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SOVEREIGN ASSET AND LIABILITY MANAGEMENT IN A DECENTRALIZED ENVIRONMENT

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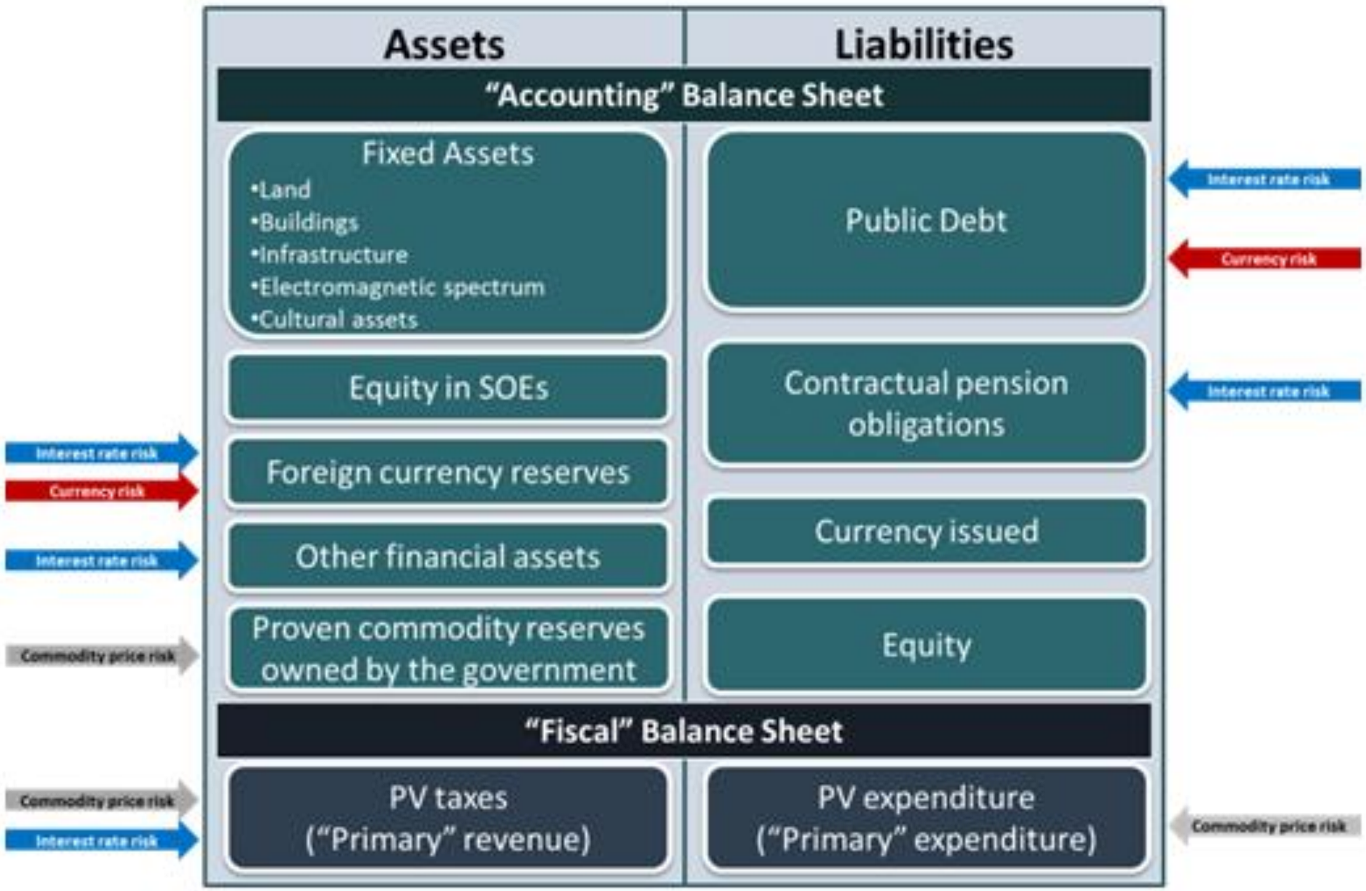
Assets and liabilities for government

