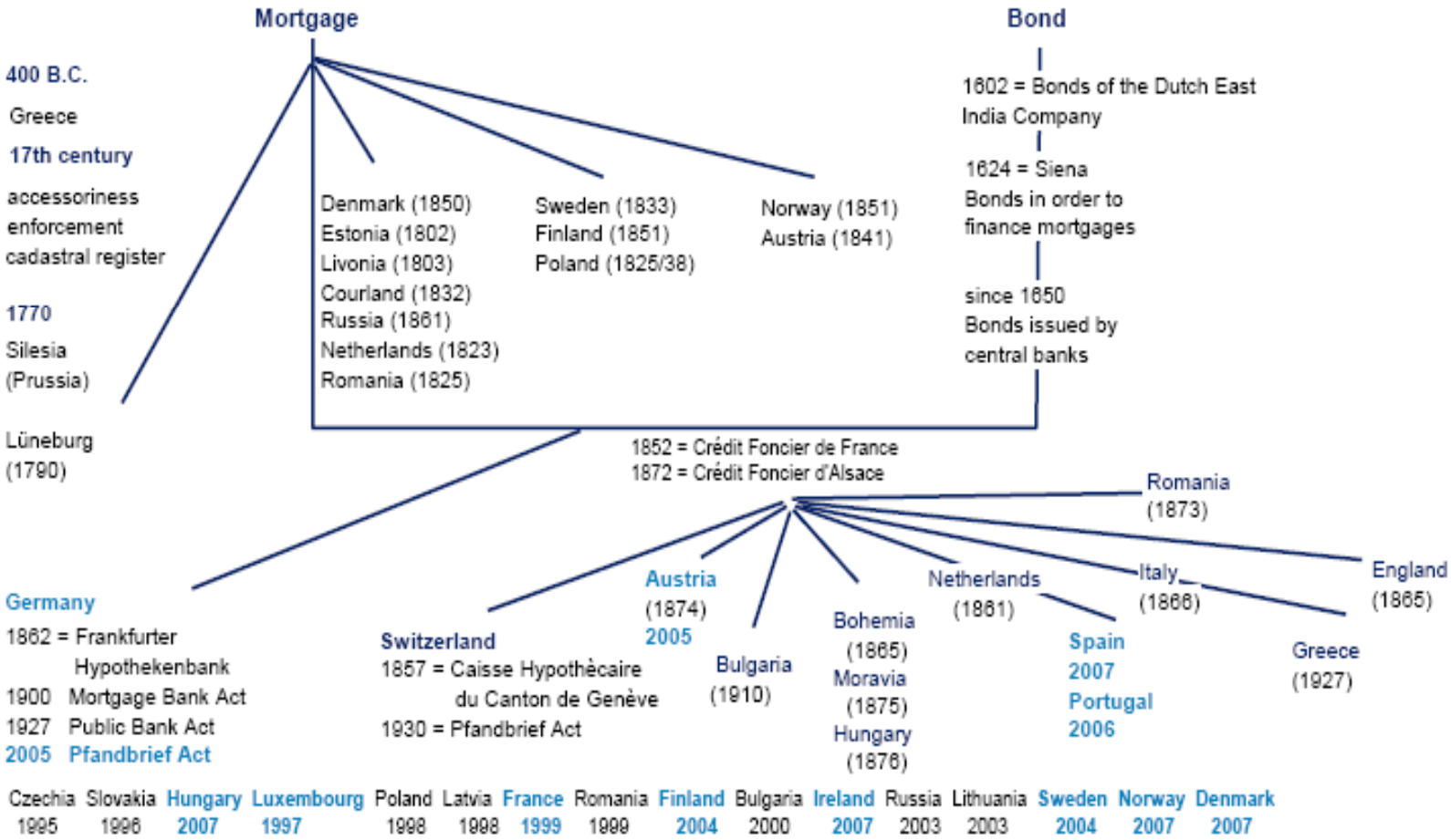
