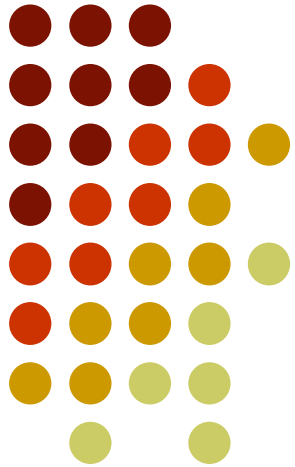
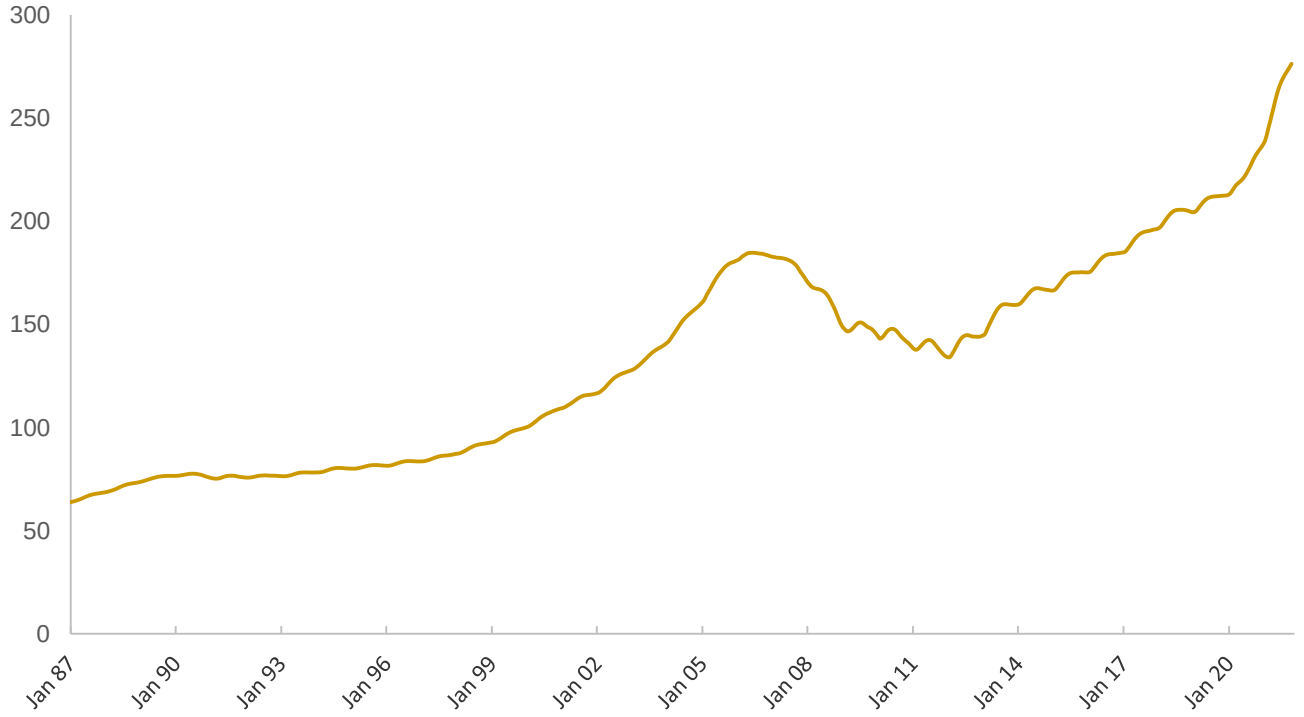
Securitization and the Global Financial Crisis

