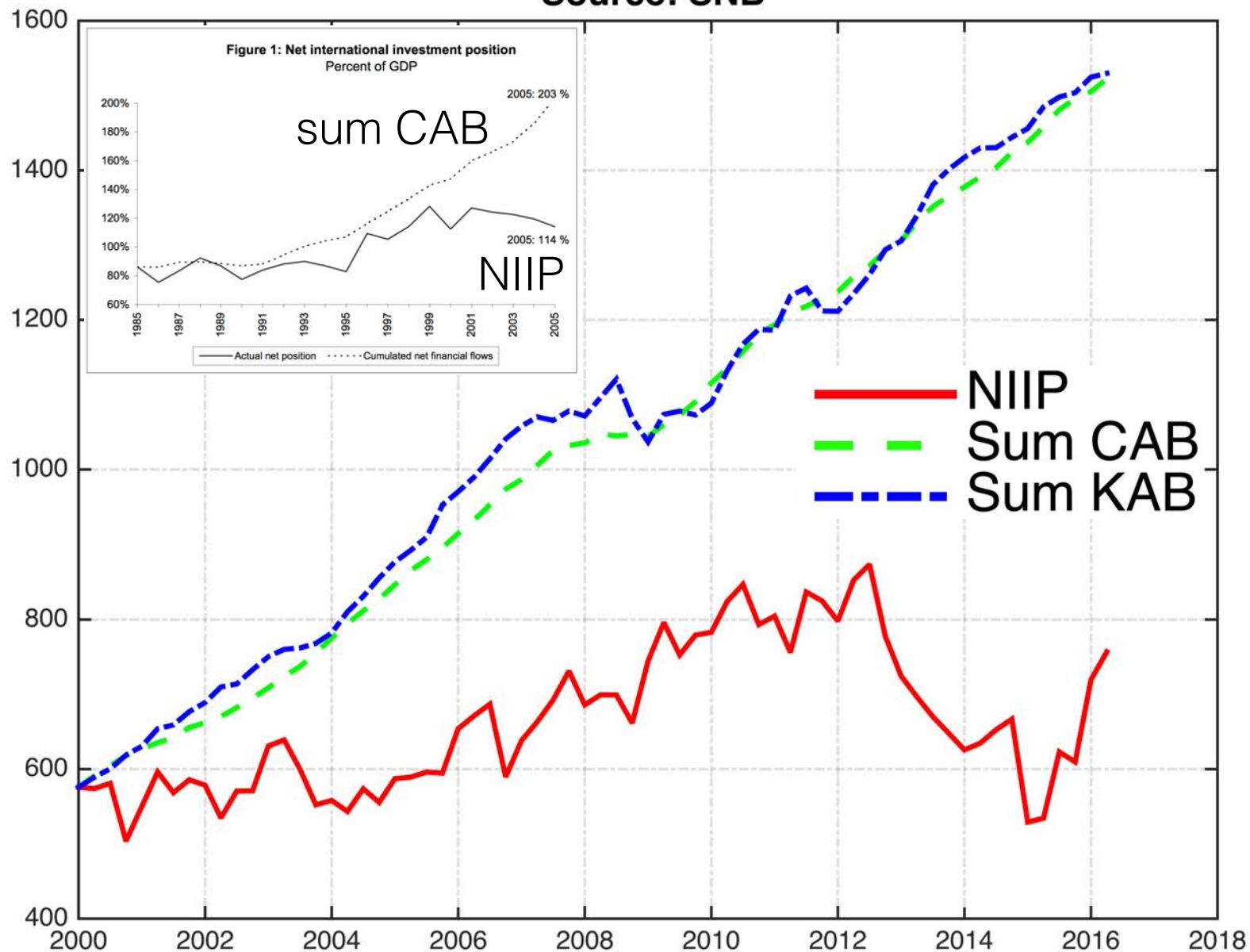
The pressure on the Swiss franc has been growing in the last **8 years** and will continue in the next **3-5 decades!**



~ +100 Billion ChF per year

NIIP and cumulated CAB and KAB, in billion CHF

Source: SNB

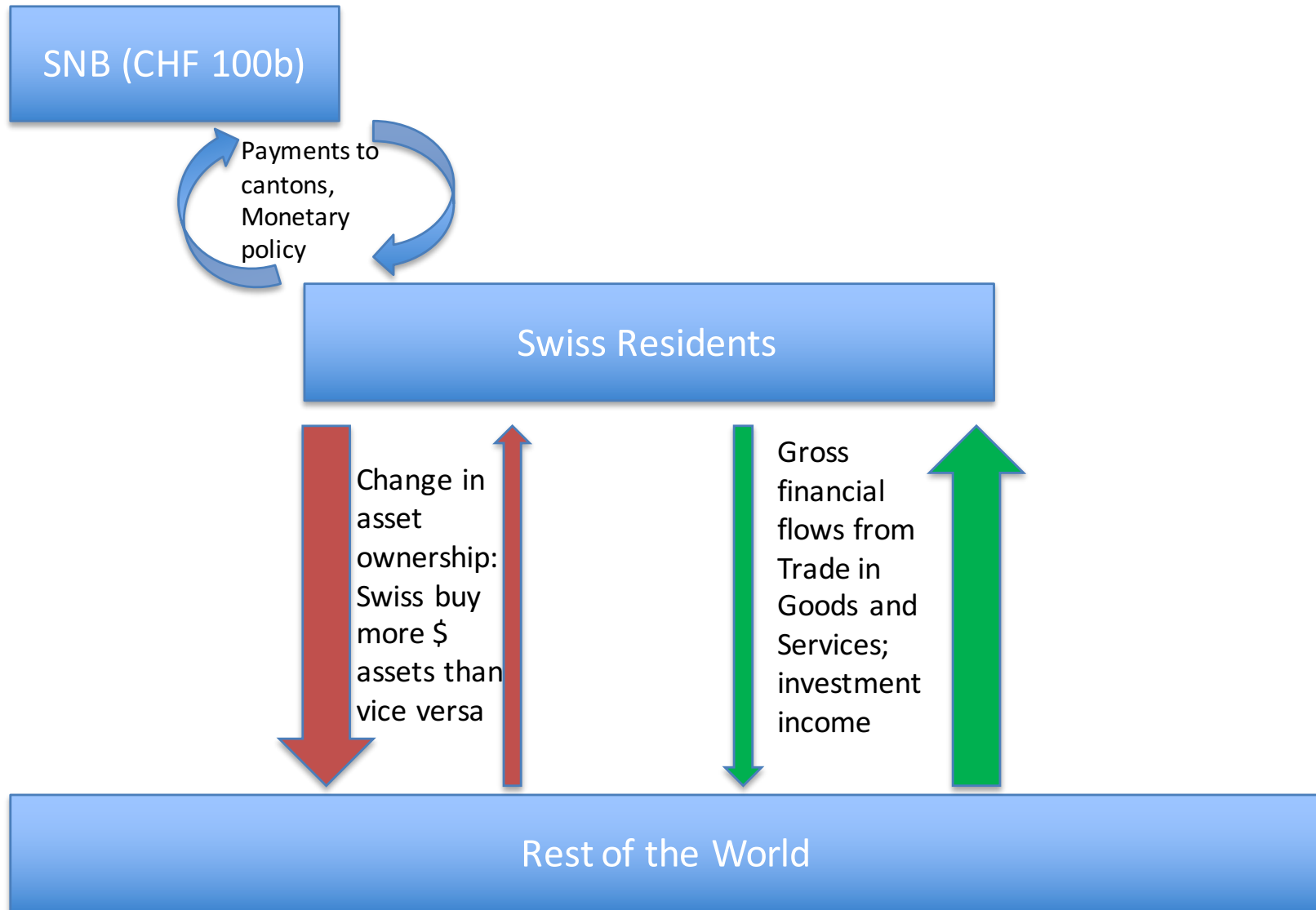


CAB: current account balance; KAB: capital account balance
NIIP: net international investment position