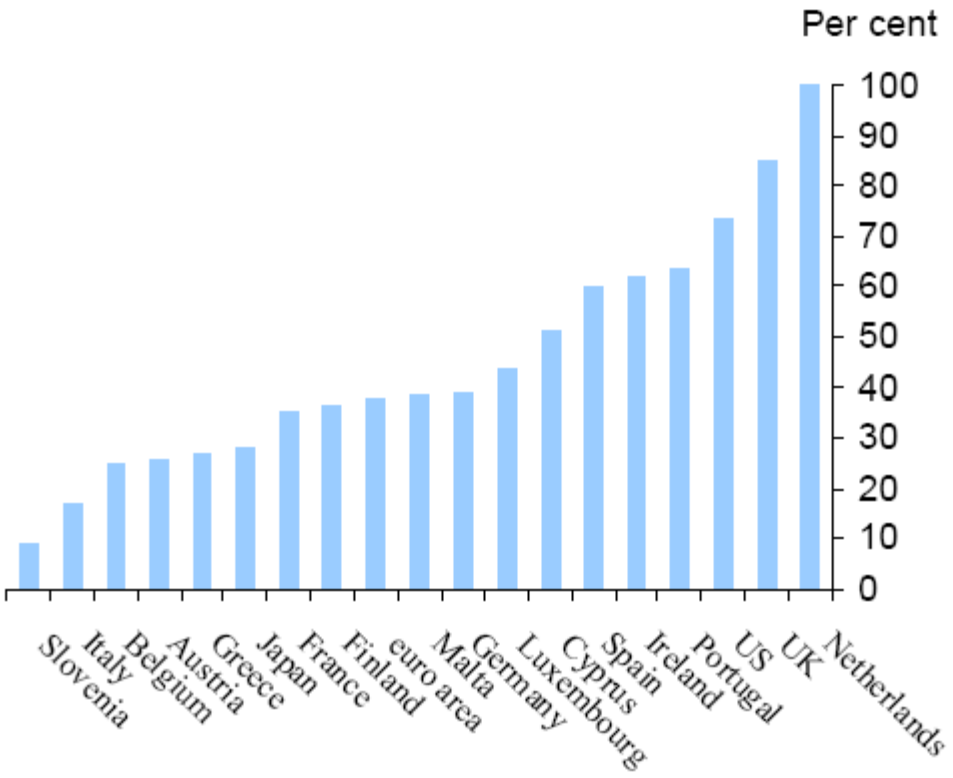
European Covered Bonds

