DERIVATIVES
CREDIT PRODUCTS
COMPLEX FINANCIAL INSTRUMENTS

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Financial Crisis Inquiry Committee Presentation

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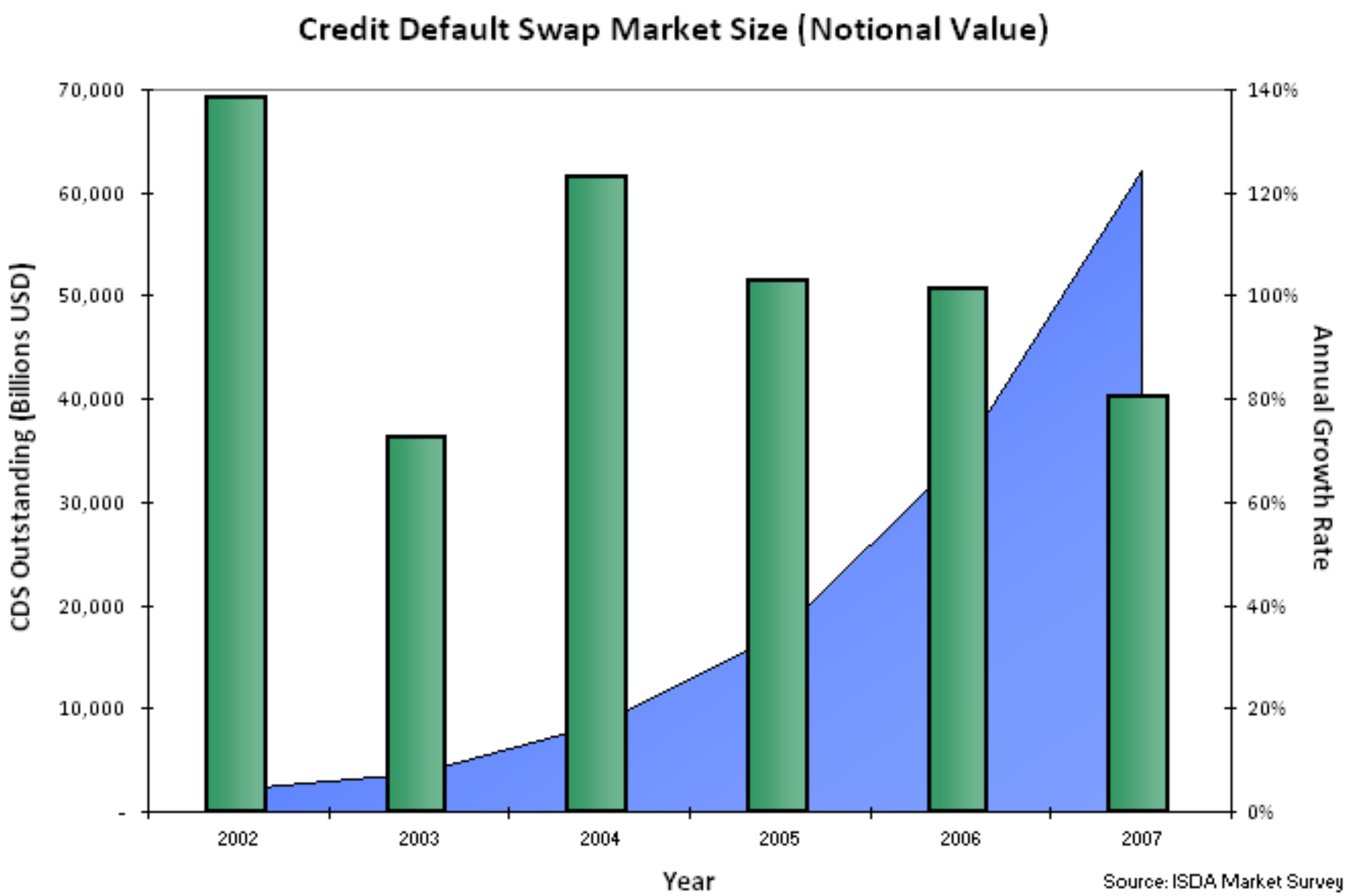
Run up - bubble