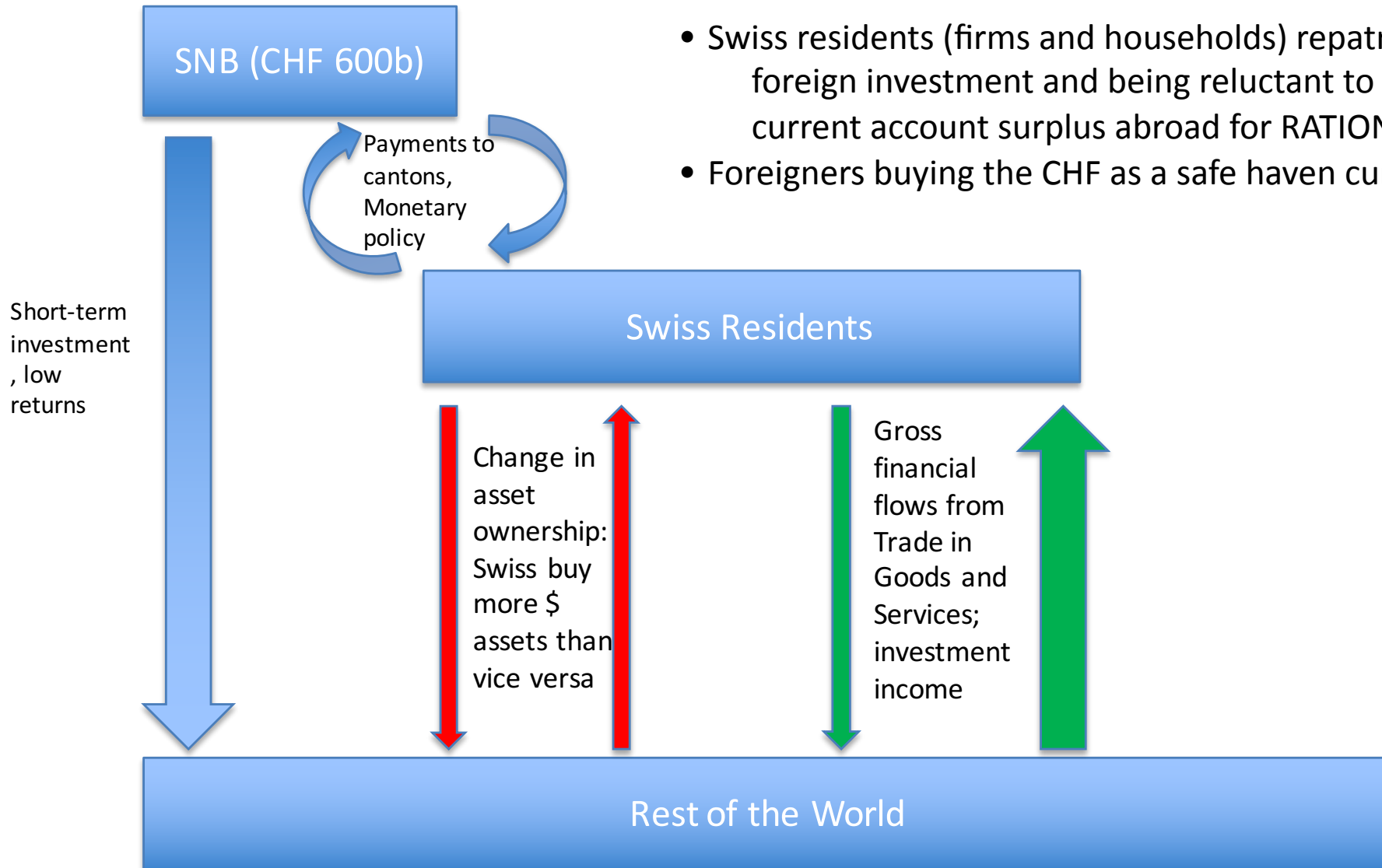
Need for long-term solutions



In the past

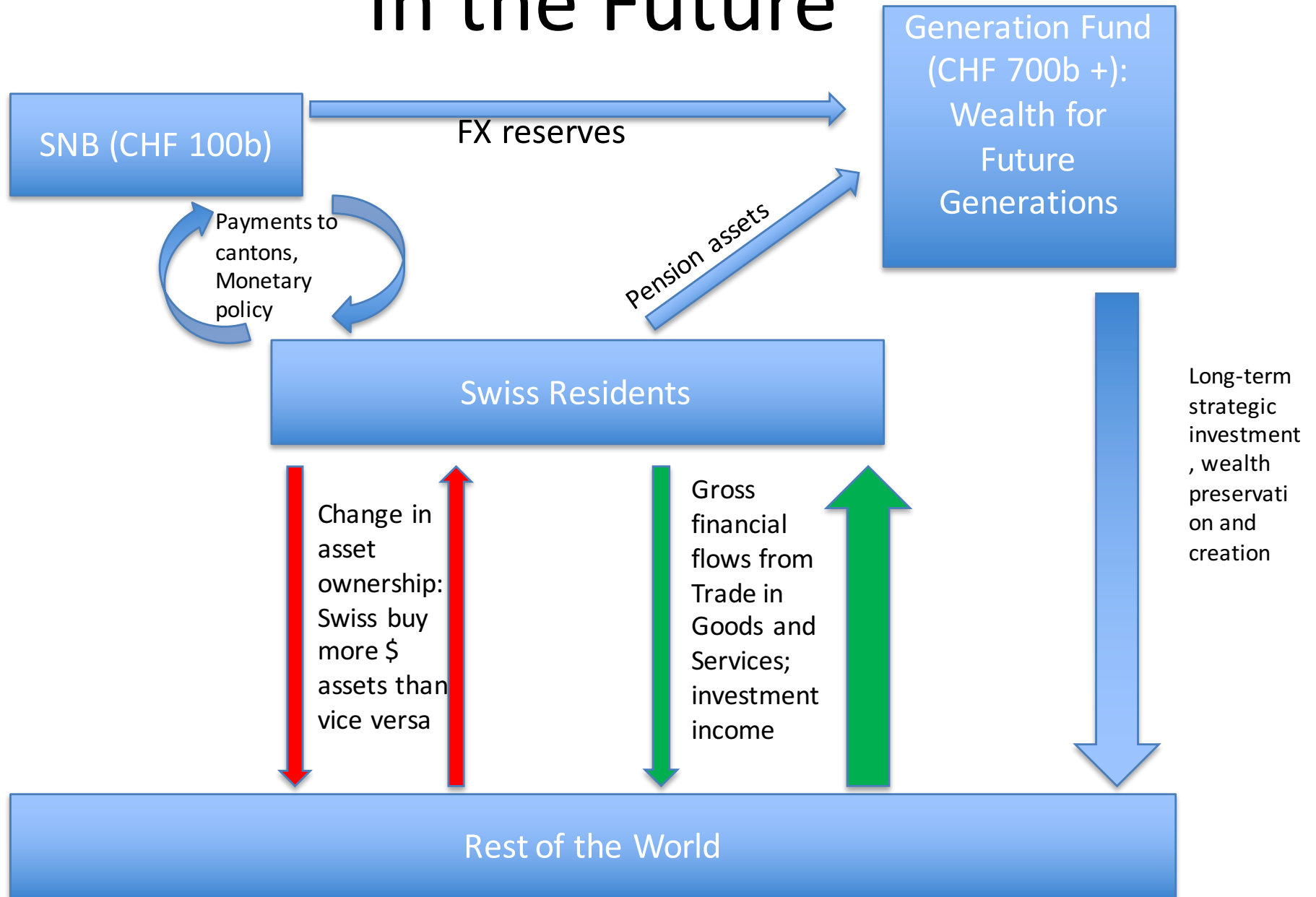


Recently



- Swiss residents (firms and households) repatriating foreign investment and being reluctant to invest the current account surplus abroad for RATIONAL reasons
- Foreigners buying the CHF as a safe haven currency

In the Future





NO. 1 GLOBAL COMPETITIVE ECONOMY

Switzerland's high R&D spend and excellent universities have made it the globe's most competitive economy for the sixth consecutive year, according to the World Economic Forum. The Forum's ranking reflects such areas as Switzerland's labor and financial markets, ability to harness existing technologies, and innovation.

The Global Competitiveness Report 2014-2015 says:

"Switzerland's top-notch academic institutions, high spending on R&D, and strong cooperation between the academic and business worlds contribute to making it a top innovator." ([Read more](#))

NO. 1 IN INNOVATION

It's official: Switzerland is the most innovative country in the world. It has topped the *Global Innovation Index* of more than 140 countries every year since 2011. This influential league table ranks nations on their innovation capabilities and results, across such areas as human capital and research, knowledge and technology outputs and market sophistication. It is published by Cornell University, INSEAD, and the UN's World Intellectual Property Organization.