A short introduction



Balance sheet objectives
The Danish case

All share the common objectives of a macroeconomic stability oriented framework:

- Fixed exchange rate to the euro
- Sustainable medium term fiscal orientation
- **Government foreign debt finances currency reserve – not deficit**

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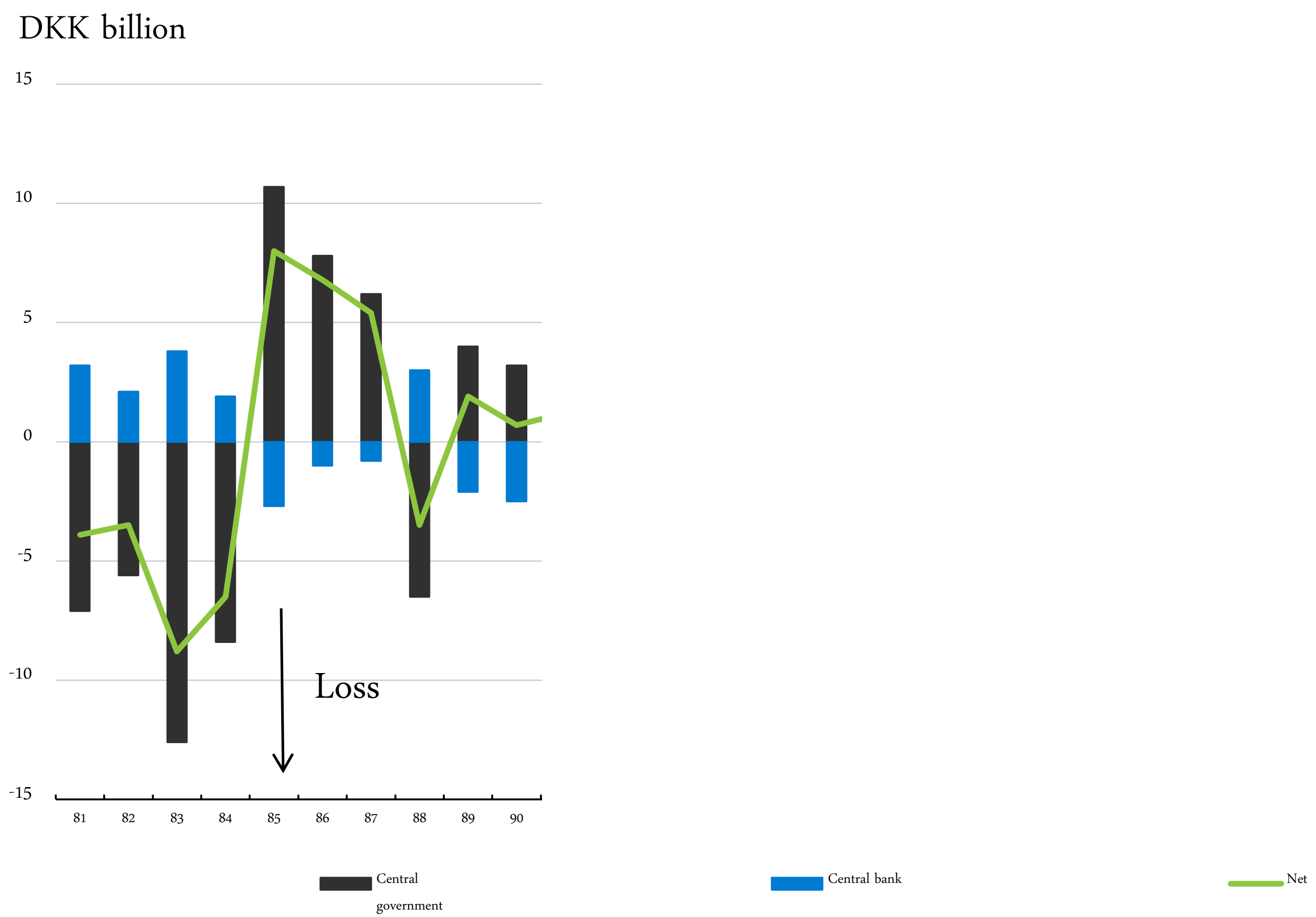
Objectives of the Central Bank and the DMO

