

Loan Origination and Transfer Pricing in the Current Market Environment

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Dichotomy of Transfer Pricing Approaches

Transfer Pricing Approaches

No necessarily "right" or "wrong" answer. Choice(s) should be aligned with overarching objectives

What is transferred?

Asset Transfer
(e.g. loan and all subsequent interest income is sold)

Risk Transfer
(e.g. front office buys credit insurance from PM but keeps loan)

- Or -

Based on what?

Market Value
(e.g. market credit spread curve)

Internal Value
(e.g. EL and EC based on internal PD, LGD, own portfolio concentrations)

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- Or -

Cyclicity?

Point-in-Time
(e.g. current credit spreads)

Cycle Neutral
(e.g. historical average credit spreads)

or

Point-in-Time
(e.g. current PDs, LGDs)

Cycle Neutral
(e.g. historical average PDs, LGDs)

or

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or

Comments

Typical for loans to liquid, large cap names
Originating at market does not ensure portfolio is "profitable"
Will track external market developments

Never seen in practical use – would be considered nonsensical by many.
Won't track external market developments

Common approach, aligns transfer price with internal profitability targets
Will more or less track external market developments

Common approach, aligns transfer price with internal profitability targets
Won't track external market developments so well

Typical for counterparty/credit treasury type situations
Insuring at market does not ensure portfolio is "profitable"
Will track external market developments

Never seen in practical use – would be considered nonsensical by many
Won't track external market developments

Typical for mid-market, non-liquid or retail names
Aligns transfer pricing with internal profitability targets

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Transfer Pricing: How far into the future?

- 1st Year EP: \$100 or -\$25
- Average EP: \$ 40 or \$ 50
- Cumulative EP: \$ 200 or \$ 250
- Present value of cumulative EP



At least two competing views are possible:

1) Accurate forecast of next year's realized EP/TP

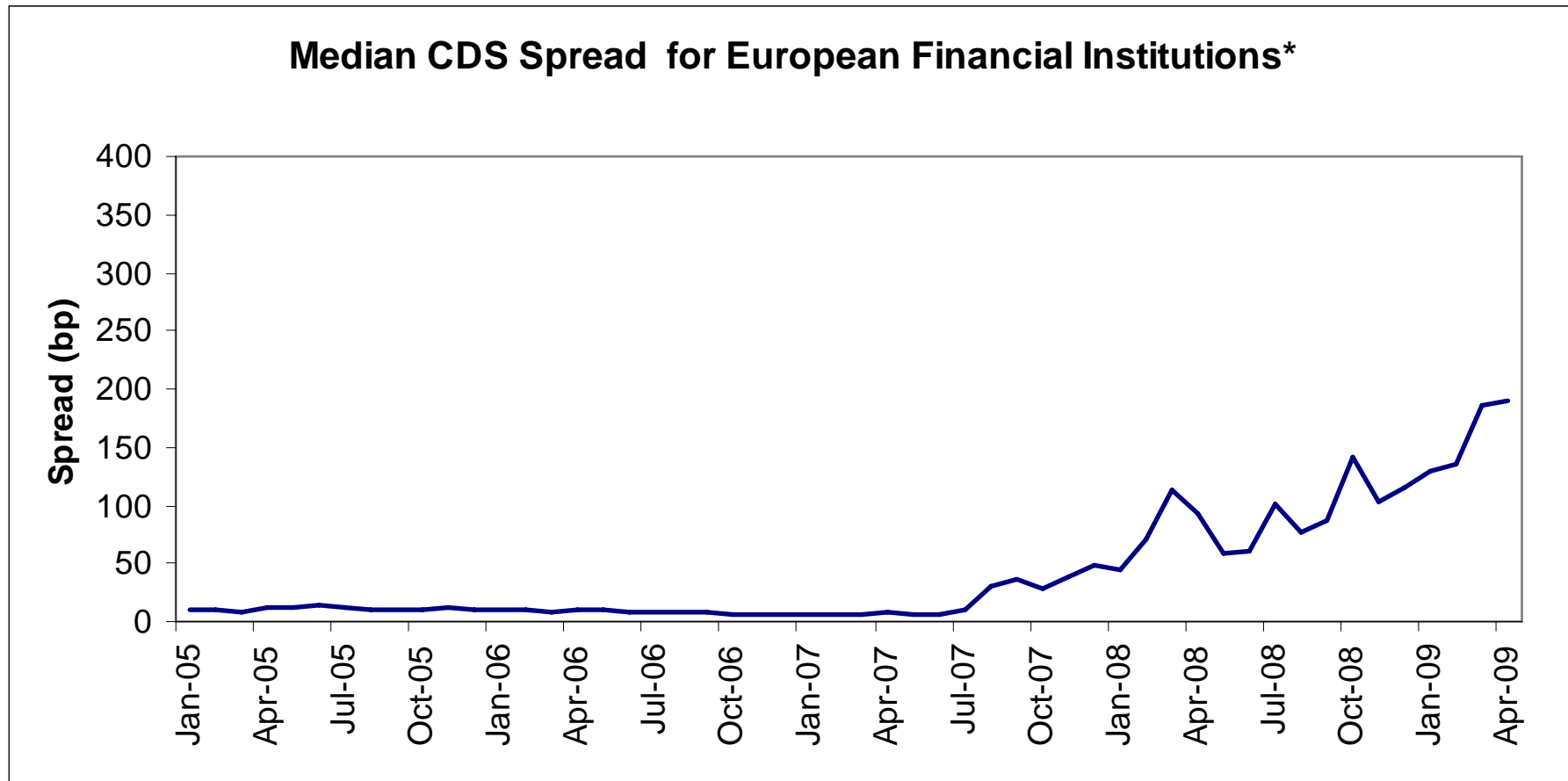
2) Economically correct and meaningful decision basis for new deals (e.g. present value of survivorship weighted cumulative EP/TP, adapted for optionality if deemed necessary)



- 1) EPs/TPs through time may differ;
- 2) Which EP/TP do we want for what?



The Current Environment



* Represents the median CDS spread for the 20 largest, measured by market capital, financial institutions in Europe



Highlights

- The current environment creates unusual challenges for pricing credit exposures and designing loan contracts.
- Traditionally transfer pricing has not had to consider the implications of funding costs
- With high funding costs, lenders must **inflate fees** to justify loans.
- Originating term loans or revolving lines of credit with prepayment options during periods of inflated fees can generate remarkably high prepayment rates.
- Questions:
 - How should a financial institution account for these dynamics?
 - Can financial institutions consider alternative contracts that may partially help overcome these challenges?





Formulating the Problem



Funding Costs: Computing Spread in a One-Period Model

Borrower	Cash Flow to Bank Shareholder
ND	$1 + r_{Borrower} - 1$
D	$(1 - LGD_{Borrower}) - 1$

$$V_{BankShareholder} = \Pr^Q \{ ND_{Borrower} \} (1 + r_{Borrower}) + \Pr^Q \{ D_{Borrower} \} (1 - LGD_{Borrower}) - 1$$

break even rate $\longrightarrow r_{Borrower} \approx PD_{Borrower}^Q \cdot LGD_{Borrower}$



What if the Bank Faces Default Risk?