And Swiss corporations are not shy of investing substantially into their digital future— according to a recent EY study amongst 12 leading economies worldwide Swiss companies not only made the largest financial investments into their projects but also were the most confident as to the chance of digital technology for their businesses and future growth prospects. ([Read more](#))





NO. 1 IN DIGITAL INVESTMENTS

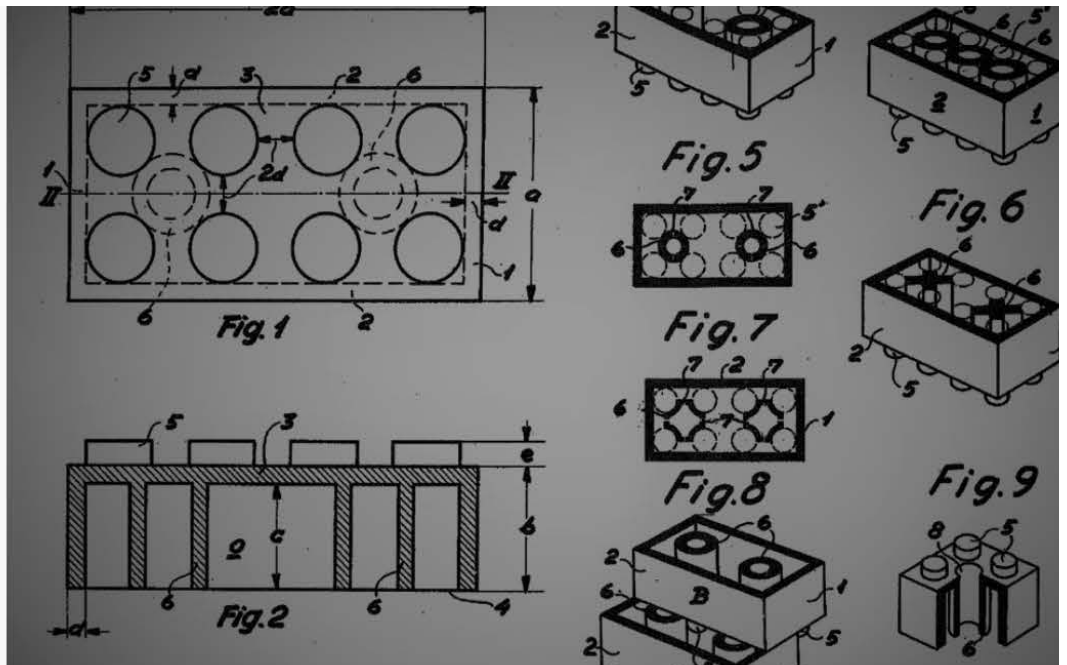
When starting a new venture in digital innovations, be there where the most investments happen. A recent study of EY (Ernst & Young) has shown that in 2015 Swiss companies are planning the highest investments in digitalization in comparison to other countries.

Also, Swiss companies consider digital technologies as a the most important factor driving changes in their business models. In a global comparison, Swiss companies are the most optimistic ones in regards of digitalisation and investments into new technologies. ([Read more](#))

TOP 5 IN INTELLECTUAL PROPERTY RIGHTS

Innovative ideas need looking after and Switzerland offers world-class intellectual property protection. It was ranked fifth of 97 countries in the 2014 International Property Rights Index, which scores and ranks countries worldwide based on the state of their legal and political environment, physical property rights, and intellectual property. ([Read more](#))

<http://digitalzurich2025.com>





MAXIMUM POLITICAL STABILITY

Centuries of political stability and peaceful co-existence built the foundations for Switzerland's exceptionally strong financial services industry and make it the perfect place for international organisations, companies and start-ups to settle.

Switzerland regularly ranks as one of the most politically stable countries in the world: inflation is well below that of most EU states and other important industrialized nations, as is unemployment, the state budget and national debt. ([Read more](#))

CENTRAL IN EUROPE

Zurich Airport is at the heart of Europe, providing both an international gateway and a contemporary and attractive meeting place for visitors from around the world. The airport is an active traffic hub, serving 168 destinations in 60 countries and handling more than 760 flights and 1,000 tonnes of cargo daily and 26 million passengers every year.

In recognition of its all-round qualities, it has been voted World Travel Awards' European Airport of the Year for the past two years. ([Read more](#))



RAPID INTERNET SPEED

For development of digital innovations a sufficient connectivity is essential. Switzerland offers one of the highest broadband penetration rates in Europe. High-speed 4G/LTE mobile internet covers 98% of the population, while a G3/UMTS signal reaches almost everyone (99.8 %). Meanwhile, fiberglass internet connection is being installed across Switzerland, and already covers most of the Zurich area. ([Read more](#))



NO. 1 IN LIFE QUALITY

If you want to attract and retain the best talent, there are plenty of reasons to headquarter your startup in Zurich.

The quality of life in Switzerland is higher than anywhere else in the world, according to the Economist Intelligence Unit (EIU). The EIU's **where-to-be-born index** ranked 80 countries on the basis of such factors as income, geography, demography and culture. And, needless to say, we think Zurich is the cream of the Swiss crop.

In the summers you can start your day with a swim in Lake Zurich, or enjoy an after-work drink by the Limmat river or in the charming Old Town. Meanwhile, the Alps are just a half an hour away by train, so even hardworking entrepreneurs can find time to recharge their batteries.

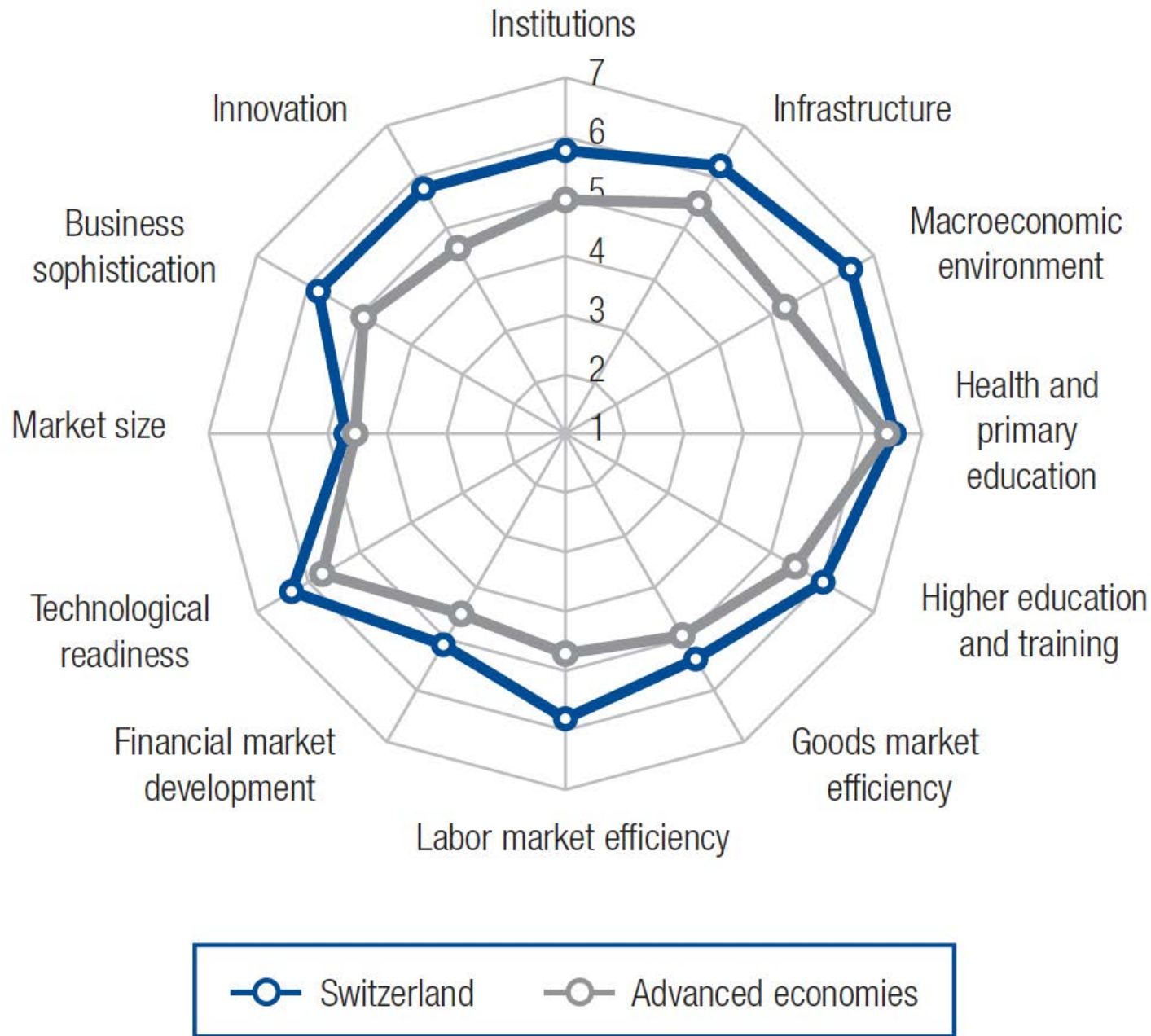
And for those who want to combine work and play, why not try a sky-high business retreat like **Alpine Co-Working?**

NO. 1 IN HAPPINESS

Happy people live longer, are more productive, earn more, and are better citizens – and Switzerland is home to many of them. Since 2012 Switzerland has been leading the United Nations (UN) ranking as the world's most happiest nation.