Historical development



Country	Description
Germany	Almost all mortgages are fixed at rates (~90%).
France	Rates are mainly fixed (70-80%). Variable rates are typically indexed to 3-month or 1-year Euribor, caps on rates are also common.
Ireland	Almost all mortgages are variable.
Italy	Most interest rates are variable (~80%). Rates are indexed to Euribor (normally 3-mth), but the government has introduced a law by which households are now charged over the base rate and the state makes up any loss to banks.
Spain	Almost all mortgages are variable (~95%). The rates are normally reset once a year to Euribor 12 mth plus a fixed spread.
UK	~40% of mortgages are at fixed rates, variable rates are typically charges at a spread over the base rate.
US	Over the last thirty years fixed rate mortgages with options to pre-pay have been the dominant mortgage product. But in recent years adjustable rate mortgages (ARM's) with re-set rates after a few years have become popular.



Note: Data are for 2008

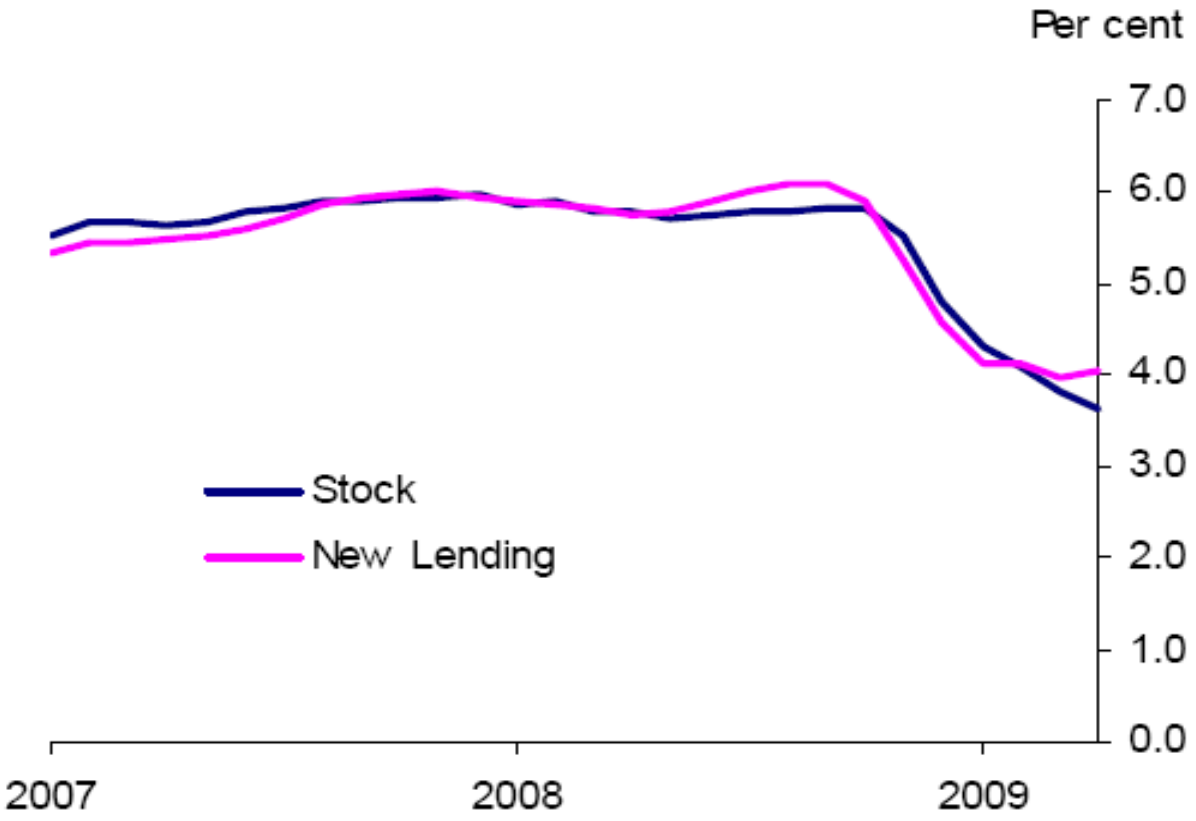
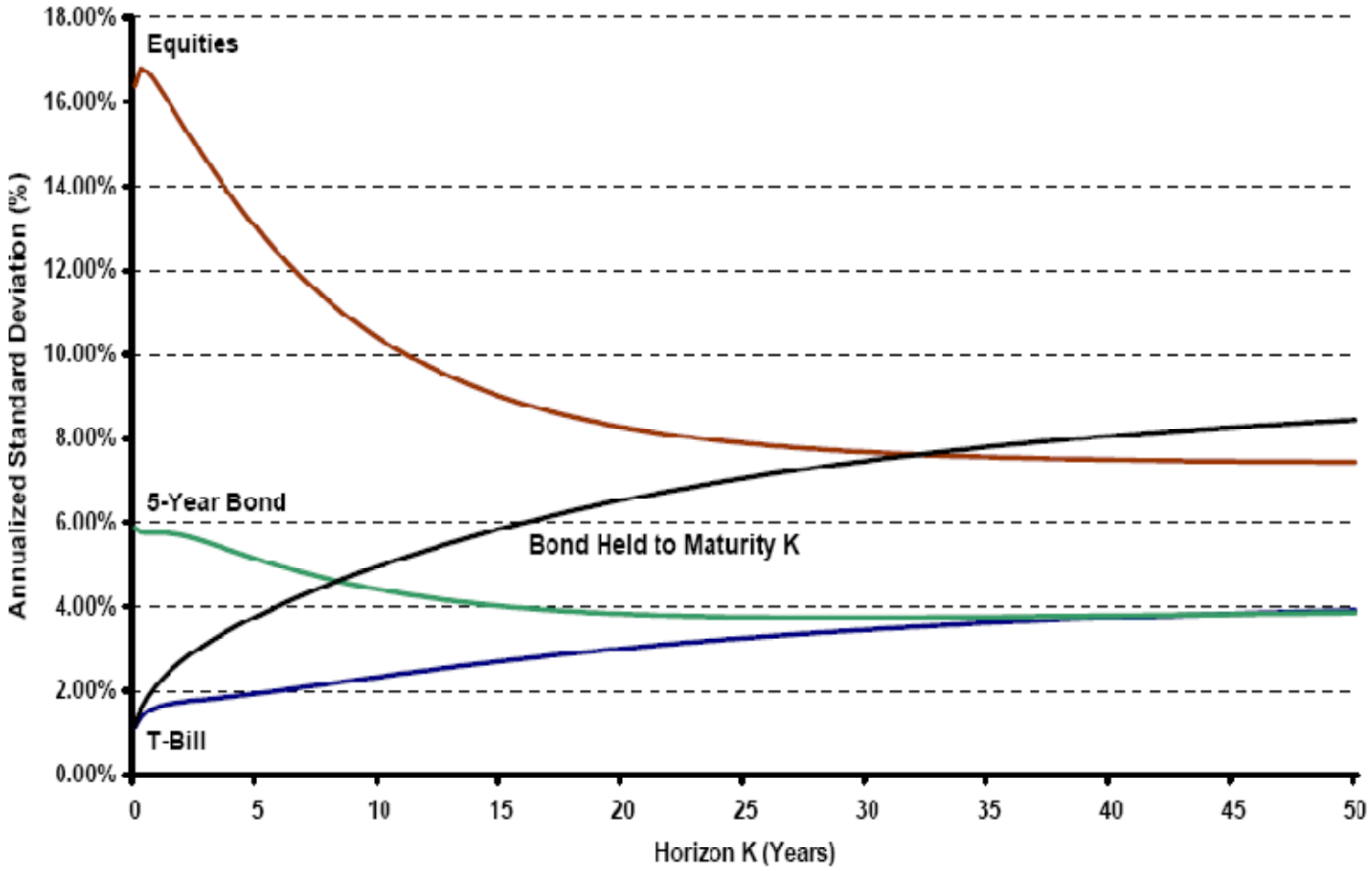