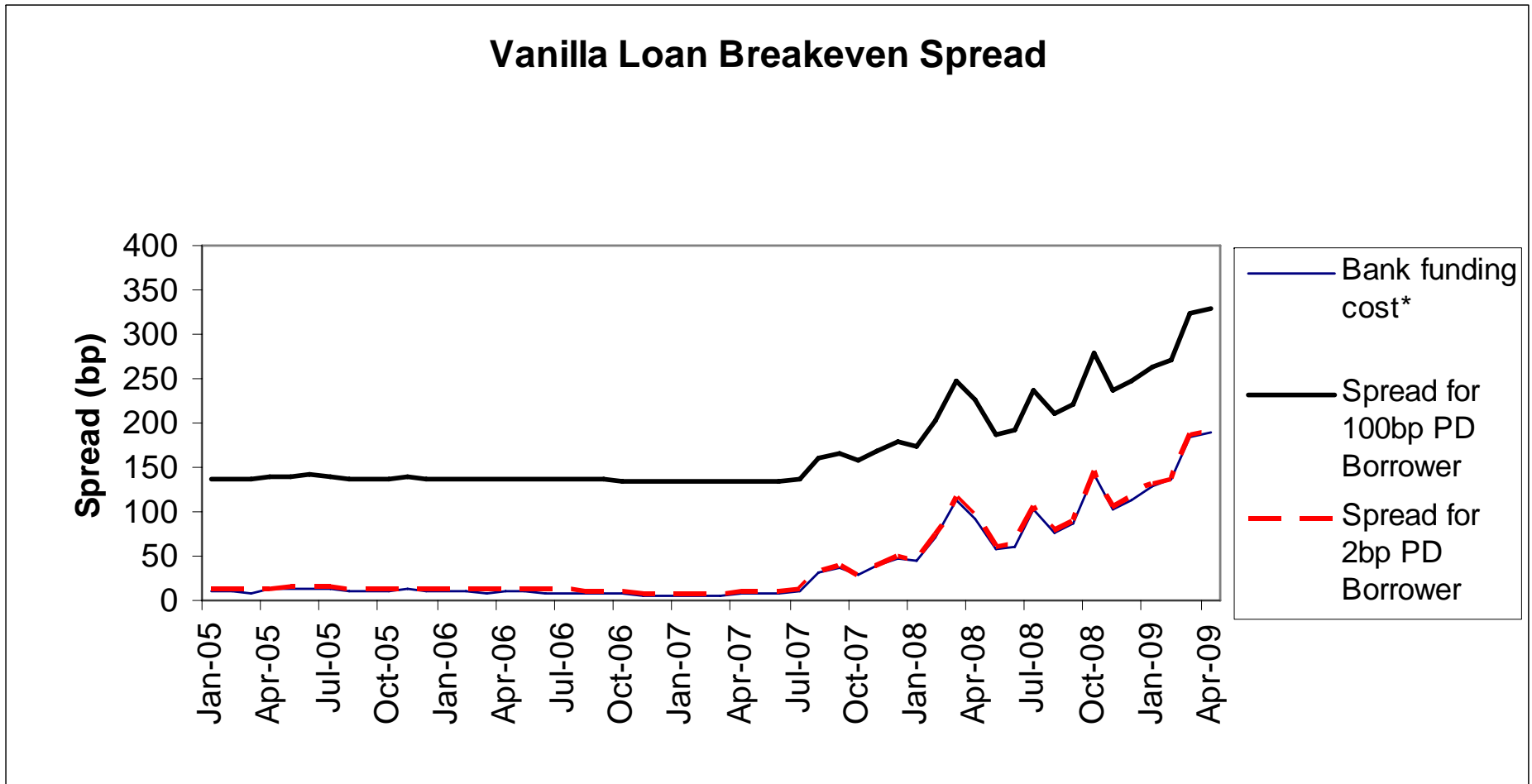
Bank	Borrower	Cash Flow to Shareholder
ND	ND	$(1+r_{Borrower})-(1+r_{Bank})$
ND	D	$(1-LGD_{Borrower})-(1+r_{Bank})$
D	ND or D	0

$$V_{BankShareholders} = \Pr^Q\{ND_{Bank}\} \left[\begin{array}{l} \Pr^Q\{ND_{Borrower}\}(1+r_{Borrower}) + \\ \Pr^Q\{D_{Borrower}\}(1-LGD_{Borrower}) - (1+r_{Bank}) \end{array} \right]$$

break even rate $\longrightarrow r_{Borrower} \approx PD_{Borrower}^Q \cdot LGD_{Borrower} + r_{Bank}$



