

Combining actuarial theory and practice with state of the art IT

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Two major issues in insurance and pensions

- Reserving
 - The Major challenge in Solvency II
- Pensions
 - Transparent, efficient and cost effective pensions

The role of academics

- Solutions
 - Find solutions of linear complexity of complex problems
- Listen
 - Make sure you understand the problem

The role of the industry

- Implementation
 - Implement within six months
- The knowledge loop
 - Reformulate problem to academics after implementation

Festina Lente

TIME FOR THOUGHTS

First case study: pensions

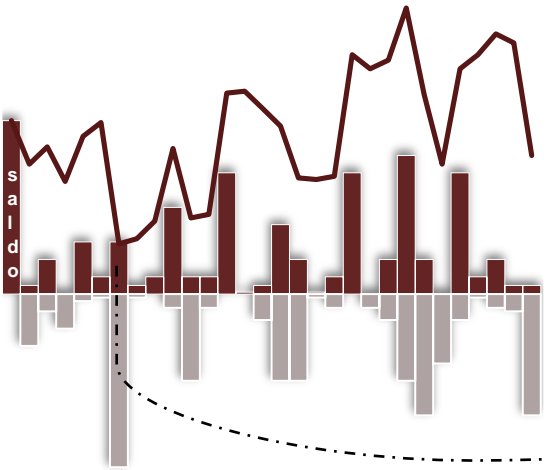
The primary driving forces

- Low cost
- Flexibility
- Transparency

The moneyflow

Contributions:

- premiums
- deposits (member)
- deposits (new member)
- transfers (§41)



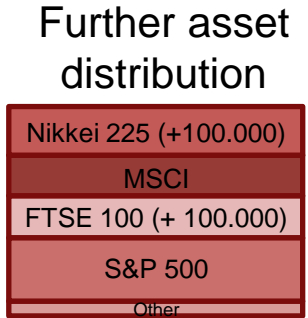
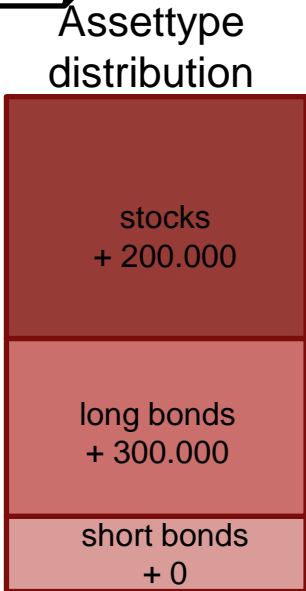
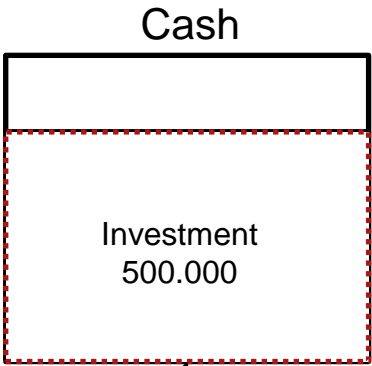
Outgoing payments:

- annuities
- lump sum benefits
- transfers (§41)

