

Applied Macroeconomics: Two Case Studies

Mongolia's Export Shock & The GFC

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Demand Shock in a Small Open Economy: Mongolia

Mongolia exports $\sim 90\%$ minerals (coking coal, copper) to China.

Shock: Chinese steel production $\downarrow \Rightarrow$ coking coal demand $\downarrow \Rightarrow$ coal prices $\downarrow 37.8\%$ y-o-y (through May '25)

China Steel Output $\downarrow$

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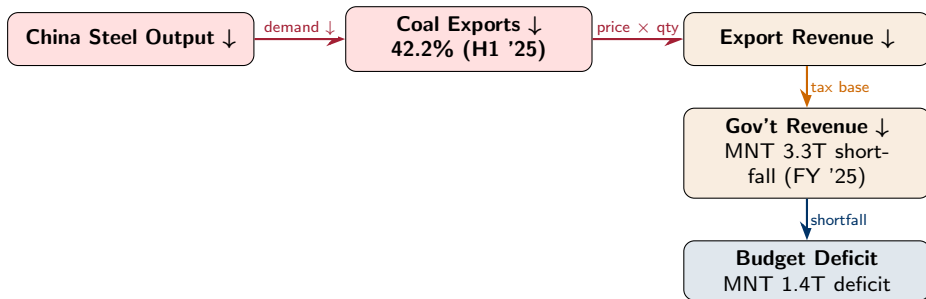
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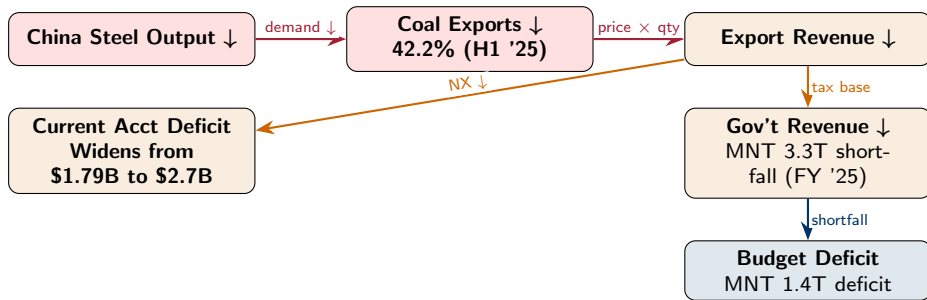
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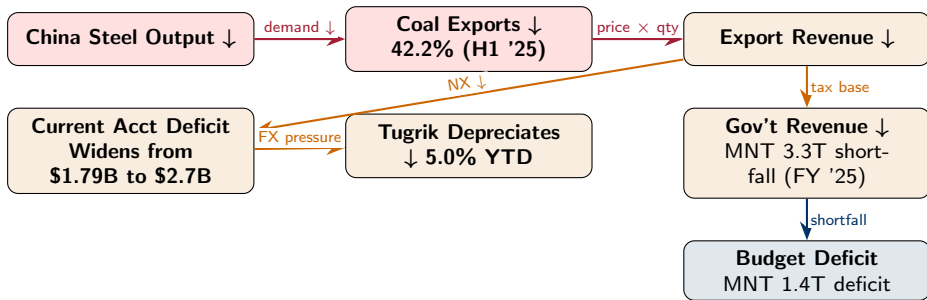
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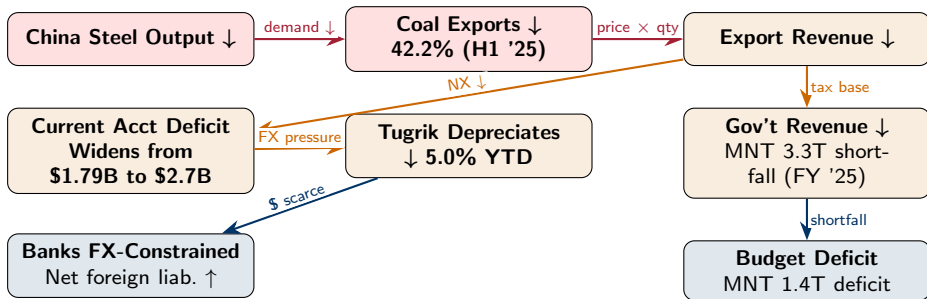
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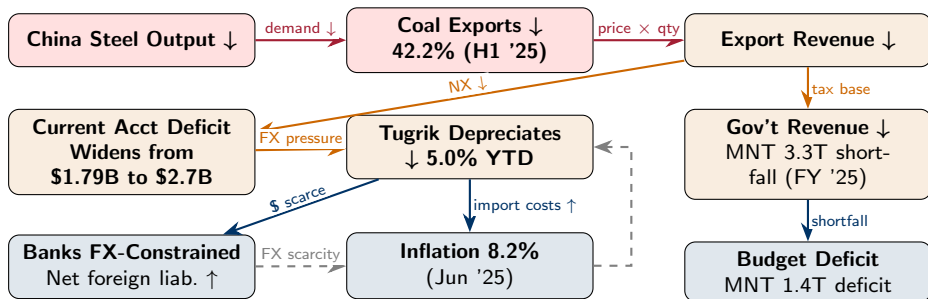
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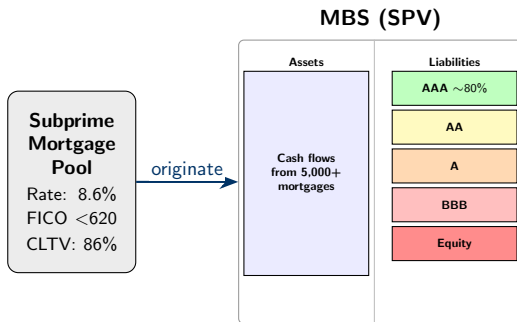
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Key AD-AS connection: Export shock ⇒ leftward shift of AD ($NX \downarrow$) and fiscal contraction ($G \downarrow$ or $T \uparrow$), while currency depreciation shifts SRAS left via higher import input costs ⇒ **stagflationary pressure**.

