



2007 ~ 2008

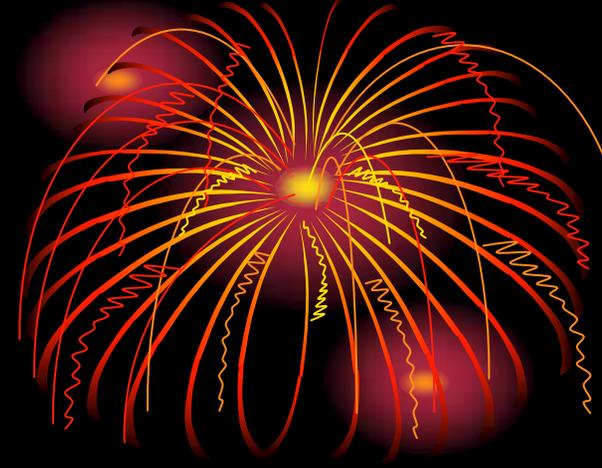


2009.06.17

soona1219@gmail.com

016 - 250 - 6832

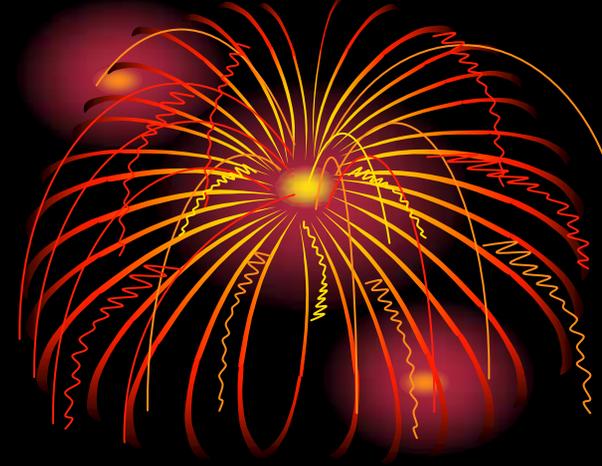
Micro factors



- MBS pass-through → CMO pay-through → CDO, CDS, CDO²
- Mortgage: Prime(A) → Alt-A → Jumbo, Subprime
- Mortgage: FixedRM → AdjustableRM → Option ARM, exotic M.
- Conduit, SIV

vs.

Macro Environment



- 1998

- Easy money

- 2004 FRB 4)

(1% → 2%)

- 70

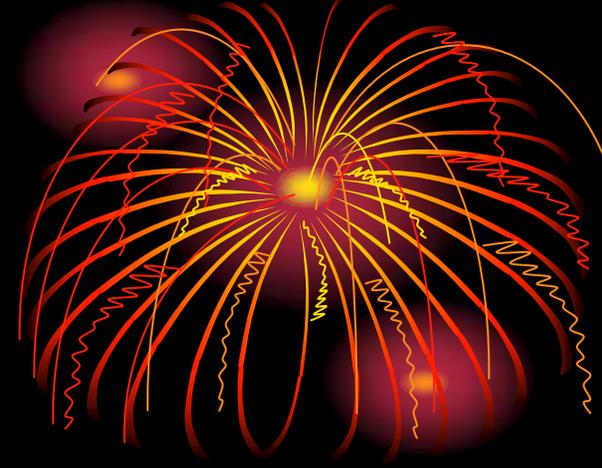
- Bretton Woods 2

- ,

-

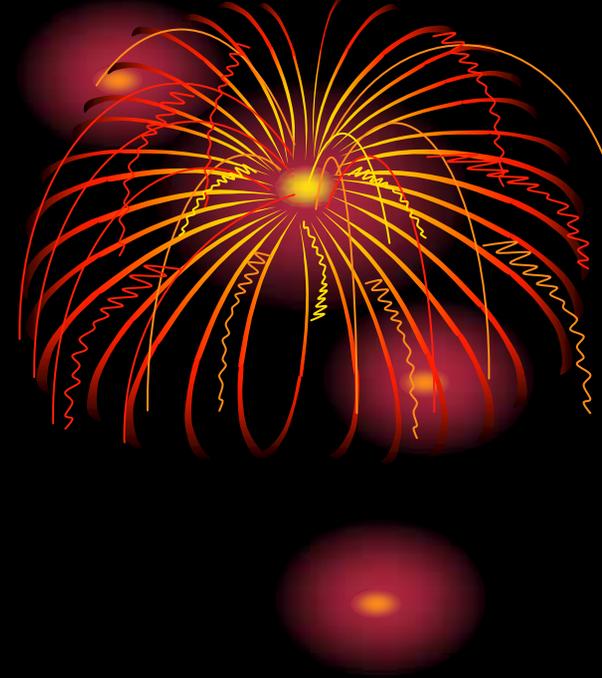
- ()