The report, published by the Sustainable Development Solutions Network, assessed more than 150 countries against six fields: real GDP per capita, healthy life expectancy, social support, freedom to make life choices, absence from corruption, and generosity. ([Read more](#))





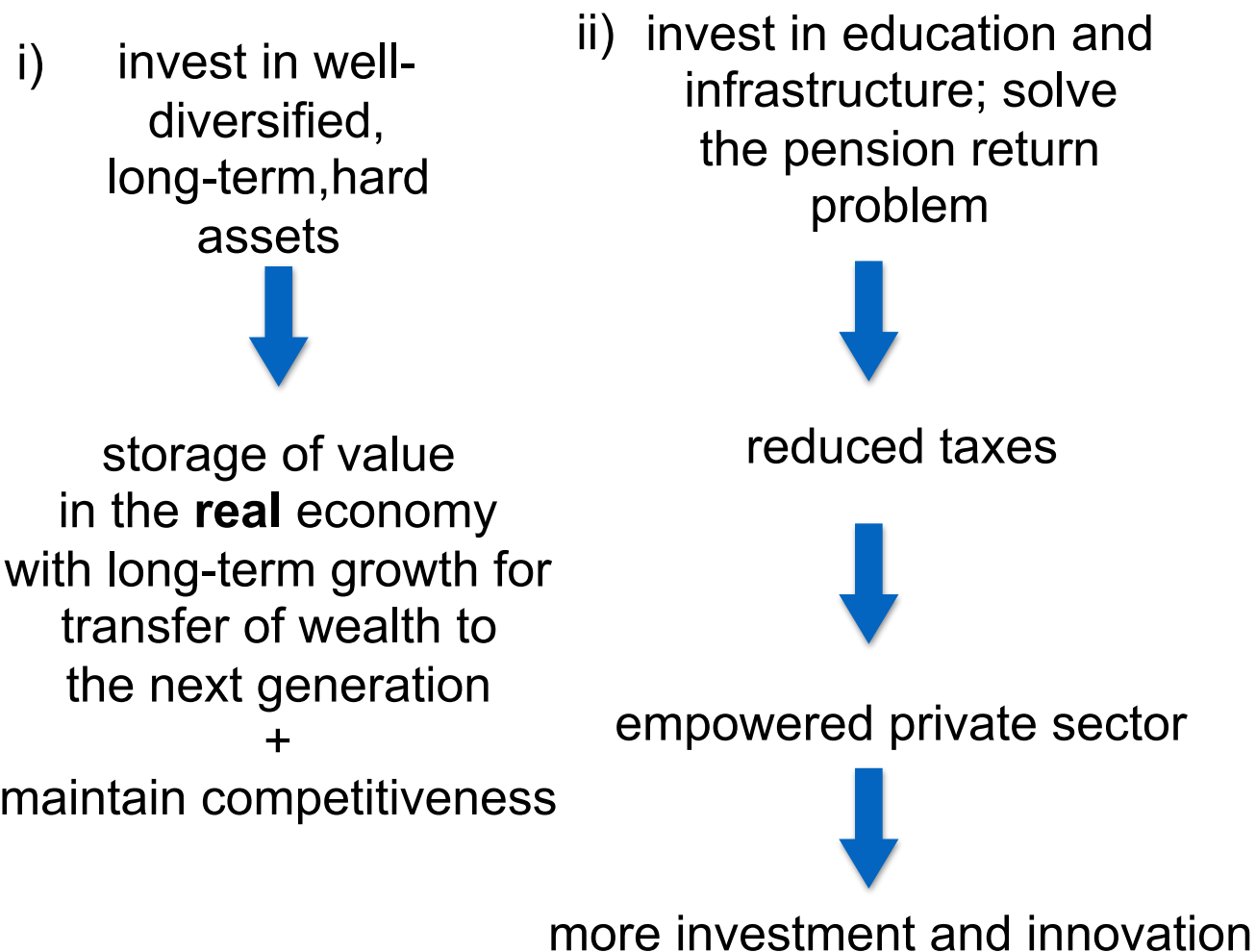
Fond Souverain Suisse

(“Swiss Generation Fund”)



The Swiss Sovereign Fund

- creation of a Swiss Sovereign Fund (SSF) to **capitalise the Swiss success**
- with the SSF, we reach two goals:
 1. stabilise the CHF with respect to a predefined currency basket
 2. earning from the SSF can be use to:



Benefits from the creation of a new sovereign fund

- Opportunity for socially responsible investment
- Model of governance to promote and export the Swiss way
- addresses the pension liabilities of >100'000 euro per person
- intergenerational commitment

(“la force de la communauté se mesure au bien-être du plus faible de ses membres”, Constitution Suisse)

The Swiss Sovereign Fund

- 1) Institution structure, design, mandate, bylaws
- 2) How do we get the money (SNB, Swiss Gov debt, a special vehicle like Fanny Mae issuing Gov backed debt, pension funds)
- 3) How do we invest this money abroad (best Swiss minds and international professionals on the model of Harvard/Yale/Stanford)
- 4) How do we utilise the proceeds / returns within Switzerland (in addition to reinvesting and thus growing the fund for the future)?
Well designed consensual projects.
- 5) Contingency plans in case of (i) an attack on the Swiss franc and (ii) a crash or large loss on the fund.

T=0

Central Bank Balance Sheet

| Assets | Liabilities |
|--|----------------|
| Domestic stocks and government bonds, gold | Banknotes |
| Foreign currency reserves | Sight deposits |

Balance Sheet of the Sovereign Wealth Fund

| Assets | Liabilities |
|--------|-------------|
| - | - |
| | |
| | |

T=1

Central Bank Balance Sheet

| Assets | Liabilities |
|--|--------------------|
| Domestic stocks and government bonds, gold | Banknotes |
| Foreign currency reserves -200 | Sight deposits |
| Special Bonds +200 | |

Balance Sheet of the Sovereign Wealth Fund

| Assets | Liabilities |
|--------------------------------|--------------------|
| Foreign currency reserves +200 | Special bonds +200 |
| | |
| | |

T=2

Bonds can be sold to banks or insurance companies, sterilizing sight deposits at the central bank

| Central Bank Balance Sheet | |
|--------------------------------------|---------------------|
| Assets | Liabilities |
| Domestic stocks and government bonds | Banknotes |
| Gold | Sight deposits -100 |
| Foreign currency reserves | |
| Special Bonds -100 | |

| Balance Sheet of the banking sector + insurance + private | |
|---|--|
| Assets | Liabilities |
| Sight deposits at the central bank -100 | Deposits (checking and savings accounts) |
| Special Bonds +100 | |
| | |

Who manages the SSF?

1/3 academic

1/3 investor professionals

1/3 parliament/democratic representatives

Senior financial investors and risk management, with different mindset and expertise than the central banks, enhancing wealth

Scenario: SSF=500 Billion Chf

5% return on foreign investments - 3% ChF appreciation

=> 2% net return in ChF => 10 B ChF return

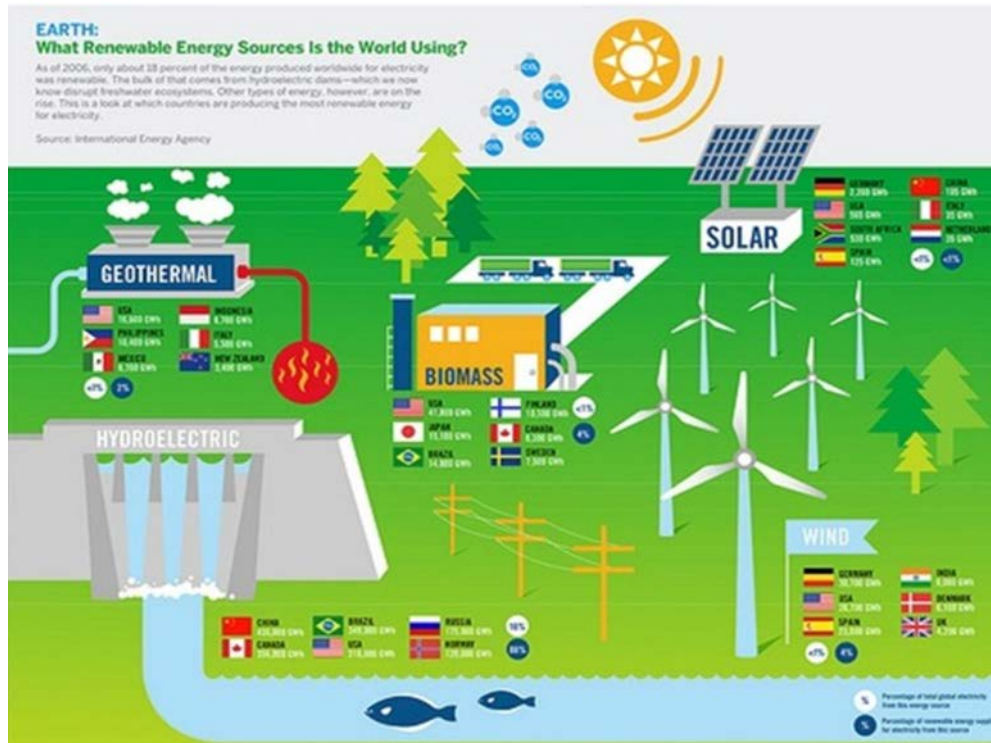
5 B reinvested and 5 B earmarked for super Apollo projects and other ambitious initiatives

| <i>Average real annual rate of return (after deduction of inflation and all administrative costs and financial fees)</i> | Période 1980-2010 |
|--|-------------------|
| All universities (850) | 8.2% |
| incl.: Harvard-Yale-Princeton | 10.2% |
| incl.: Endowments higher than 1 billion \$ (60) | 8.8% |
| incl. Endowments between 500 millions and 1 billion \$ (66) | 7.8% |
| incl. Endowments between 100 and 500 million \$ (226) | 7.1% |
| dont: Endowments less than 100 million \$ (498) | 6.2% |

Between 1980 and 2010, U.S. universities earned an average real return of 8.2% on their capital endowments, and all the more so for higher endowments. All returns reported here are net of inflation (2.4% per year between 1980 and 2010) and of all administrative costs and financial fees. Sources: see piketty.pse.ens.fr/capital21c.