Chapter 7



U.S. Real Estate Prices, 1987 to 2021:
S&P/Case-Shiller Composite-10 Index



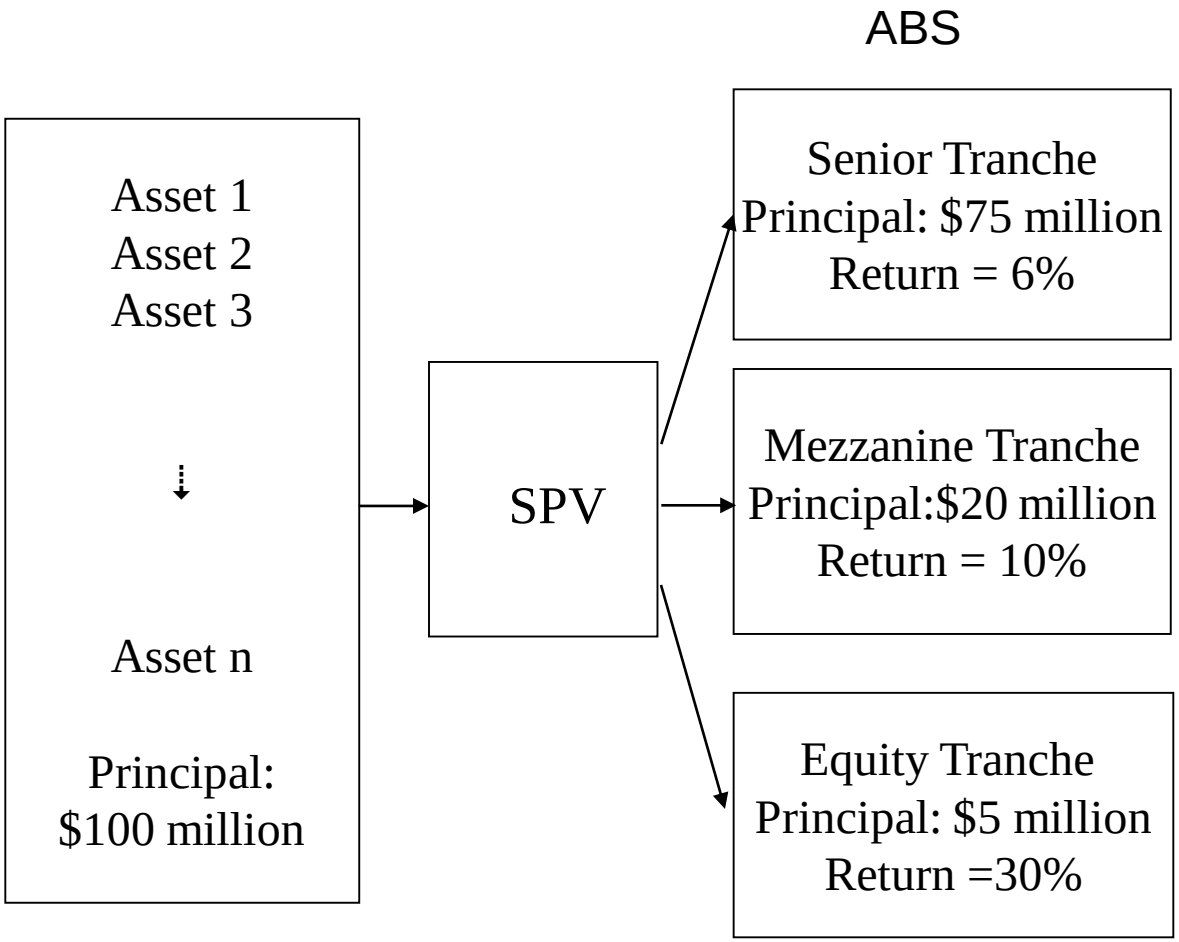
What happened…

- Starting in 2000, mortgage originators in the US relaxed their lending standards and created large numbers of subprime first mortgages.
- This, combined with very low interest rates, increased the demand for real estate and prices rose.
- To continue to attract first time buyers and keep prices increasing they relaxed lending standards further
- Features of the market: 100% mortgages, ARMs, teaser rates, NINJAs, liar loans, non-recourse borrowing

What happened...