Figure 1. Annualized Percent Standard Deviations of Real Returns Implied by Quarterly VAR(1) Estimates (1952.Q-2002.Q4)



Resilient Systems

- Resilience is a property of complex adaptive systems
- Complex versus complicated
  - Complexity is a deep property – Complication is not
  - Remove an element from a complex system and it dies – not so for complicated
  - Complex systems may be fragile or remarkably robust to component change
  - The central issue is interdependence
- Resilience - usually four dimensions rather than the three of the paper
  - Latitude -- Degree of effort to change state (distance to change threshold)
  - Resistance -- Degree of difficulty of changing state
  - Vulnerability -- instantaneous trajectory
  - Panarchy – Adaptive interaction
- These can be treated mathematically.
- To manage risk we can lower vulnerability (time and history matter) or
- Increase resilience – that's adaptive change
- One lesson from this literature:
- **Choosing for maximum efficiency typically leads to the edge of chaos**

Fig. 1a. Three-dimensional stability landscape with two basins of attraction showing, in one basin, the current position of the system and three aspects of resilience, L = latitude, R = resistance, Pr = precariousness.

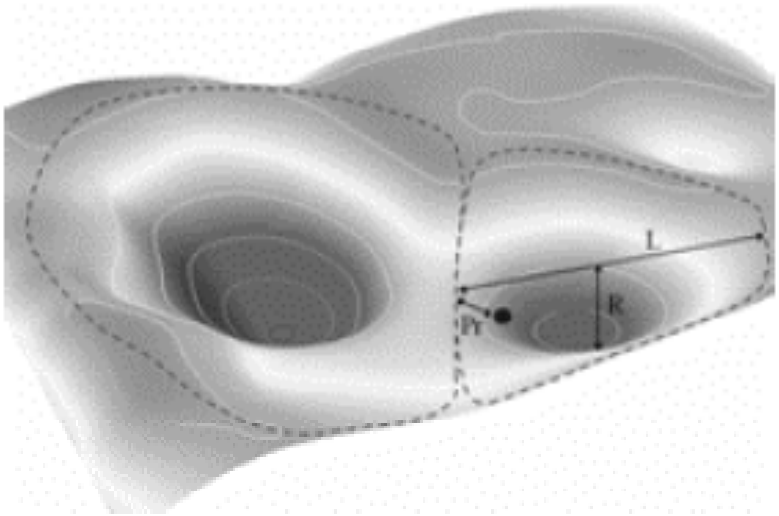


Fig. 1b. Changes in the stability landscape have resulted in a contraction of the basin the system was in and an expansion of the alternate basin. Without itself changing, the system has changed basins.

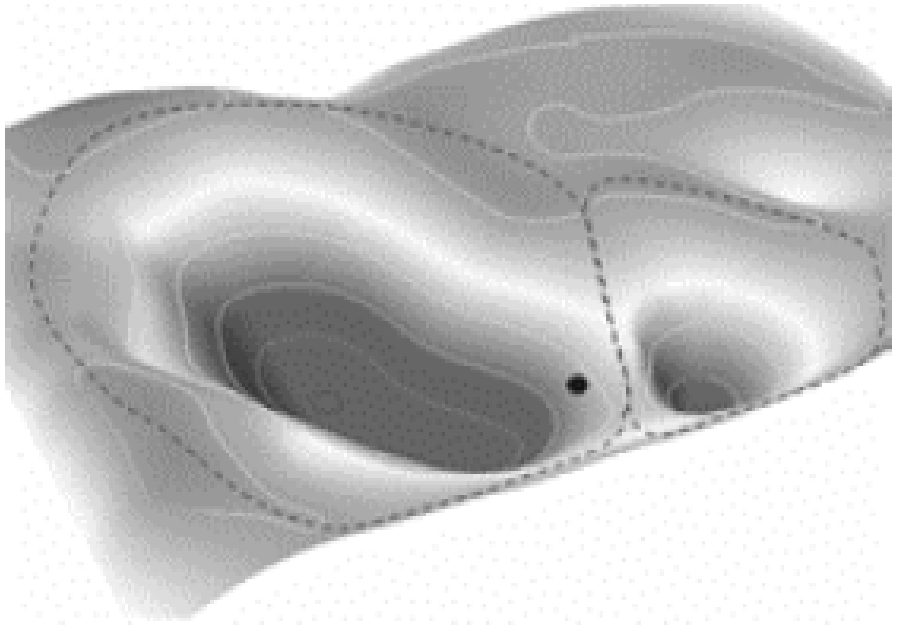


Fig. 2. The fourth aspect of resilience in relation to a stability landscape—Panarchy (Pa); the influence of the states of the system (including where they are in their adaptive cycles) at scales above and below the focal scale, which affects the other three aspects (Fig. 1) by impacting the system directly (from the finer scale) or changing the stability landscape (from the coarser scale).