- Central Bank and DMO have both common and exclusive objectives $\Rightarrow$ scope for some coordination

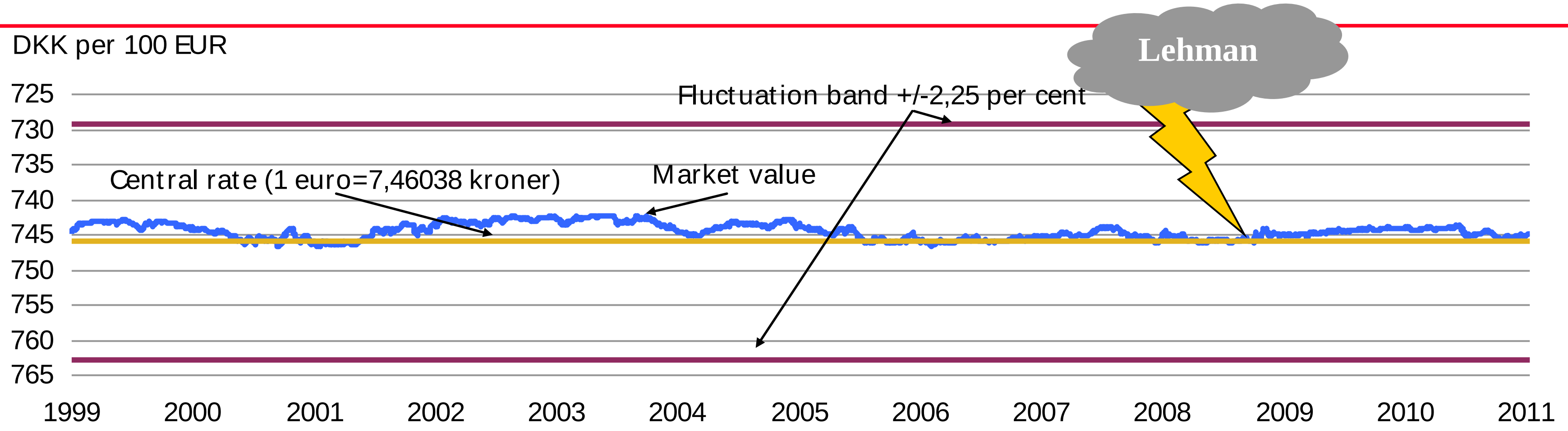
- Central bank:
  - Fixed exchange-rate policy against the euro (foreign exchange reserve)
  - Financial stability (low level of risk appetite)