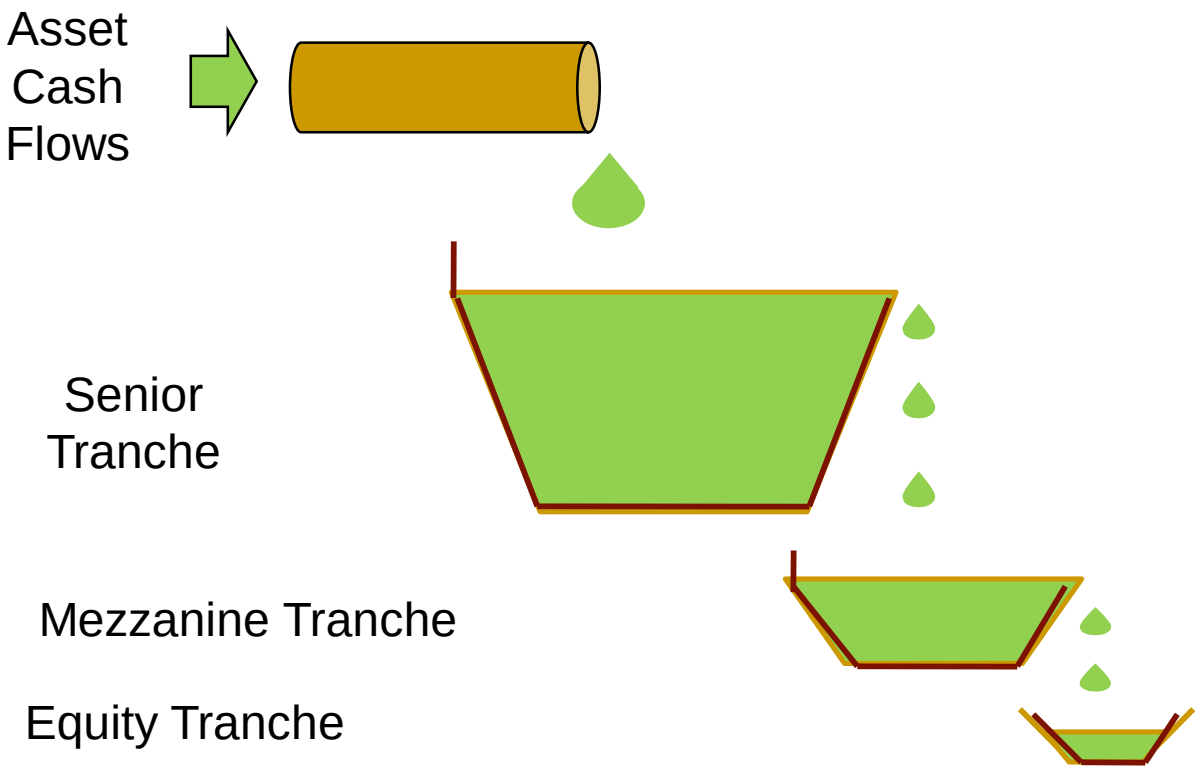
- Mortgages were packaged in financial products and sold to investors
- Banks found it profitable to invest in the AAA rated tranches because the promised return was significantly higher than the cost of funds and capital requirements were low
- In 2007 the bubble burst. Some borrowers could not afford their payments when the teaser rates ended. Others had negative equity and recognized that it was optimal for them to exercise their put options.
- U.S. real estate prices fell and products, created from the mortgages, that were previously thought to be safe began to be viewed as risky
- There was a “flight to quality” and credit spreads increased to very high levels

Asset Backed Security (Simplified)