- Originate and distribute banking model
- "Credit products" CDO, CDS, repo, swaps,…
  - CDS volume doubled every year (from 2002 onwards)
  - Spreads narrowed – "searching for yield"
  - Properties
    - Implicit leverage and maturity mismatch
    - "De-facto" seniority due to close-out provisions
- Credit bubble → house price bubble

  collateral
  - Ride the bubble - "dance as long as the music plays"
    - due to synchronization risk – risky to go against it "alone"
- **Risk builds up and materializes late when crisis erupts**

CDS from 2002 - 2007



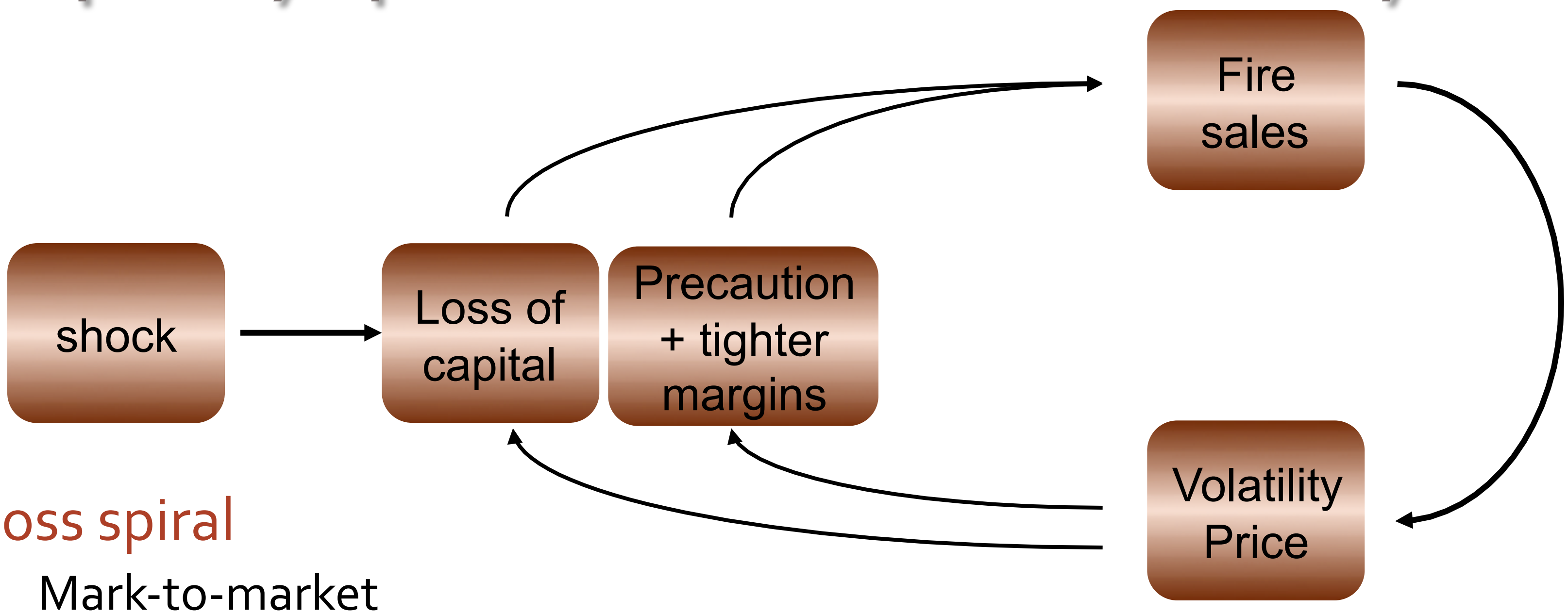
Overview

- Risk build-up phase Credit bubble *hubris*
- Crisis phase Amplification *externalities*
  "endogenous risk"