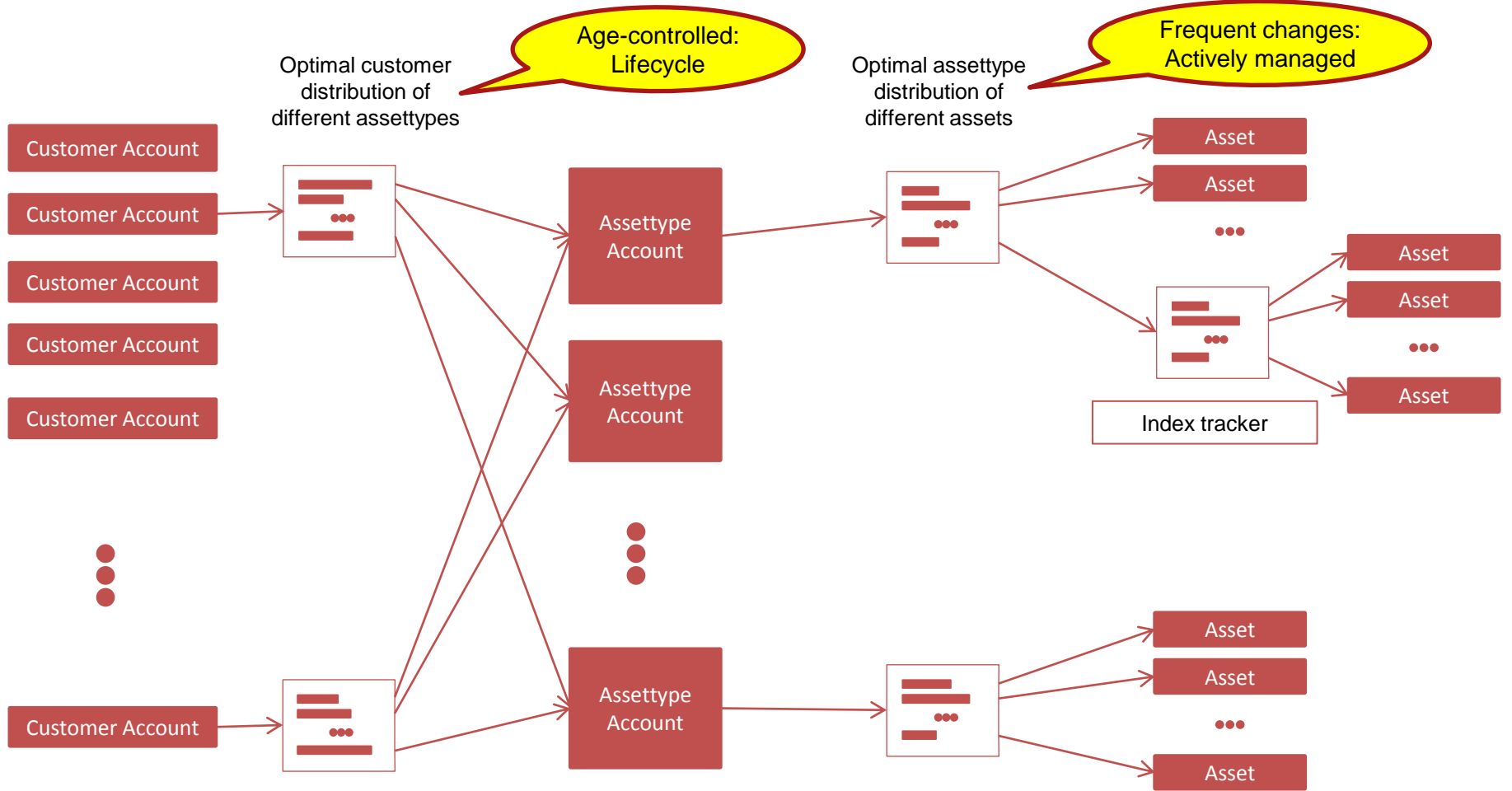
• Optimal cashflow

• Optimal/Actual risk profile