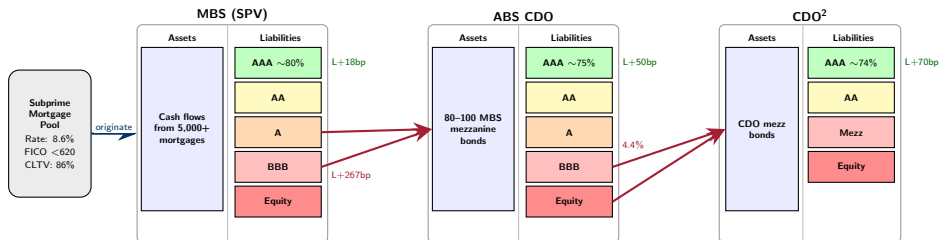
GFC: Key Definitions



- **Mortgage** — A loan to buy a home; the house itself is collateral.
Subprime: borrower FICO <620.
- **MBS** (Mortgage-Backed Security)
- **Tranche** — A “slice” of debt; senior (AAA) gets paid first, equity last.
- **CDO** (Collateralized Debt Obligation)

GFC: The Securitization Chain — “The Meat Grinder”

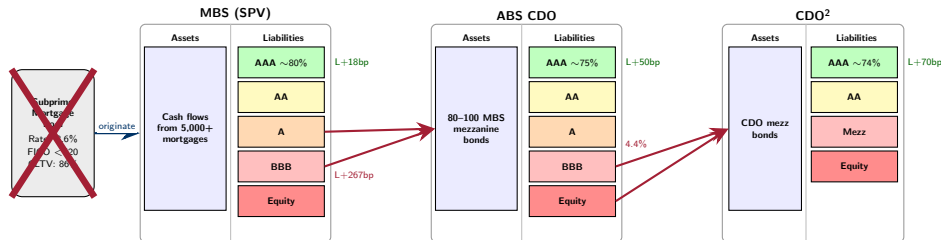
Subprime mortgages were pooled into MBS, whose mezzanine tranches were re-pooled into CDOs, then into CDO²s. At each layer, **~75% of output was rated AAA**.



While home prices ↑, defaults are low because banks can foreclose and sell the house at a *profit*.

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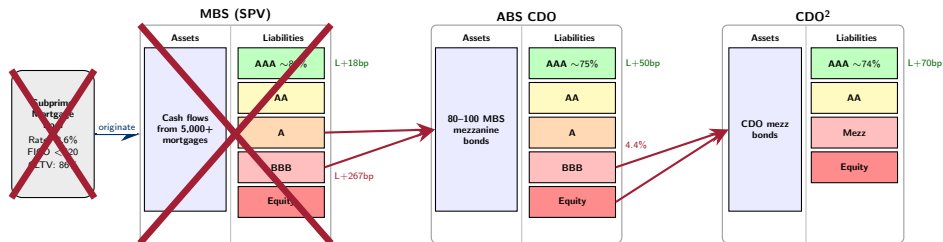
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2006: Home prices plateau → defaults spike. Borrowers are **underwater** (owe more than the house is worth). Foreclosure no longer recovers the loan.

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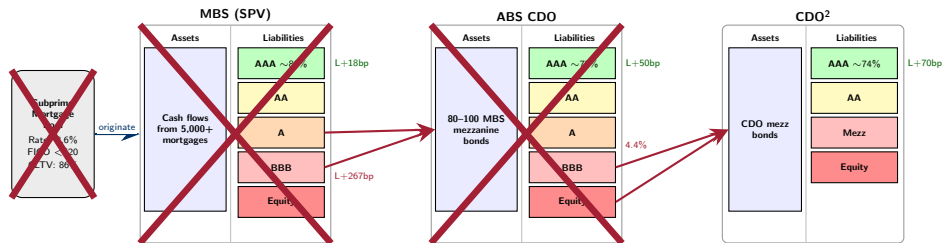
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Losses eat through MBS equity, then mezzanine, then even “AAA” tranches. All tranches were correlated to the same housing bet.