The Current Lending Environment



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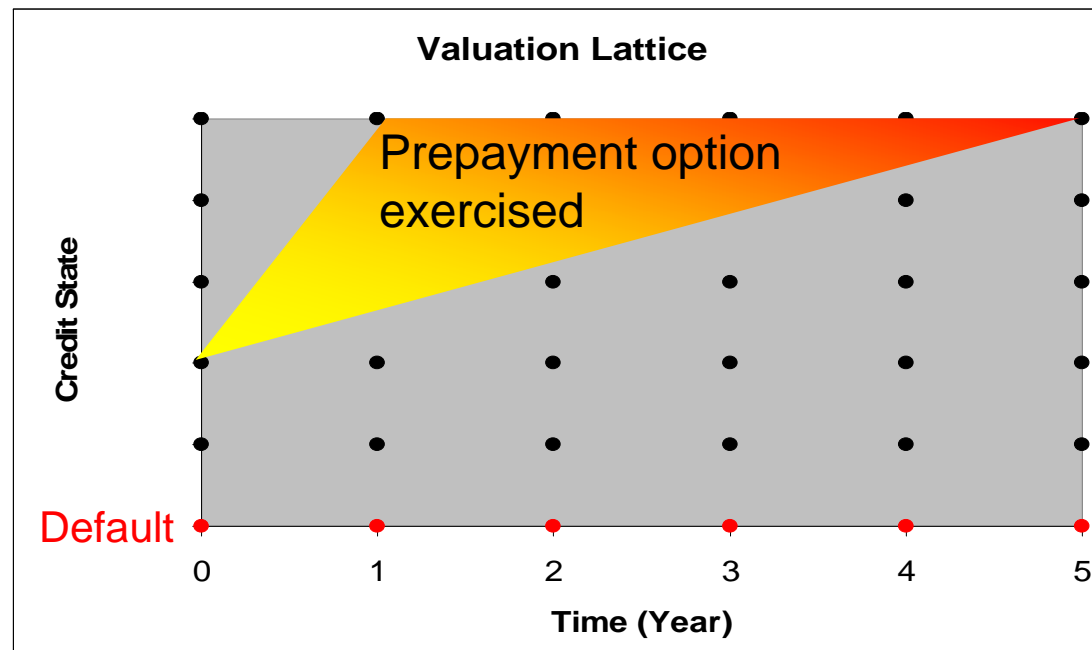
Prepayment Options

- In general, a pre-payable loan should have a higher fee to offset the value of the option.
- With inflated funding costs, the likelihood of prepayment increases.
- CAVEAT - this exercise is a controlled thought experiment and does not account for various subtleties; e.g., most borrowers currently hoard cash and are unlikely to prepay.