• Convergence principle

• Target Group
• Convergence principle

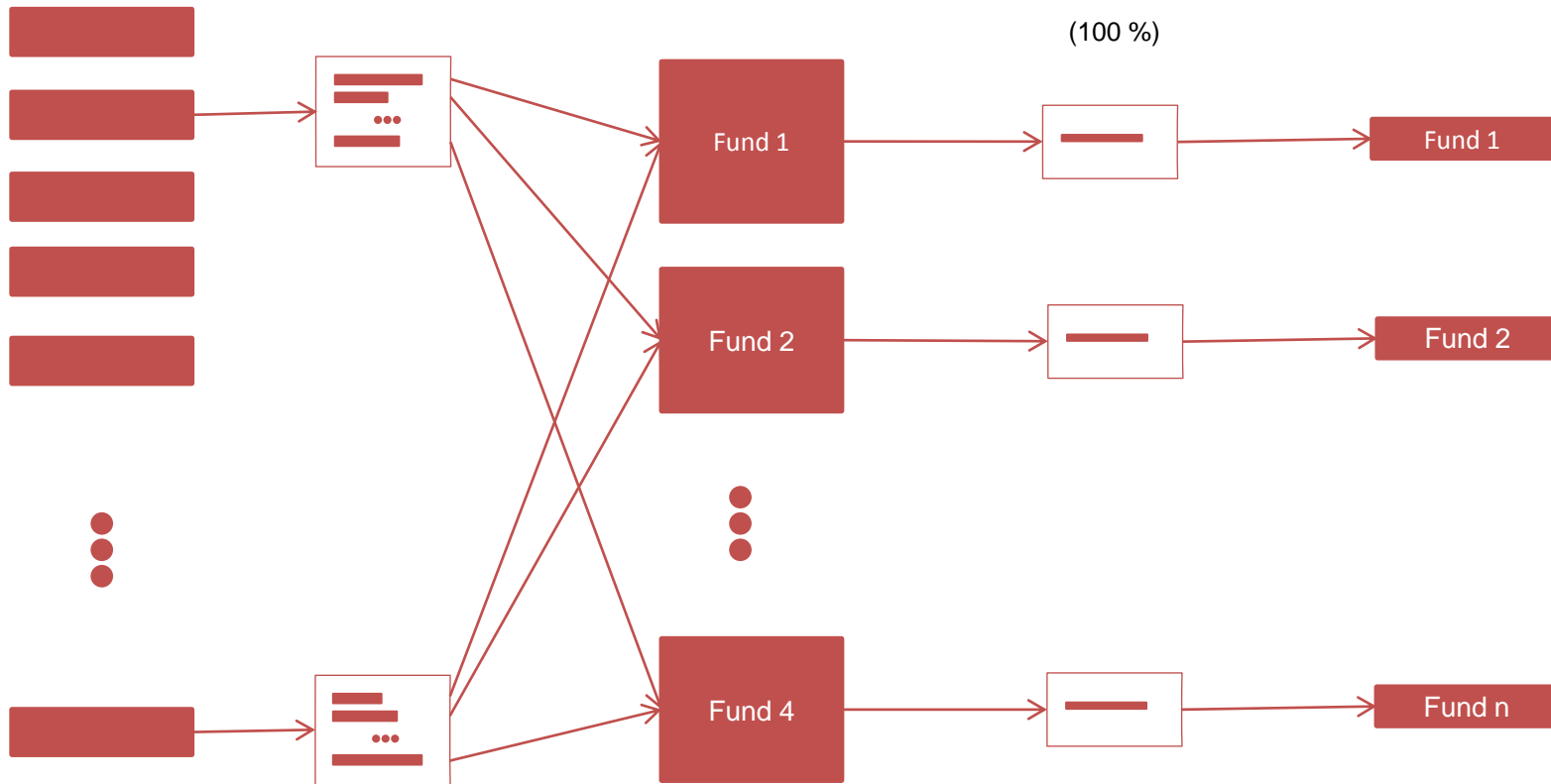