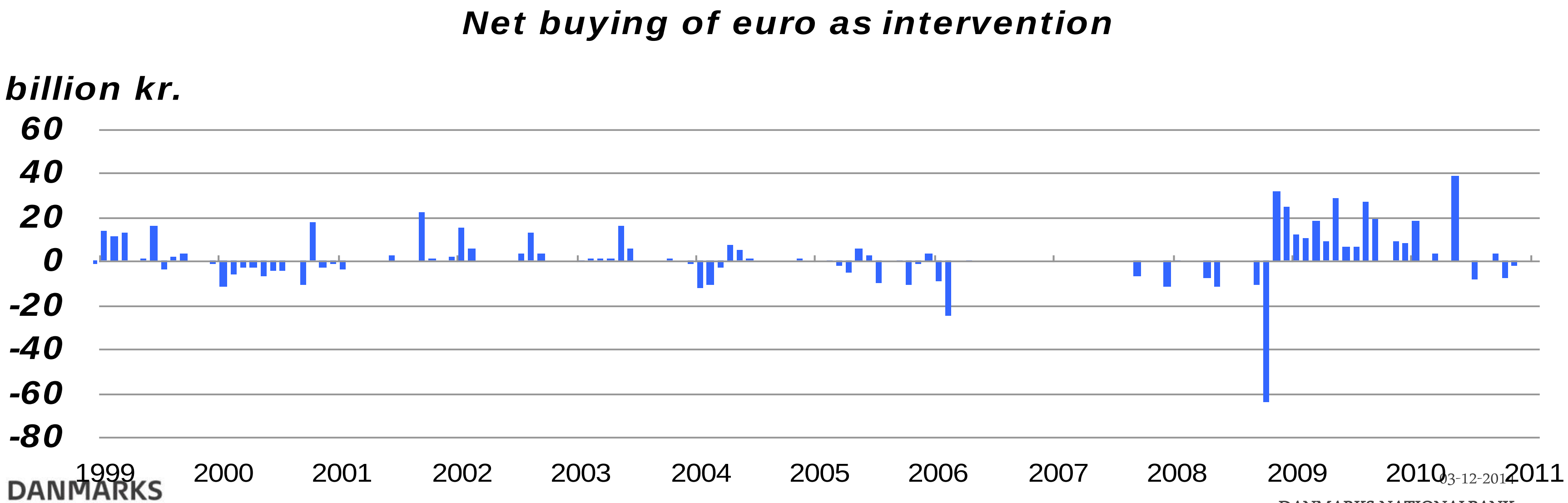
- Debt management:
  - Finance government deficit
  - Finance currency reserve
  - Low long term costs taking risks into account
  - Facilitate access to the financial markets in the longer term
  - Support well-functioning domestic financial market, monetary policy and financial stability

Foreign exchange exposure before and after coordination



Stable DKK





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Two types of curency movements

- **Own currency vs. the rest**
- Unavoidable risk asscocated with FX borrowing/investing
- Reflect exposure against risk minimizing basket.
- In Denmark:
  - Risk vs Euro
  - Not so simple in other cases
-

- **Other currencies vs. eachother**
- Avoidable
- Reflect risk reward tradeoff.

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Coordination of exchange-rate risk on Government debt and FOREX-reserves

- Benefits from coordinating exchange-rate risk
- Government borrows in foreign currency to supplement the central bank foreign-exchange reserve (peg of DKK to the Euro)
- When separating the management of assets from liabilities – potentially large net exposures
- Objective:
  - Avoid borrowing in one currency and investing in another
  - Manage gross currency exposure
  - Currency swaps and forwards to manage currency exposure
- No forecast of future exchange rates

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Borrowing to fill the currency reserve: Avoid large net exposure

Currency	Central bank	Government	Net
DKK	-10	+10	0
EUR	+10		+10
USD		-10	-10
JPY			
GBP			

Avoid large gross exposure in high risk currencies

Currency	Central bank	Government	Net
DKK	-10	+10	0
EUR			0
USD	+10	-10	0
JPY			
GBP			