Super-Apollo projects

WWII effort in time of “peace” but great global challenges
nuclear, batteries, water, de-desertification, health...



Switzerland could become the world leader in green technologies, exporting worldwide the breakthroughs.

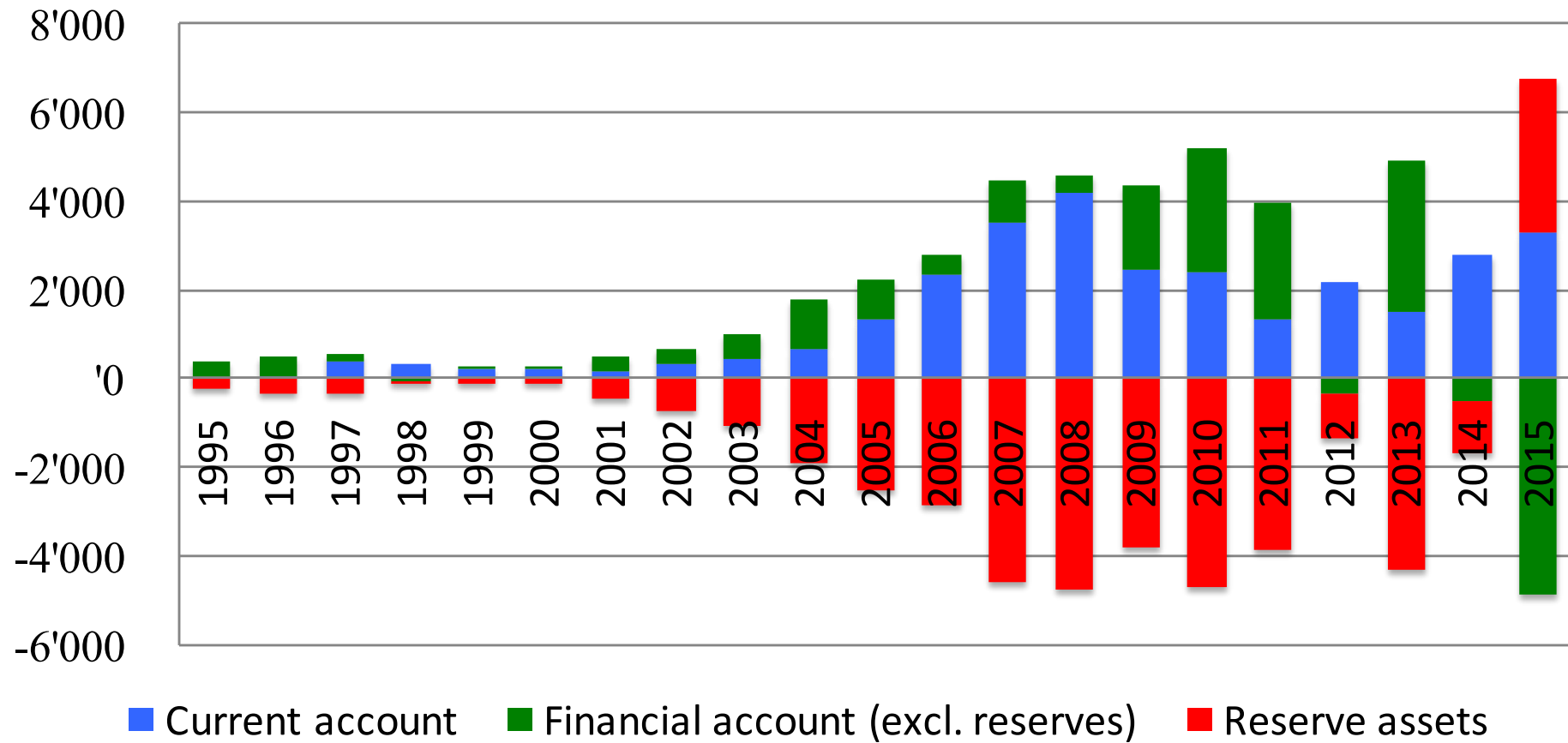
need for **massive innovation / productivity policies**
to complement / replace non-working monetary and fiscal policies

The Swiss case is not unique, and a Sovereign Wealth Fund not something extraterrestrial.

Let us have a look at China, Korea and Singapore...

China: Current Account surpluses and capital inflows are mirrored by central bank intervention

China Balance of Payment, in \$100 mio. Source: SAFE

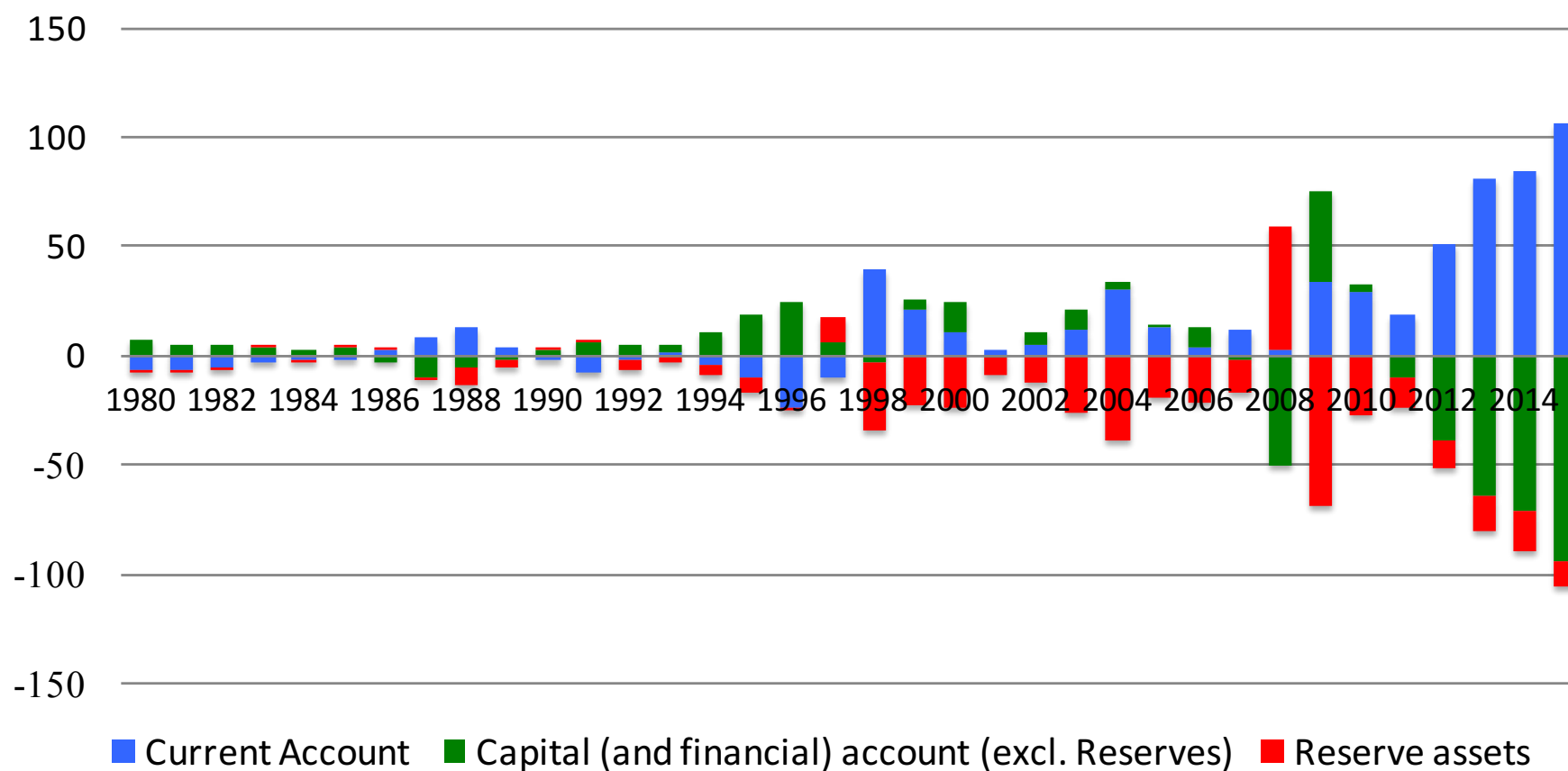


China Investment Corporation (CIC)

- Currently USD 814 billion assets under management according to SWFI
(<http://www.swfinstitute.org/swfs/china-investment-corporation/>)
- Created to better manage part of the foreign exchange reserves
- The new vehicle CIC issues bonds amounting to USD 200b guaranteed by the government that are swapped with some of the foreign exchange reserve