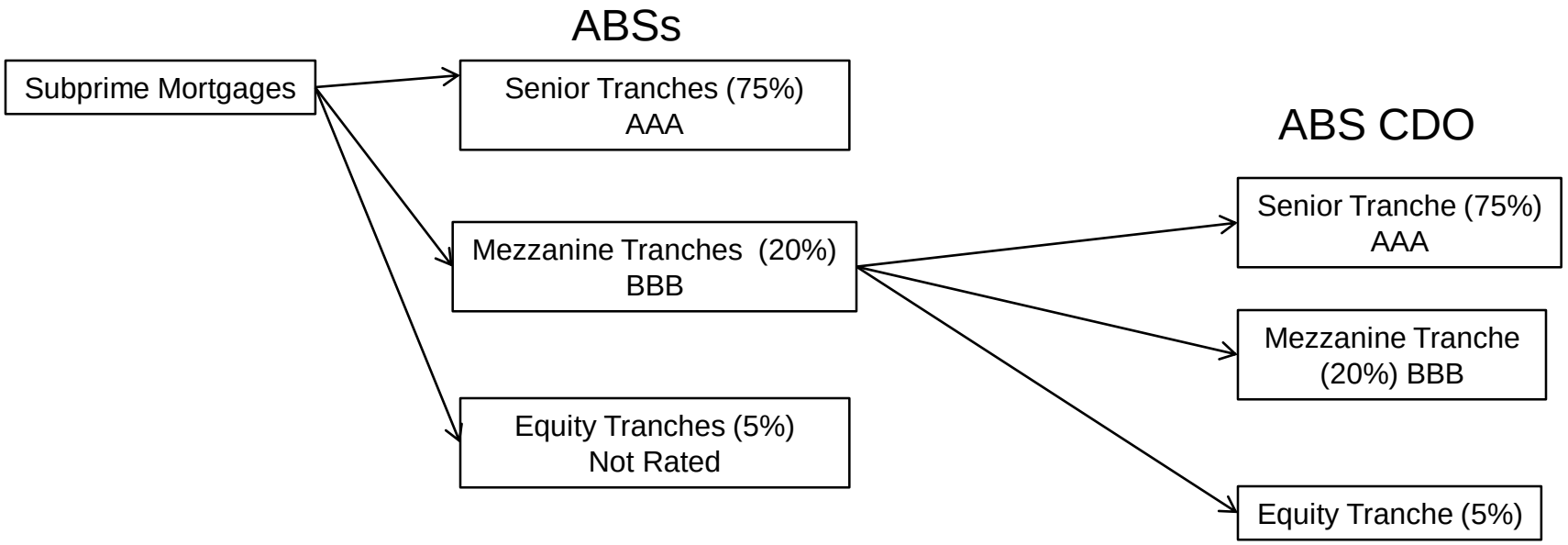


A "waterfall" defines the precise rules for allocating cash flows to tranches

The Waterfall



ABS CDOs or Mezz CDOs (Simplified)