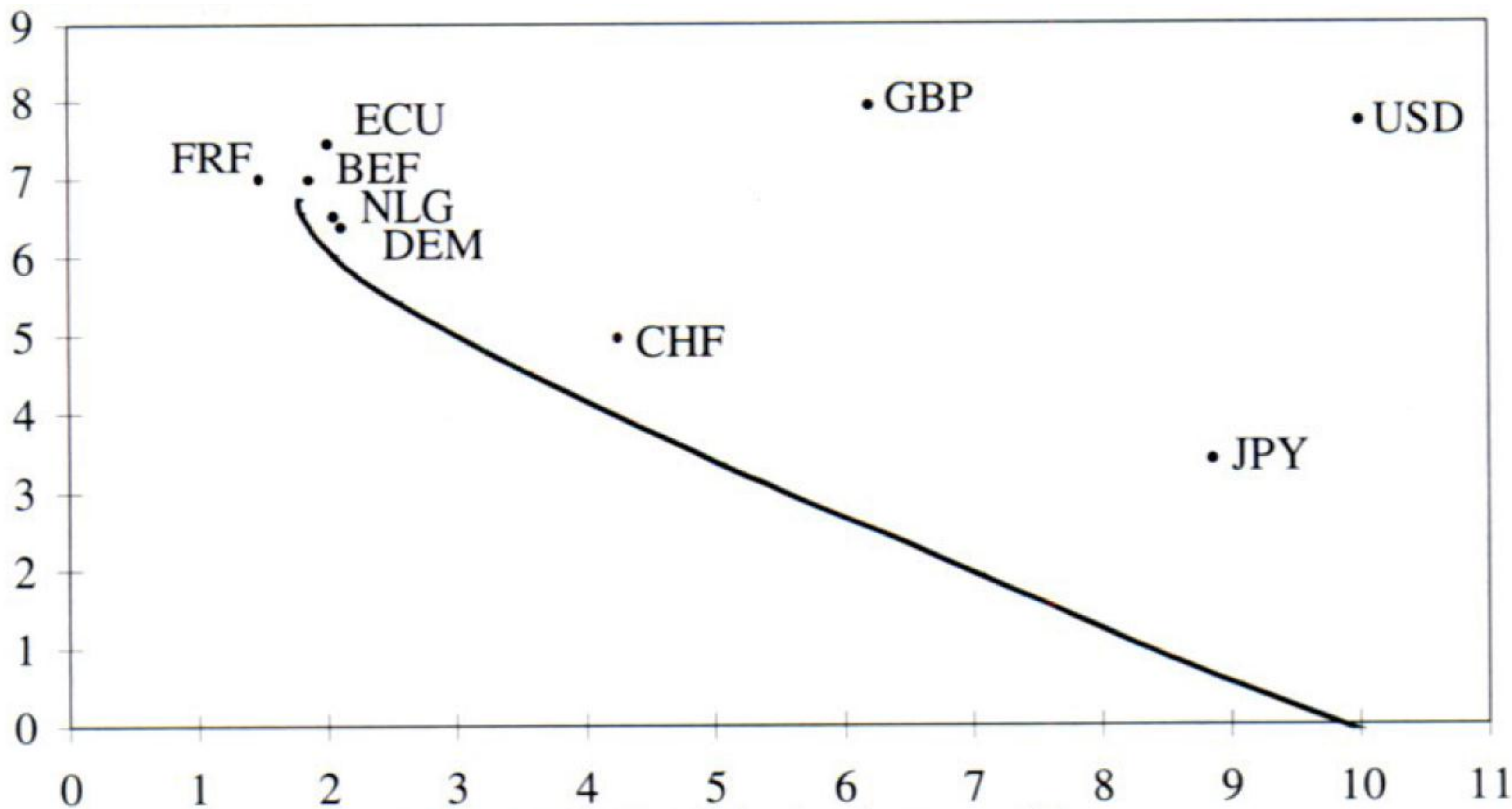
Small net and gross exposure

Currency	Central bank	Government	Net
DKK	-10	+10	0
EUR	+10	-10	0
USD			
JPY			
GBP			