South Korea: After the Asian Crisis of 1997, reserves are accumulated, mirroring a current account surplus

Korea Balance of Payment, in billion USD. Source: Bank of Korea

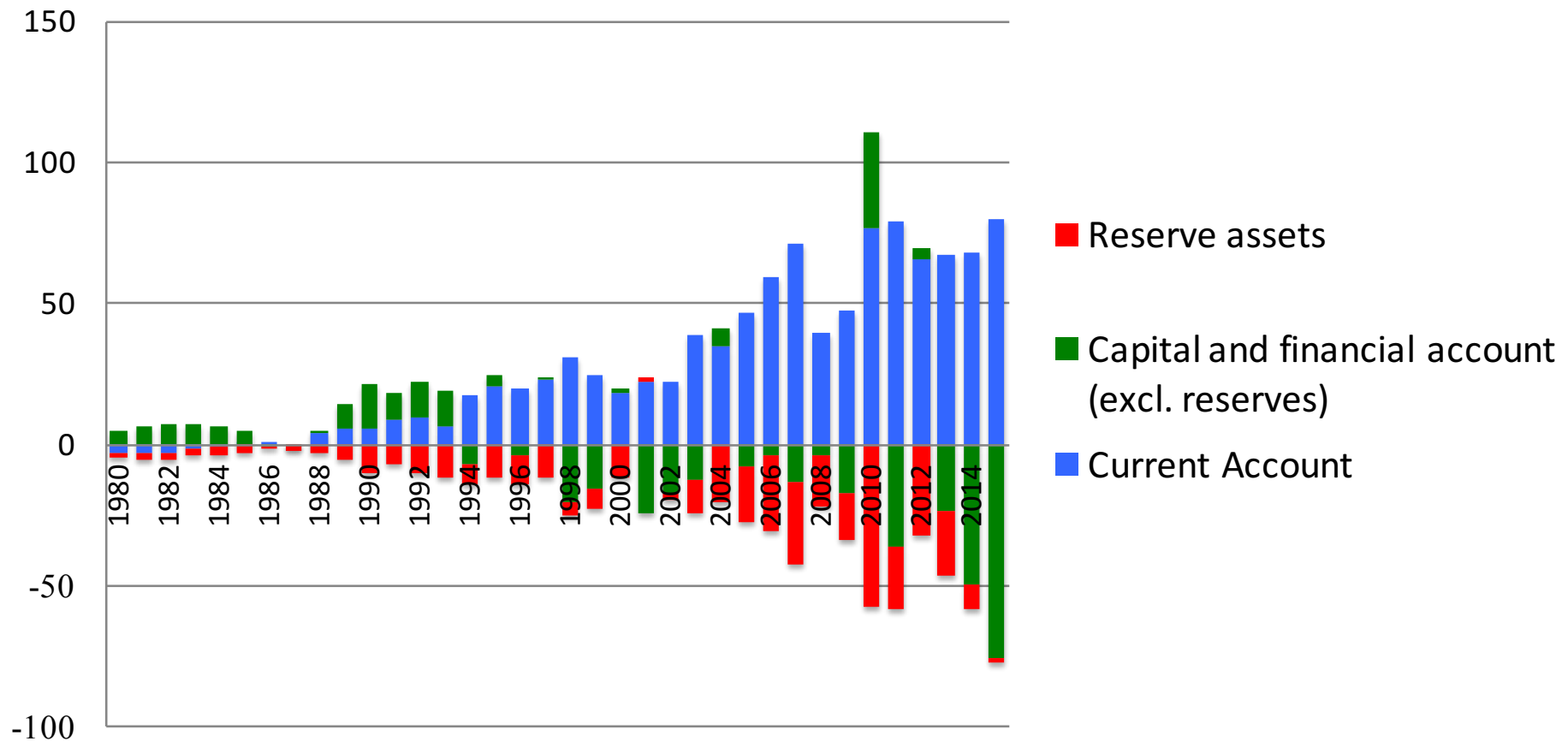


Key facts: Korea Investment Corporation (KIC)

- 2003: Creation of the KIC with \$17b FX reserves and \$3b assets
- Motivation:
 - Central Bank does not need all FX reserves (\$360b in 2015) and cannot invest in illiquid assets
 - Create high long-term returns
 - Develop Korea as asset management center
 - Since 2011 KIC is allowed to issue bonds
 - Currently \$90b under management, but the goal are \$200b by attracting domestic pension funds that lack the necessary expertise and risk-sharing capabilities to enhance investment performance
 - Net foreign wealth of Korea is \$198b in 2015

Similar story in Singapore: Huge current account surpluses and continuous acquisition of reserve assets

Singapore Balance of Payment, in billion S\$.
Source: Singapore Statistics.

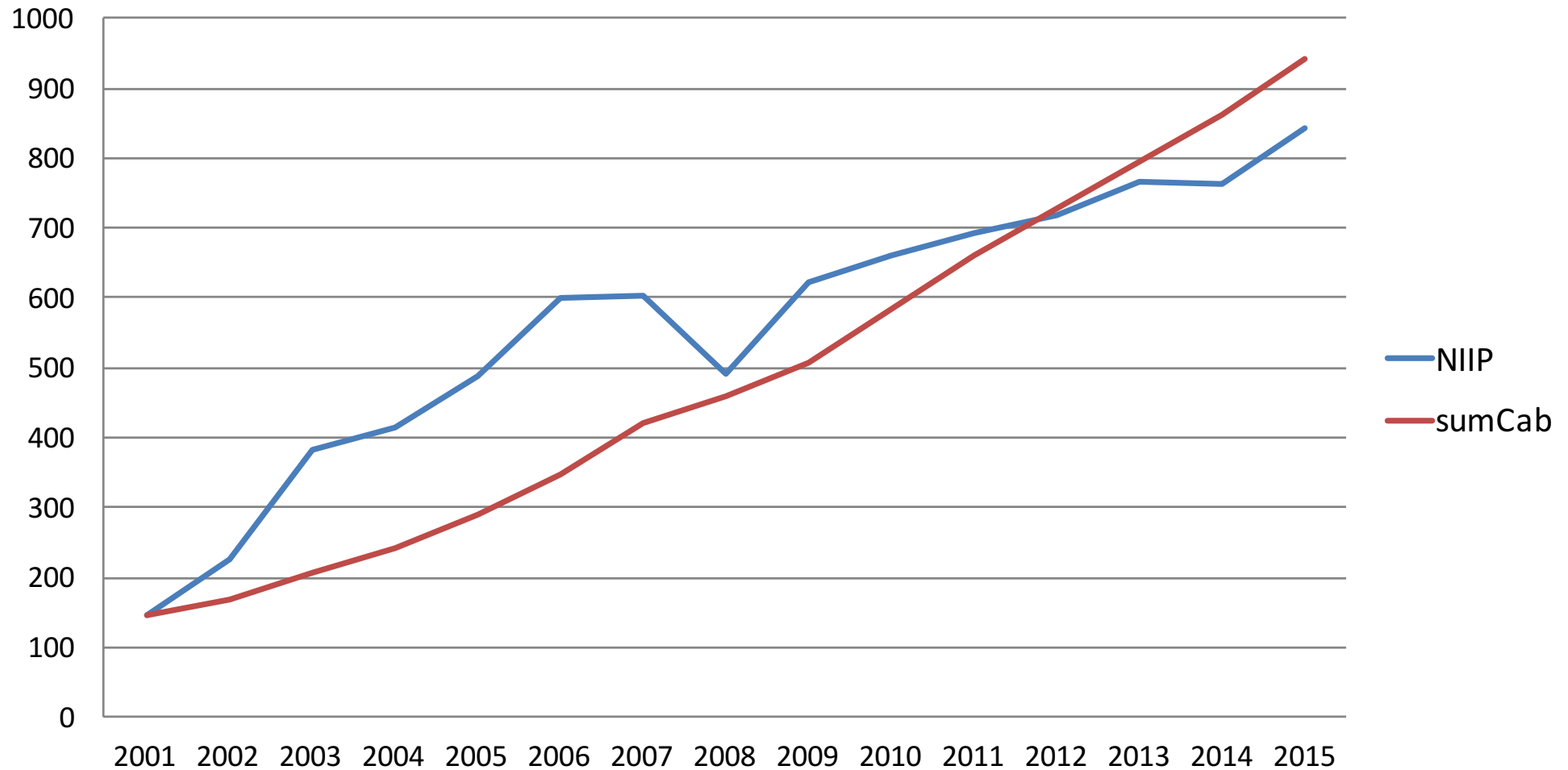


Singapore

- Small open economy with a financial center, like Switzerland
- Persistent Current Account Surpluses
- Exchange rate policy: Crawling peg (slowly appreciation Singaporean Dollar)
- Central Bank and two Sovereign Wealth Funds aim at over-compensating the losses from the appreciation
- Central bank plus roughly $\frac{1}{2}$ of Temasek Holdings plus GIC assets amount to over 200% of GDP (which is roughly equal to the Net foreign wealth (NIIP))
- All together they make sure that foreign investment is large enough, mirroring the current account surplus