System overview

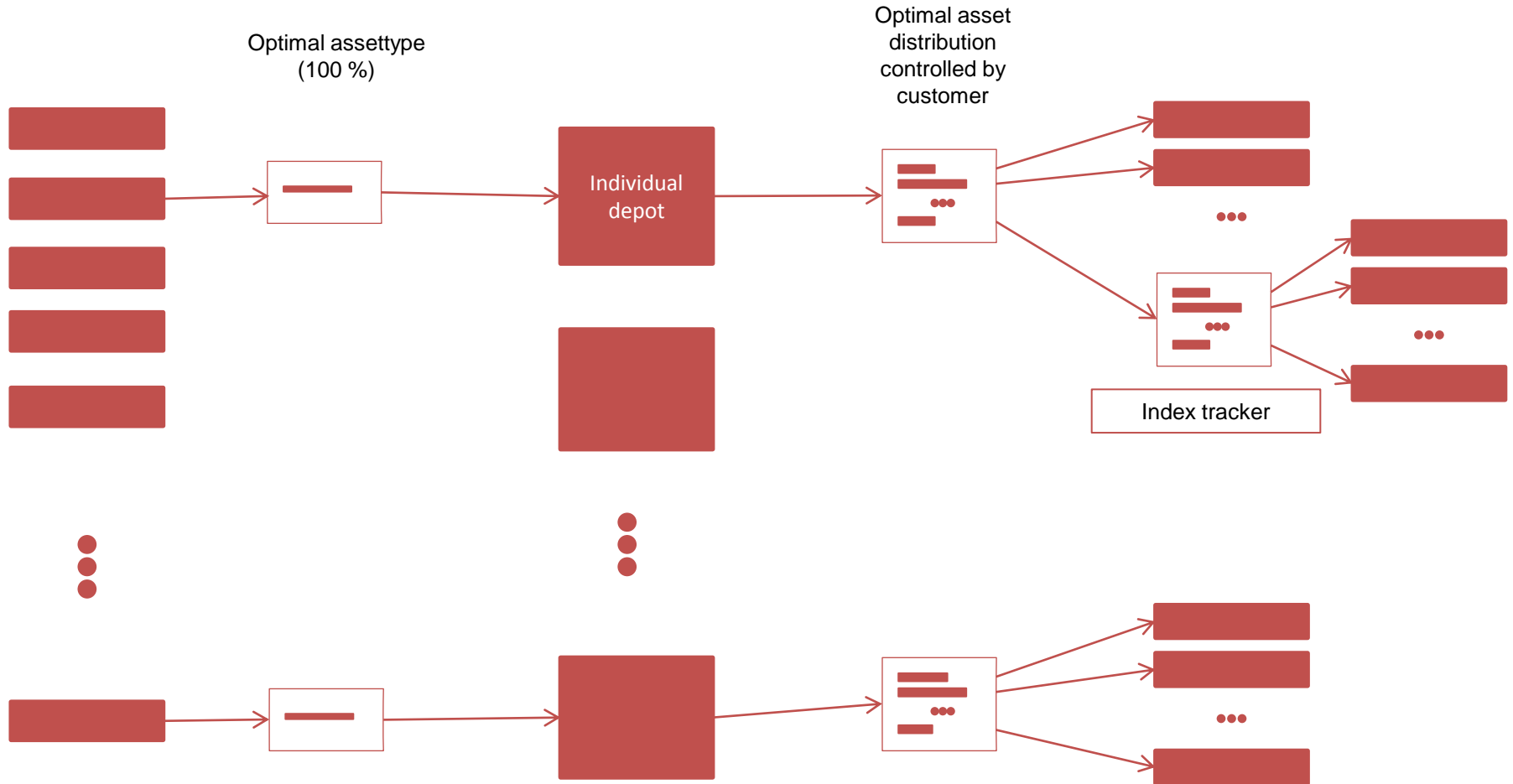


Unit link