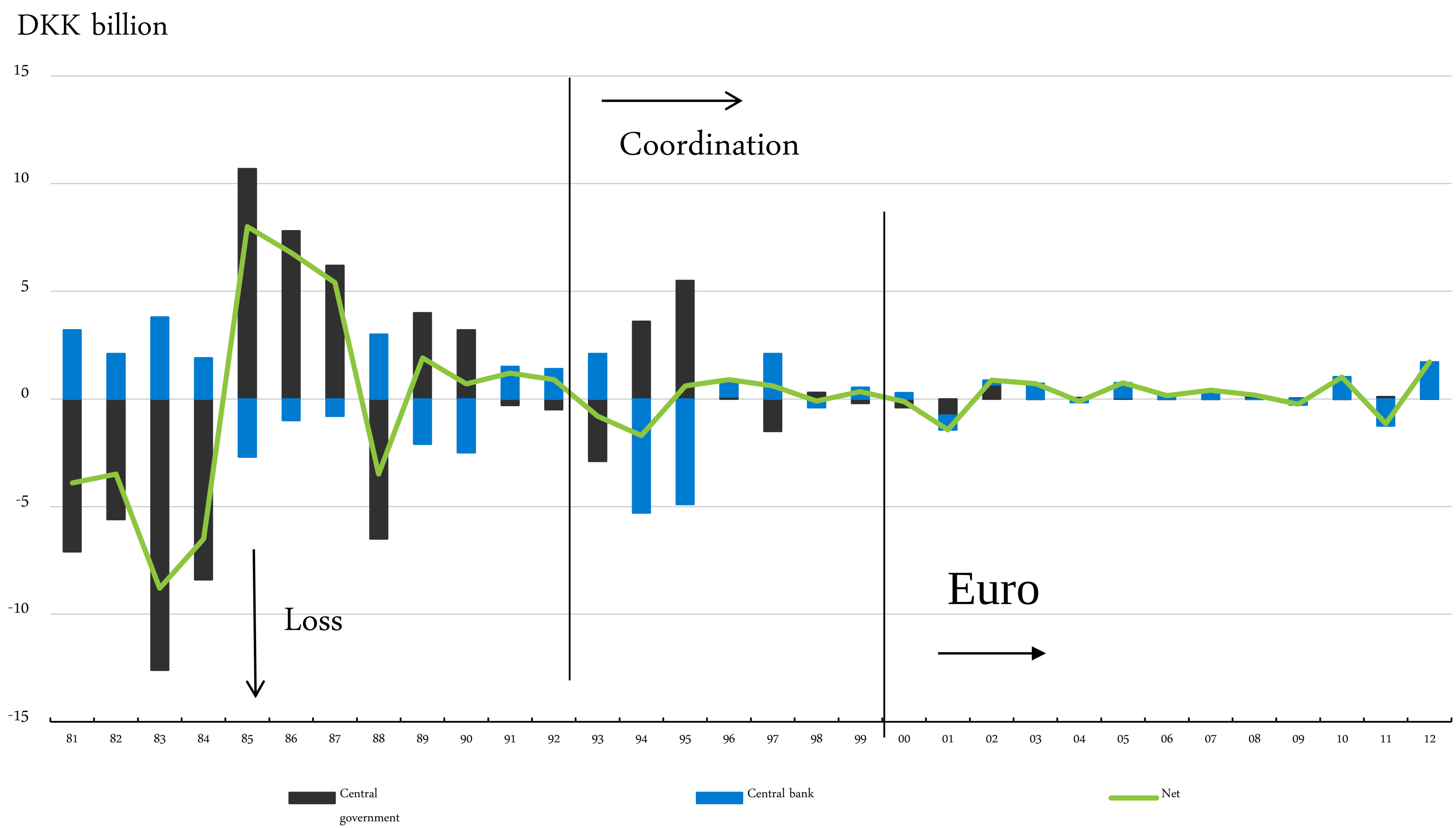
ALM process

- 1991 debt management function shifted from Treasury to Central bank
  - Central bank is an agent of the treasury
- One objective was to facilitate management of assets and liability on a consolidated basis.
  - Report from national audit authority.
- Quarterly strategy meeting
  - Treasury, Central bank and Ministry of economic
  - Treasury forecast net lending
  - Central bank analyses strategies and makes proposals
  - Treasury sign off on guidelines

Mean variance portefolio model



Foreign exchange exposure before and after coordination



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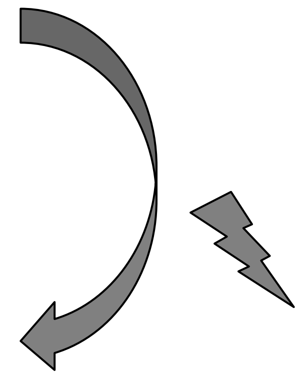
Interest rate risk is different in government debt and central bank

- Government looks at the risk of higher debt servicing cost
  - Not a tradable portfolio
  - Accounts based on interest payments
  - Long maturity gives lover risk

- Central bank looks at the risk of lower value.
  - Assets con be sold
  - the effective size of portfolios is relevant
  - Short duration gives lower exposure to interest rate hikes.



- **Coordination** of interest rate risk is very challenging

Concluding remarks

- Full integration of national balance sheet not possible and not wanted
- SALM is important to DMO's risk management
- Institutional set-up consistent and transparent