Successful preservation of wealth (Singapore)

NIIIP and sum of CAB for Singapore, in billion S\$. Source: Singapore Statistics



CAB: current account balance

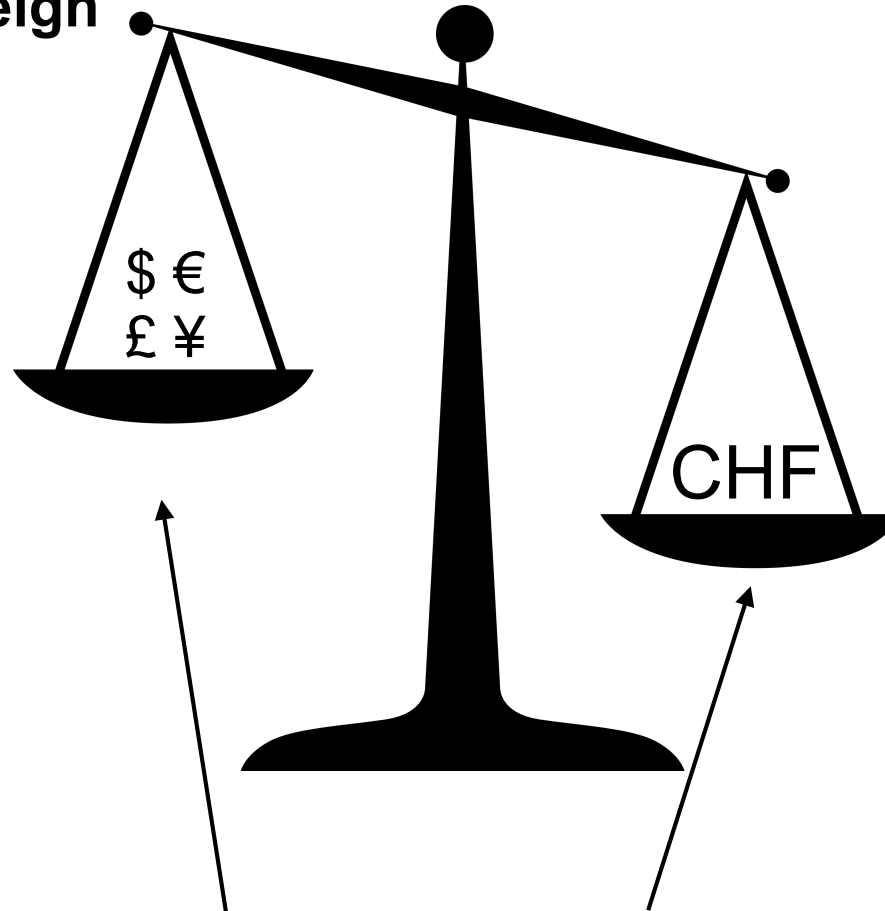
NIIIP: net international investment position

SUPPLEMENTS

The balance of trades without a crisis

strengthening foreign currencies due to:

- imports
- Swiss spendings abroad
- Swiss investments abroad



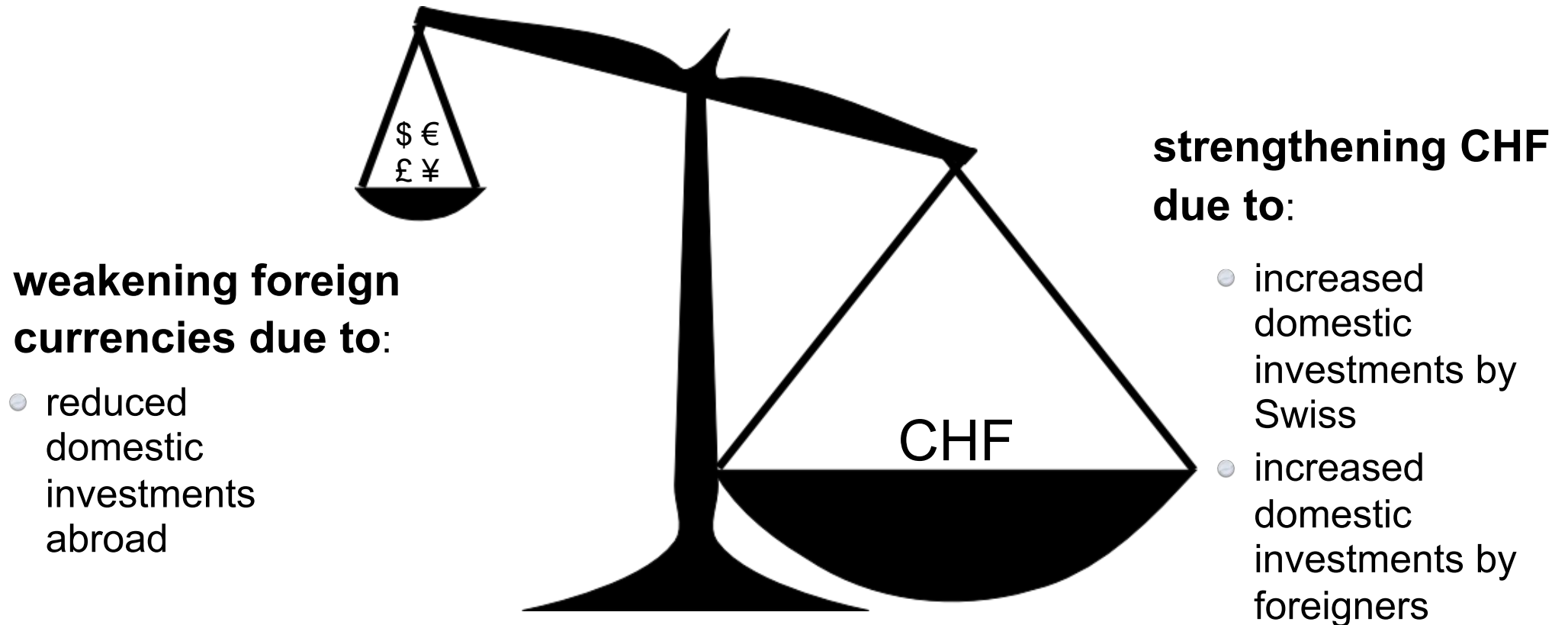
strengthening CHF due to:

- exports
- foreign spending in Switzerland
- foreign investments in Switzerland

slight imbalance ($\approx 3\%$ per year) because in CH we have relatively

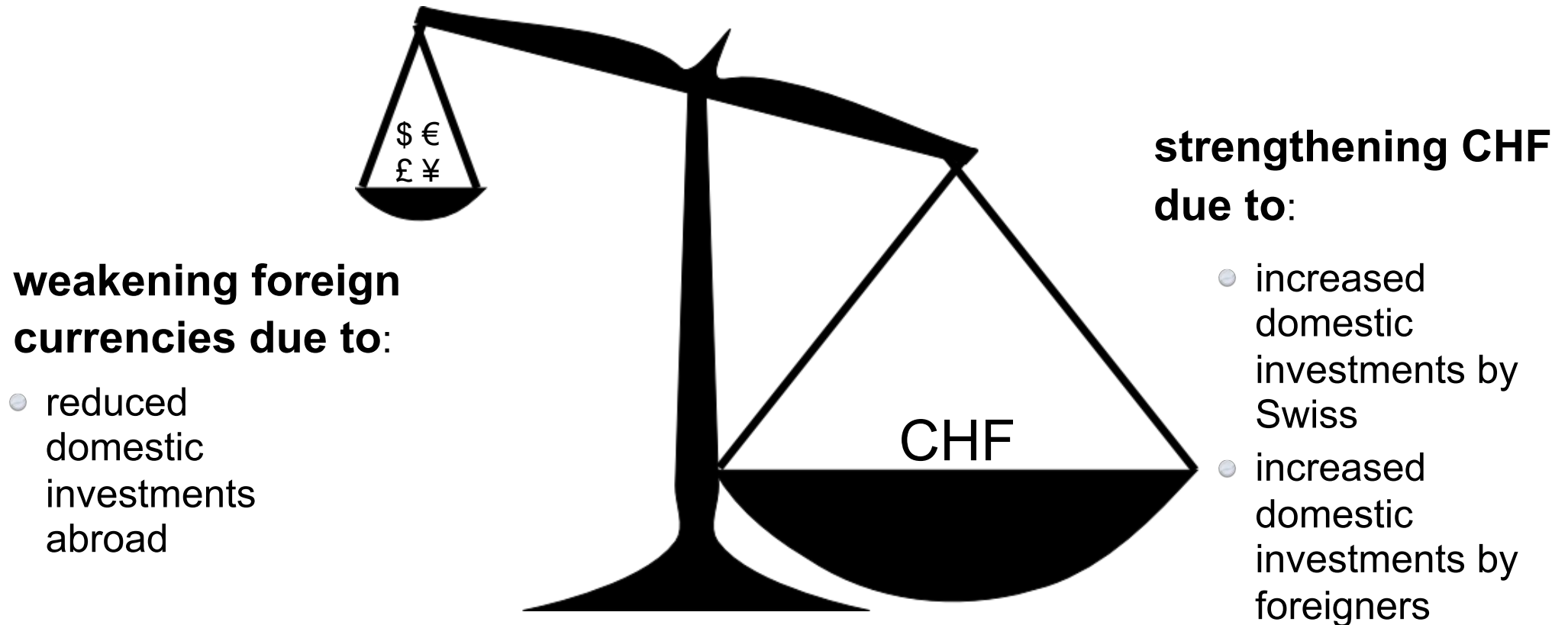
- low inflation
- high productivity growth