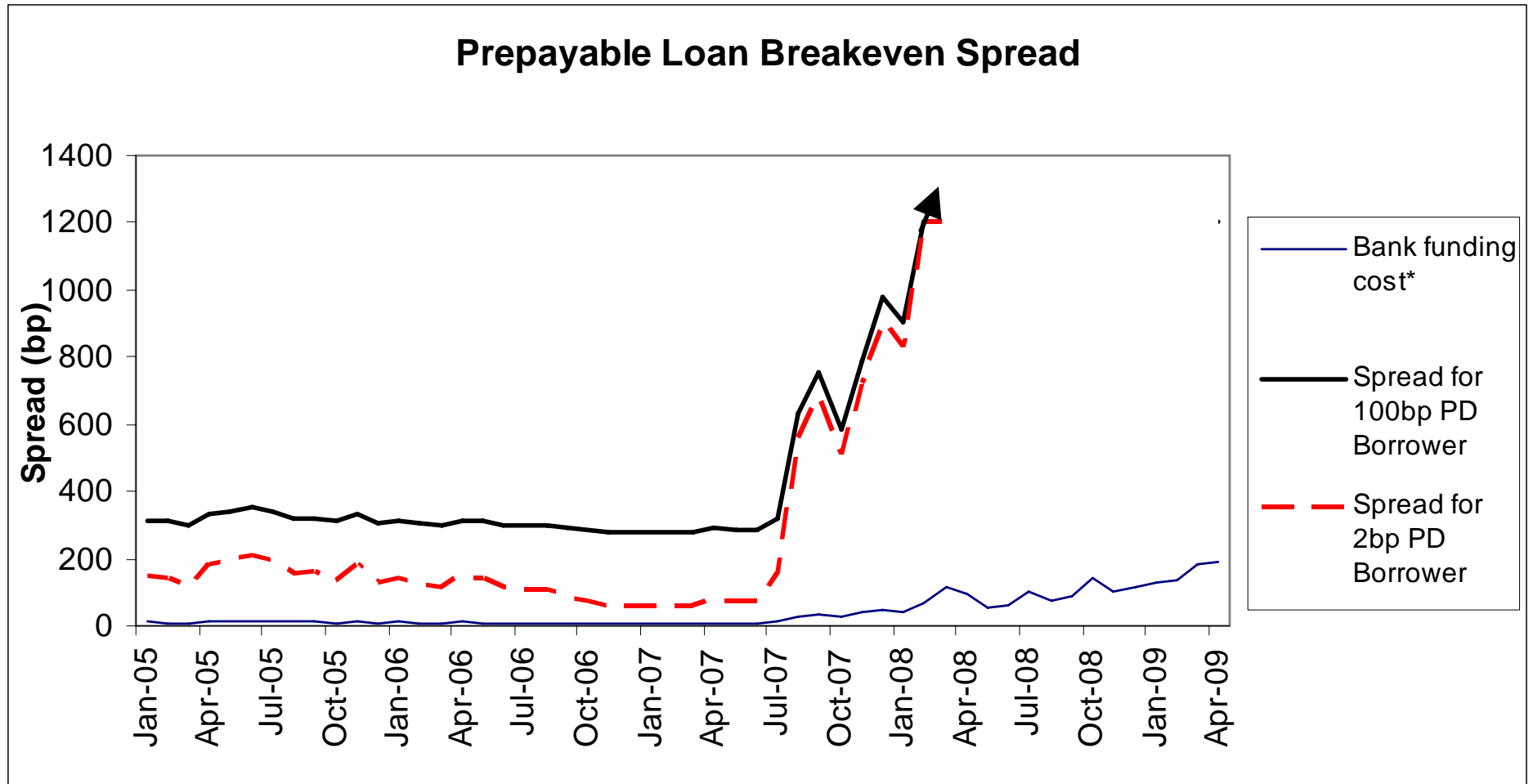


Using RiskFrontier™ to Price Prepayable Loans

- The Lattice Valuation Model in Moody's KMV RiskFrontier facilitates valuation of loans and revolvers with embedded options.



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Possible Solutions



Solutions

- To high funding costs
 - Government intervention
 - Repos to central banks
 - Creditor involvement

- To prepayment effects
 - Shortened tenor
 - Grid pricing - establish the fee as a function of index spreads (e.g., CDX or iTraxx)
 - Charge the value of the option via a higher upfront fee what if not exercised?)
 - Charge higher prepayment penalties