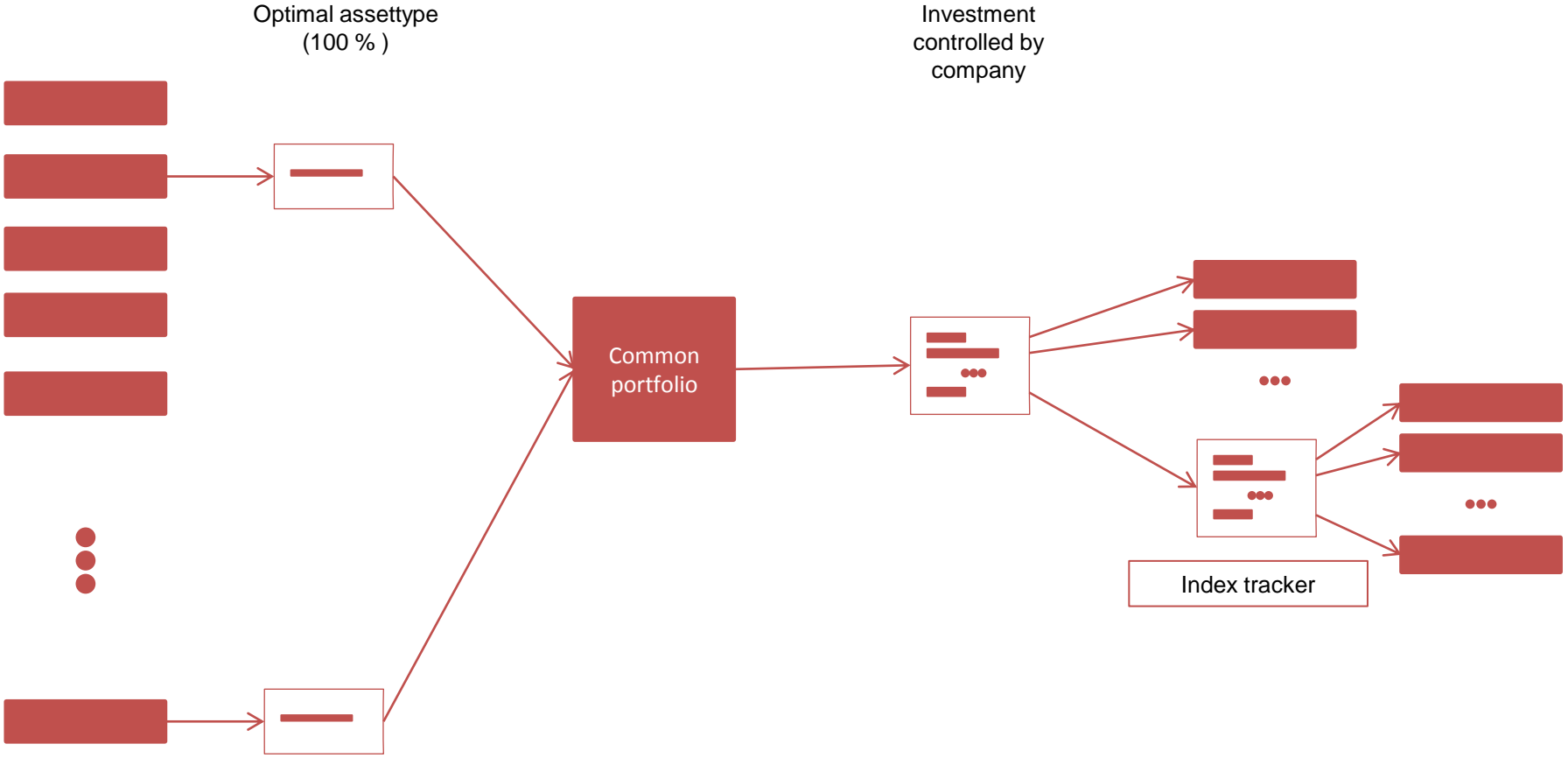
Optimal distribution of
different assettypes:
The customer choses