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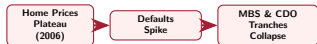
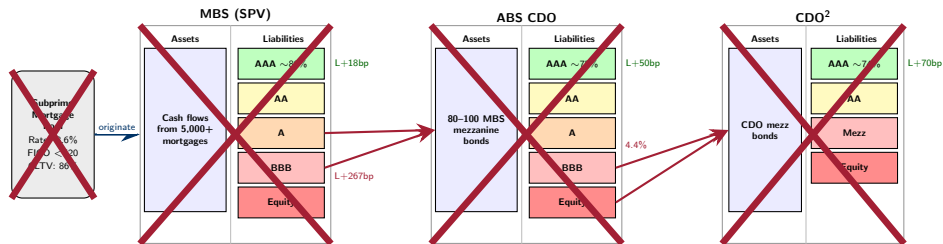
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CDO assets are MBS mezzanine bonds—the very tranches now defaulting. Losses cascade: CDO equity → mezzanine → “AAA.”

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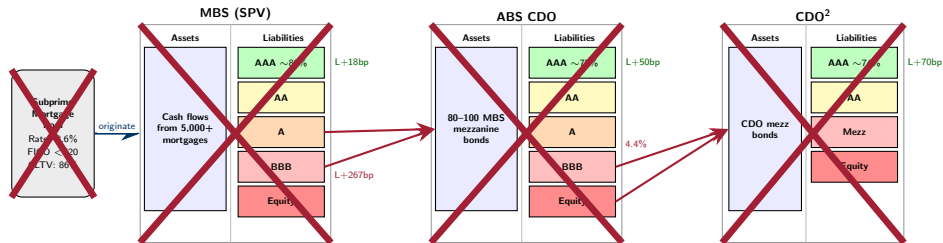
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CDO² assets are CDO mezzanine bonds—junk repackaged as AAA, now worthless. The entire chain is broken.

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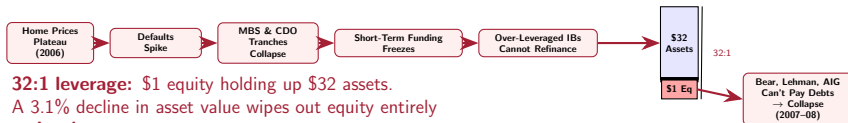
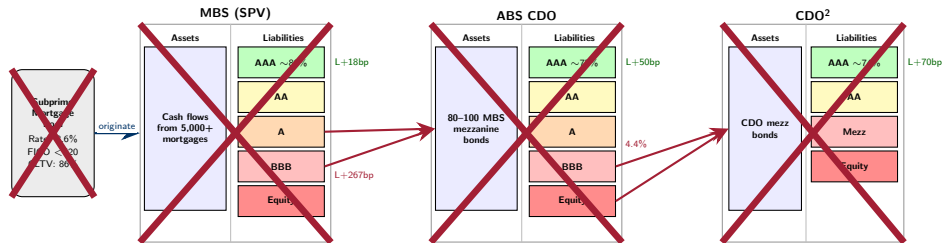
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Banks rolled ~25% of funding each night—borrowing daily to pay yesterday's lender.'

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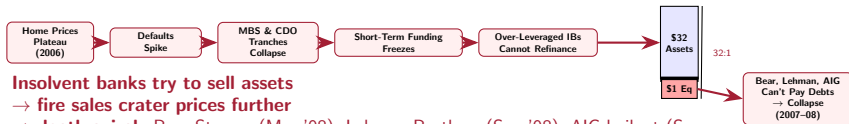
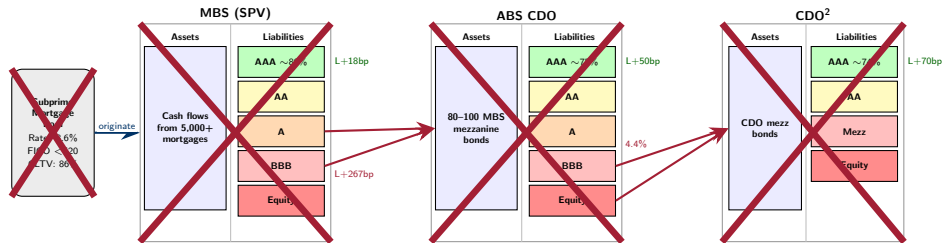


32:1 leverage: \$1 equity holding up \$32 assets.

A 3.1% decline in asset value wipes out equity entirely → **insolvent**.

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Insolvent banks try to sell assets

→ **fire sales crater prices further**

→ **death spiral**. Bear Stearns (Mar '08), Lehman Brothers (Sep '08), AIG bailout (Sep '08).

References & Data Sources

- [1] IMF World Economic Outlook Update, January 2026. “Global Economy: Steady amid Divergent Forces.”
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- [5] *The Economist*, “Japan’s big-spending Takaichinomics is ten years out of date,” November 27, 2025.
- [6] Duggan, M. (2026). Econ 1: Principles of Economics, Sessions 11–17. Stanford University.