The balance of trades with global and Euro crisis



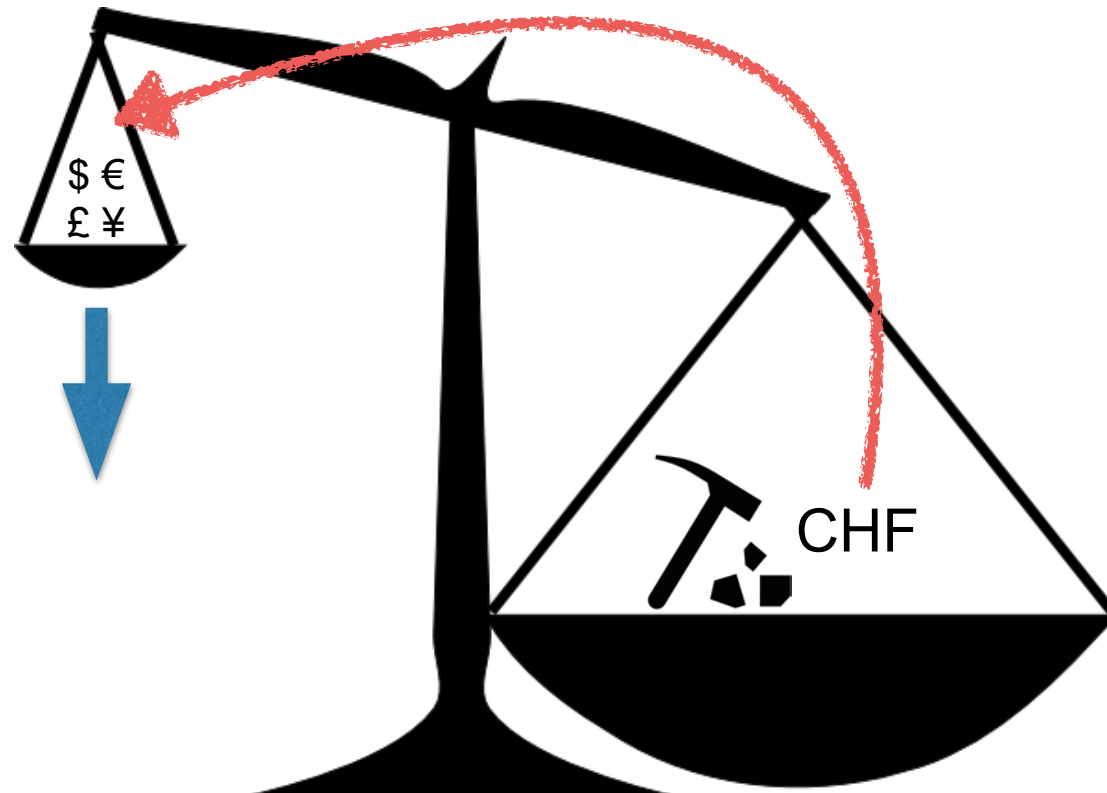
to balance the CHF, the SNB must print money “out of nowhere”

The balance of trades with global and Euro crisis



to balance the CHF, the SNB must print money “~~out of nowhere~~”

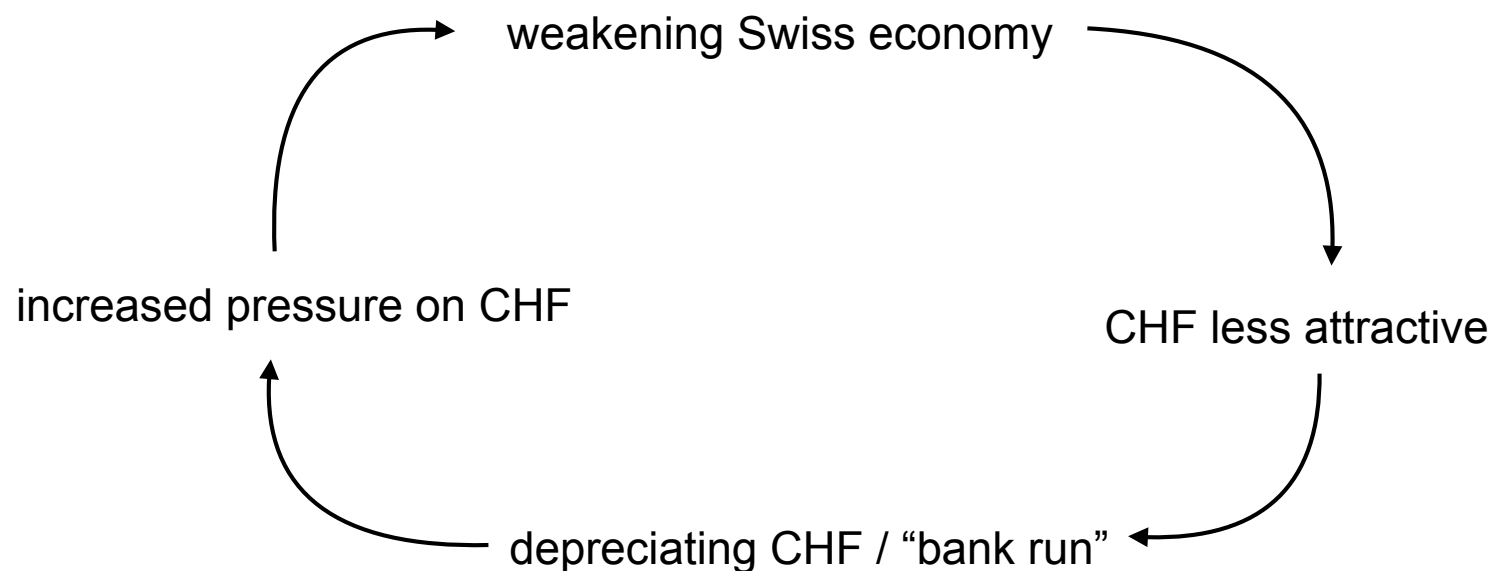
Creating CHF means mining a precious metal



- the CHF plays a role similar to a currency like oil or gold, in great demand by foreigners
- the CHF can be considered an almost unlimited source of wealth over the long term
- we can export our currency in controlled amounts to reach a target band for the CHF

What could go wrong?

- The “CHF commodity” in the hand of foreigners is a liability of Switzerland



- increased interconnectedness between Switzerland and international markets due to the highly diversified SSF
- Who do we trust with the SSF? What if there is a reputation loss?

Remark: if our ChF performs less well and drops in value, we are more competitive at exports and this strengthen further the economy, giving a correction force (mean reversal) that tend to reverse the weakness of the CHF and thus strengthens it. Thus, printing ChF and become complacent has, to first order and short terms, a stabilising effect.

Who manages the SSF?



- Model of the GIC Private Limited, formerly known as Government of Singapore Investment Corporation, is a sovereign wealth fund established by the Government of Singapore in 1981.
- The funds managed by GIC are owned by the Singapore Government.
- GIC is accountable in various key areas to the President of Singapore who is empowered under the constitution to obtain information to enable him to safeguard the country's reserves. The Auditor-General, who is appointed by the President of Singapore, submits an annual report to the President and Parliament on his audit of the Government and other bodies managing public funds.

Who manages the SSF?



- Norwegian sovereign fund (<http://www.nbim.no/en/>): surplus wealth produced by Norwegian petroleum income and is owned by the Government of Norway.
- managed by Norges Bank Investment Management, a part of the Norwegian Central Bank on behalf of the Ministry of Finance.
- search for high returns over time and for long-term investment opportunities in specific sectors and companies.
- The fund invests for future generations. It has no short-term liabilities and is not subject to rules that could require costly adjustments at inopportune times.
- Norges Bank Investment Management seeks to safeguard investments in more than 9'000 companies worldwide by promoting good corporate governance standards and encouraging businesses to improve social and environmental standards.
- six strategic focus areas for ownership activities: 1. equal treatment of shareholders 2. shareholder influence and broad accountability 3. well-functioning, legitimate and efficient markets. 4. Children's rights 5. Climate change risk management 6. Water management.
- - The companies are expected to follow internationally recognised corporate governance standards. Norges Bank Investment Management is a signatory to the UN Principles for Responsible Investment. We exercise ownership rights based on the UN Global Compact and the OECD Guidelines for Corporate Governance and Multinational Enterprises. We report on our ownership activities on a quarterly and annual basis