1. Liquidity spirals + fire-sale externality
2. Network externalities
3. Runs

large

1. Liquidity spirals & fire-sale externality

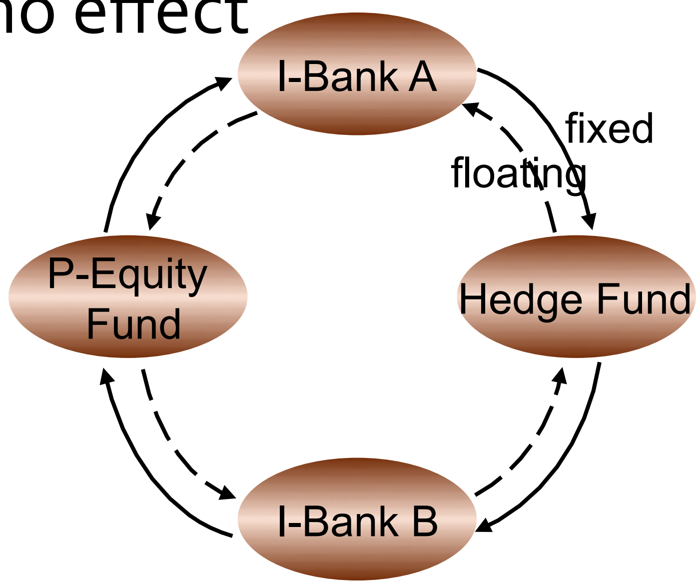


- Loss spiral
  - Mark-to-market
- Margin/haircut spiral
  - Rollover risk
  - Reduce leverage

- Fire-sale externality financial stability is a public good
  - Selling hurts other since it also depresses their price
- Lesson: leverage + maturity mismatch is excessive

2. Network externalities

- Domino effect



- Aim: reduce counterparty credit risk

2. Network externalities

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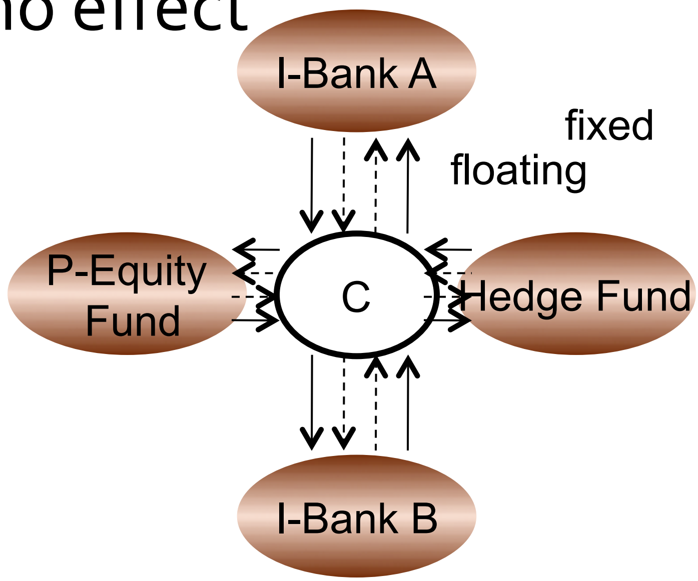
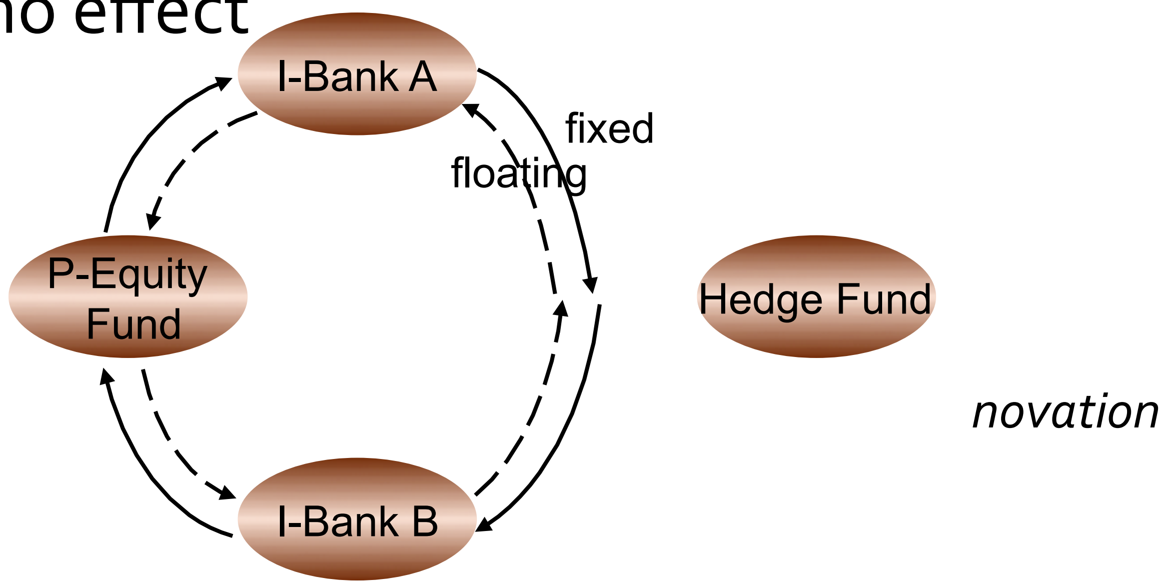