Summary



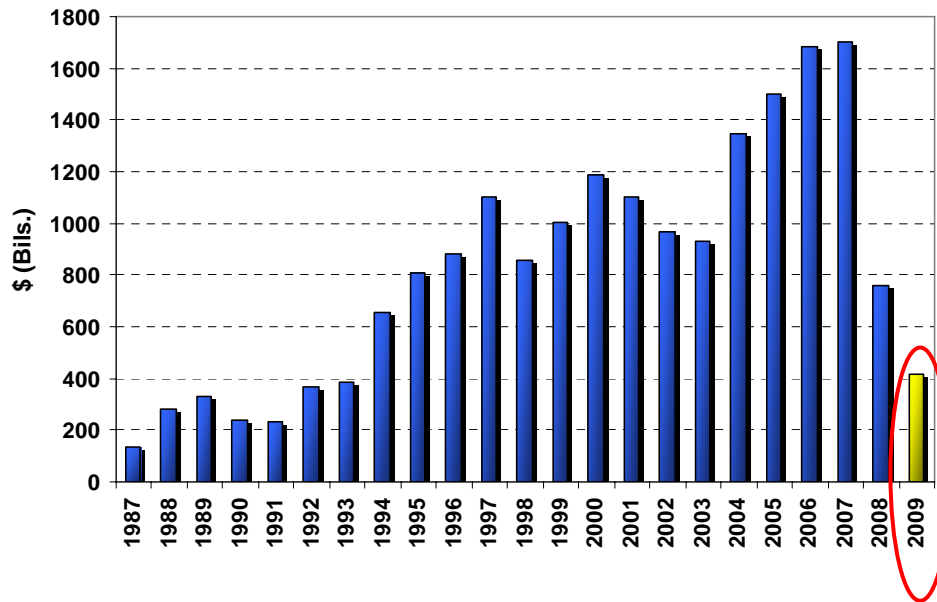
Summary

- Extraordinary times for funding costs
- Fees can have a nontrivial impact on the price of vanilla loans and even more so on pre-payable loans
- There may be contractual tweaks that alleviate some of the distortions
- Food for thought
 - Who is lending to high credit-quality borrowers?
 - Equilibrium effects

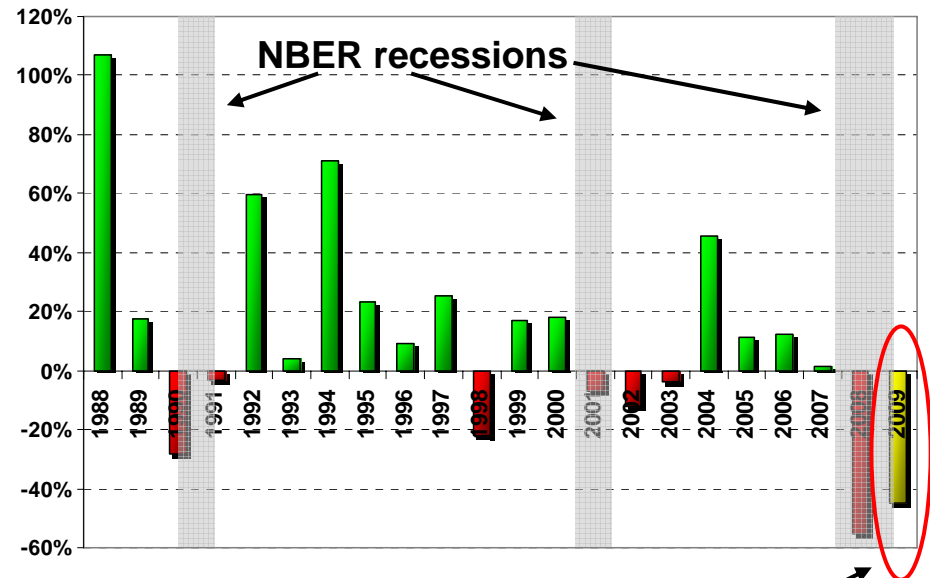


Loan Origination during the Current Environment: Demand or Supply?

US Loan Issuance



Change in Issuance



Projected for 2009 (based on Q109 issuance)

Includes IG loans, leveraged loans, institutional loans, LBOs, and HY bonds

Source: Thomson Reuters LPC





Questions