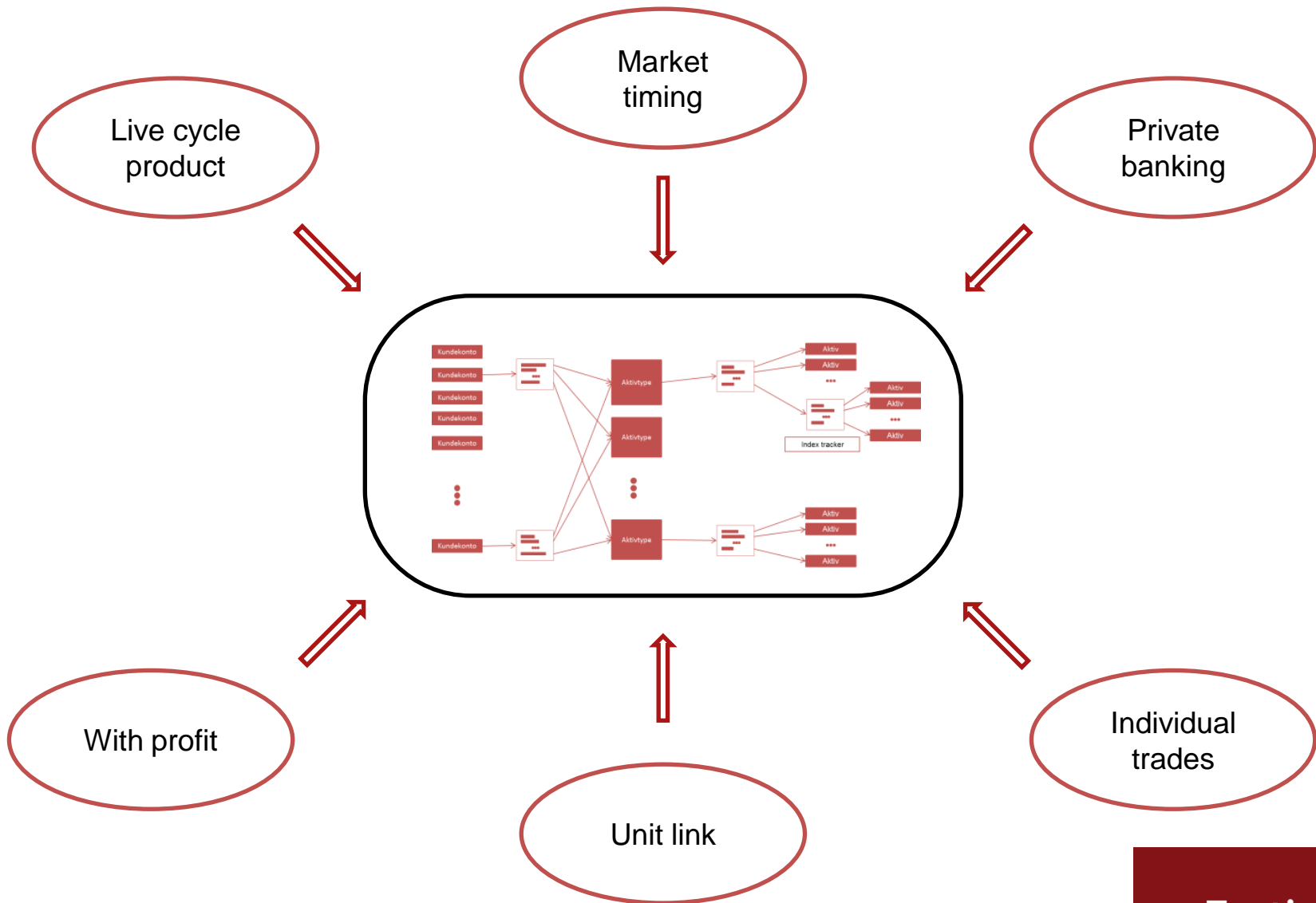
Individual trades



With profit



IT of linear complexity: all products included!



So, for the individual pension saver the system can be

- Collectively or individually based
- Unit linked or not
- With profit or not
- Rebalancing or not
- Live cycle based or not
- Aware of the savers current financial situation or not
- Actively or passively managed or both
- Algorithmically market timing based or not

Or any combination of the above at only minimal cost

And fully transparent

IT of linear complexity in reserving: all approaches included!