everything nets

- Aim: reduce counterparty credit risk
- Simplify network with
  - Clearing house
  -

2. Network externalities

- Domino effect



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  - OTC: novation/close-out netting/compression trades

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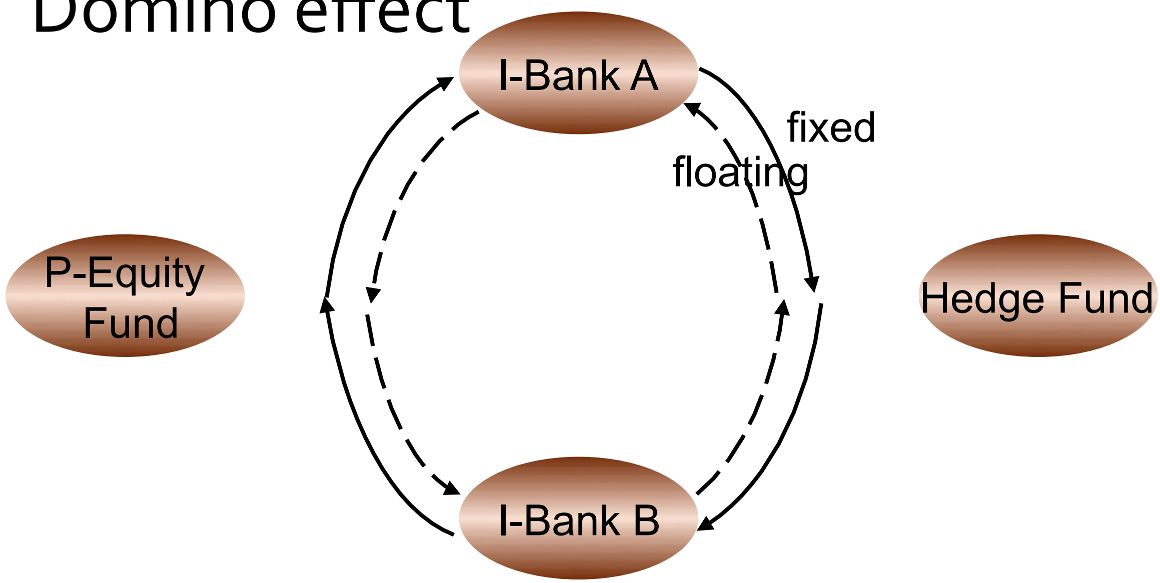