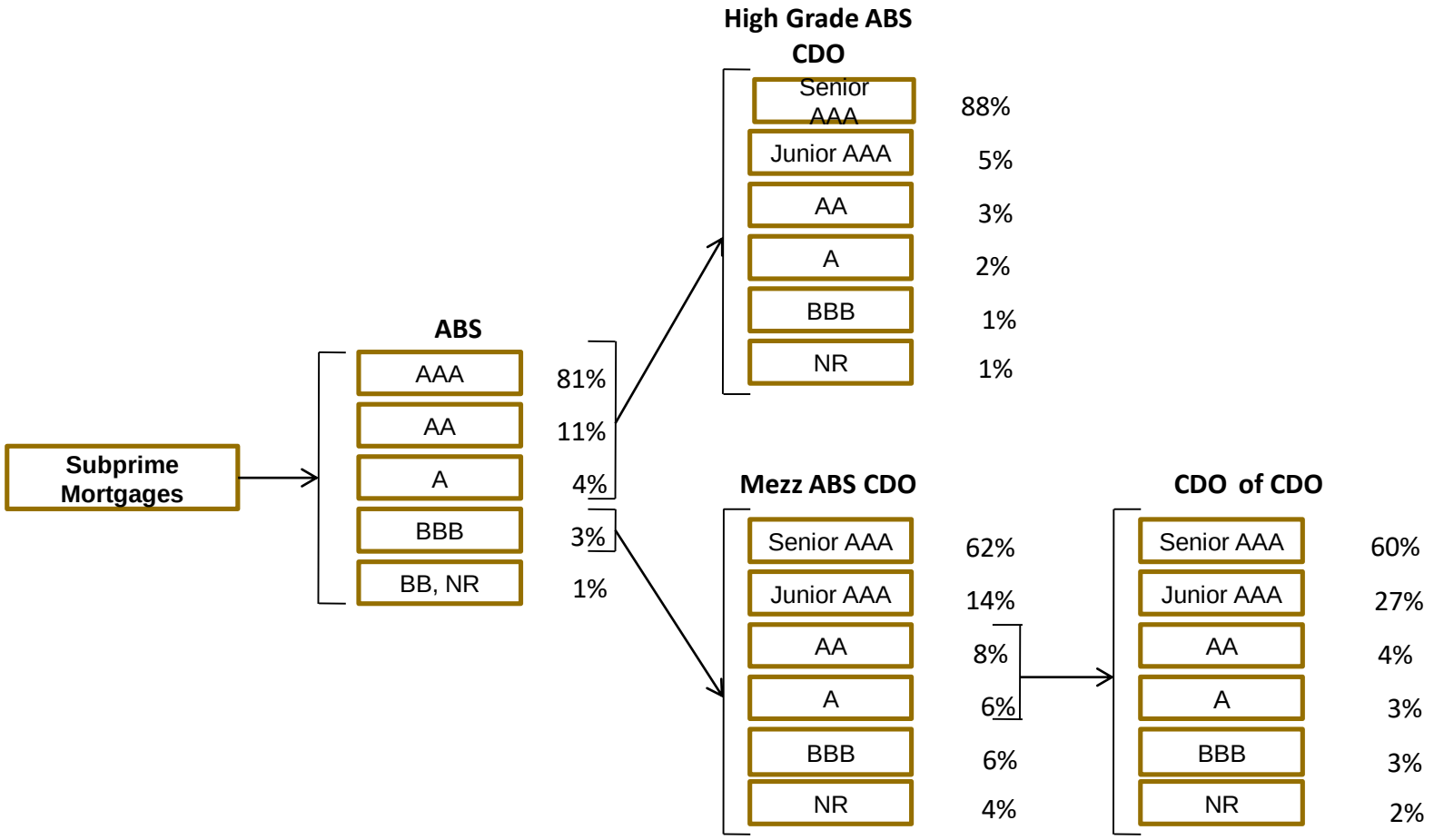


How much of the original portfolio of subprime mortgages is AAA?

Losses to AAA Tranche of ABS CDO (Table 7.1)

Losses on Subprime portfolios	Losses on Mezzanine Tranche of ABS	Losses on Equity Tranche of ABS CDO	Losses on Mezzanine Tranche of ABS CDO	Losses on Senior Tranche of ABS CDO
10%	25%	100%	100%	0%
15%	50%	100%	100%	33.3%
20%	75%	100%	100%	66.7%
25%	100%	100%	100%	100%

A More Realistic Structure
(Figure 7.5)



BBB Tranches

- BBB tranches of ABSs were often quite thin (1% wide)
- This means that they have a quite different loss distribution from BBB bonds and should not be treated as equivalent to BBB bonds
- They tend to be either safe or completely wiped out (cliff risk)
- What does this mean for the tranches of the Mezz ABS CDO?

Regulatory Arbitrage

- Capital required for securities created from a portfolio of mortgages was considerably less than capital that would be required if mortgages had been kept on the balance sheet

Role of Incentives

- Arguably the incentives of valuers, the creators of ABSs and ABS CDOs, and rating agencies helped to create the Global Financial Crisis
- Compensation plans of traders created short-term horizons for decision making

Importance of Transparency

- ABSs and ABS CDOs were complex inter-related products
- Once the AAA rated tranches were perceived as risky they became very difficult to trade because investors realized they did not understand the risks
- Other credit related products with simpler structures (eg, credit default swaps) continued to trade during the GFC.

Lessons from the GFC (page 158)

- Beware irrational exuberance
- Do not underestimate default correlations in stressed markets
- Recovery rate depends on default rate
- Compensation structures did not create the right incentives
- If a deal seems too good to be true (eg, a AAA earning LIBOR plus 100 bp) it probably is
- Do not rely on ratings
- Transparency is important in financial markets
- Resecuritization was a badly flawed idea