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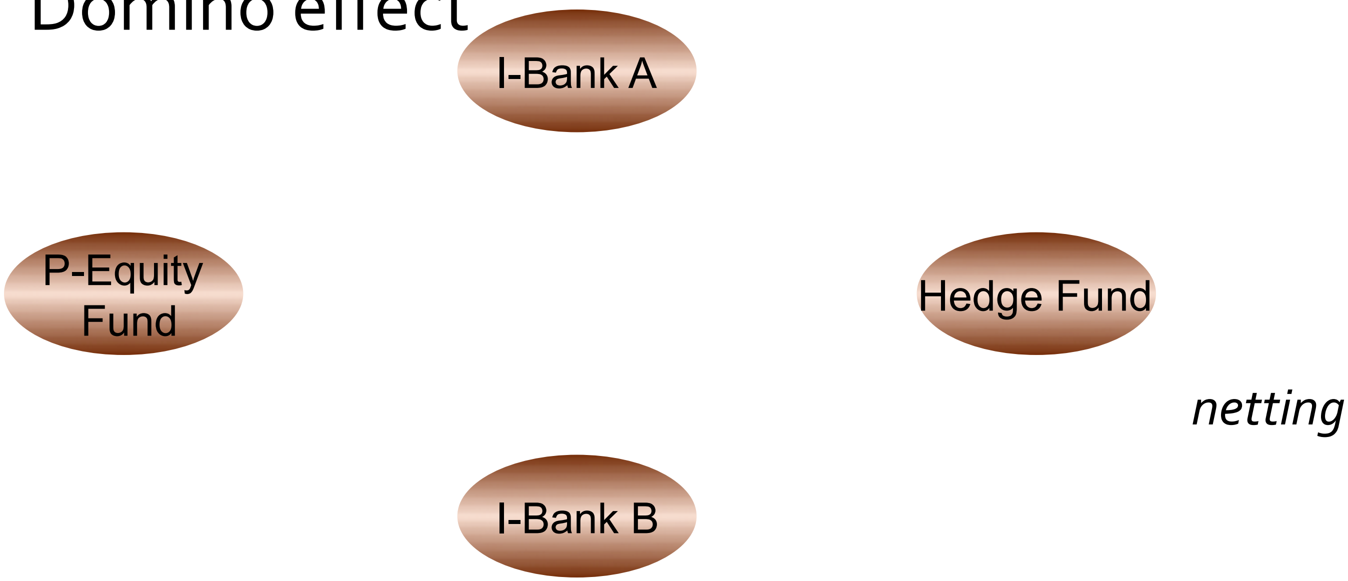

- Aim: reduce counterparty credit risk
- Simplify network with
  - Clearing house
  - OTC: novation/close-out netting/compression trades
    credit products: no "automatic stay" in bankruptcy

3. Run externalities

- Special privileges for credit products
  - Reduces domino (knock-on) effects, *but*
  - undermines bankruptcy code
- Runs - get funds/collateral out before others
  - "collateral run" by hiking margins/haircuts
    - Not worried about survival, since secured by collateral "destruction of franchise value"
    - Seize and sell collateral before others *depress price* (QFCs only apply to commercial banks)
  - Collateral requirements were one-sided!
    - I-banks received (from HF) but did not put up collateral

Two extra questions

1. Did emergence of CDS burst the bubble?
   - No direct channel
     - Investors sell derivatives – others buy (net = 0, adding up constraint)
     - Drives derivatives price down = spreads up
     - As long as underlying (house, Greek bond) is not shorted ⇨ no impact
   - Indirect channel - requires adverse feedback loop
     1. CDS spread increase leads to rating downgrade,
        ⇨ investors require higher return
     2. CDS aggregates info and raises concerns of naïve buyers
2. Did CDS amplify the fallout?
   - Yes, because of uncertainty (endogenous risk) due to market structure

…. to sum up

- Privileges for "credit securities" played crucial role in
  - Run up and credit bubble correction occurs *too late*
  - Amplification in downturn
- Liquidity spirals
  - margins/haircuts → delevering → large price movements
- Network
  - Privileges: implicit priority, short-maturity
  - Aim: isolate players to reduce domino effects … but
- Run on individual institutions is more likely since
  - privileges undermine bankruptcy code
  - collateral requirements are one-sided (except for tri-party)
  - amplified by liquidity spirals