Institutional factors



- Agent Problem
 - , ex: mortgage broker
 - IB incentive system
- 가
 - ,
 - 가
- 9賊 ()

Regulatory Factors



-
- Shadow Banking
- “Greenspan Put”
- Gramlich (2007)
- Mark - to - Market ?

, 가

- 2003 Fannie Mae, Freddie Mac
IB

(胚芽)

- Larry Fink

- 1980 First Boston
- BlackRock
- Freddie Mac CMO
-

Mortgage Trader

(Tranche)



PHOTO: SARAH R. FRIEDMAN



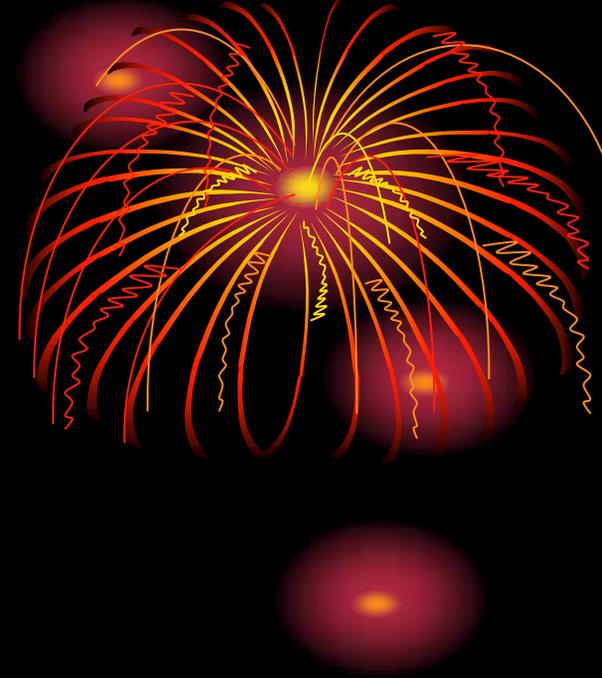
(胚芽)

- Michael Vranos
 - Kidder Peabody CMO
 - Ellington Management Group CEO
 - David Askin CMO
 - IT ,
 - Leverage Equity Tranche (Toxic Waste)
 - 1994 Fed Rate 0.5% → CMO
 - CMO 550

"There is no way to determine [values] that would be simultaneously fair both to investors redeeming from these funds and to investors remaining in the funds" , M. Vranos, Sep. 2009

가

- 1970 S&L
 - Federal Home Loan Bank Board
- 1987 Black Monday
 - Portfolio Insurance
- 1998 LTCM
 -
- 2007
 - 2007 6 2
 - 2007 8 IKB, SachsenLB SIV
 - 2007 9 Northern Rock
 - issue



2000

Perfect Storm



- 가
- ,
- Yield curve play: Mortgage
- Mortgage Credit Score → Prime Mortgage
- 2000 Subprime →
- Subprime CDO CDO Diversification
- (Information Asymmetry)
- Due Dilligence
-

(2008)

가

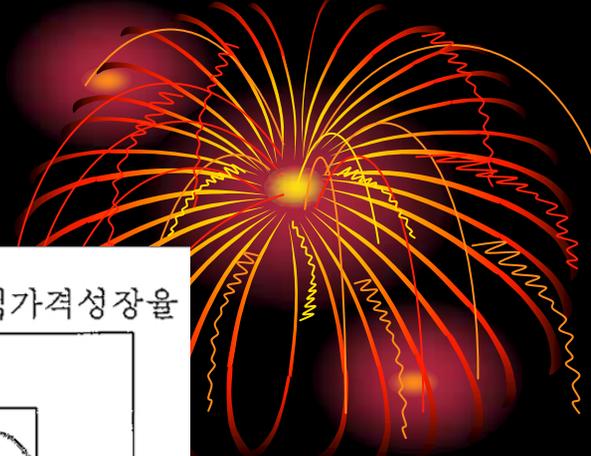
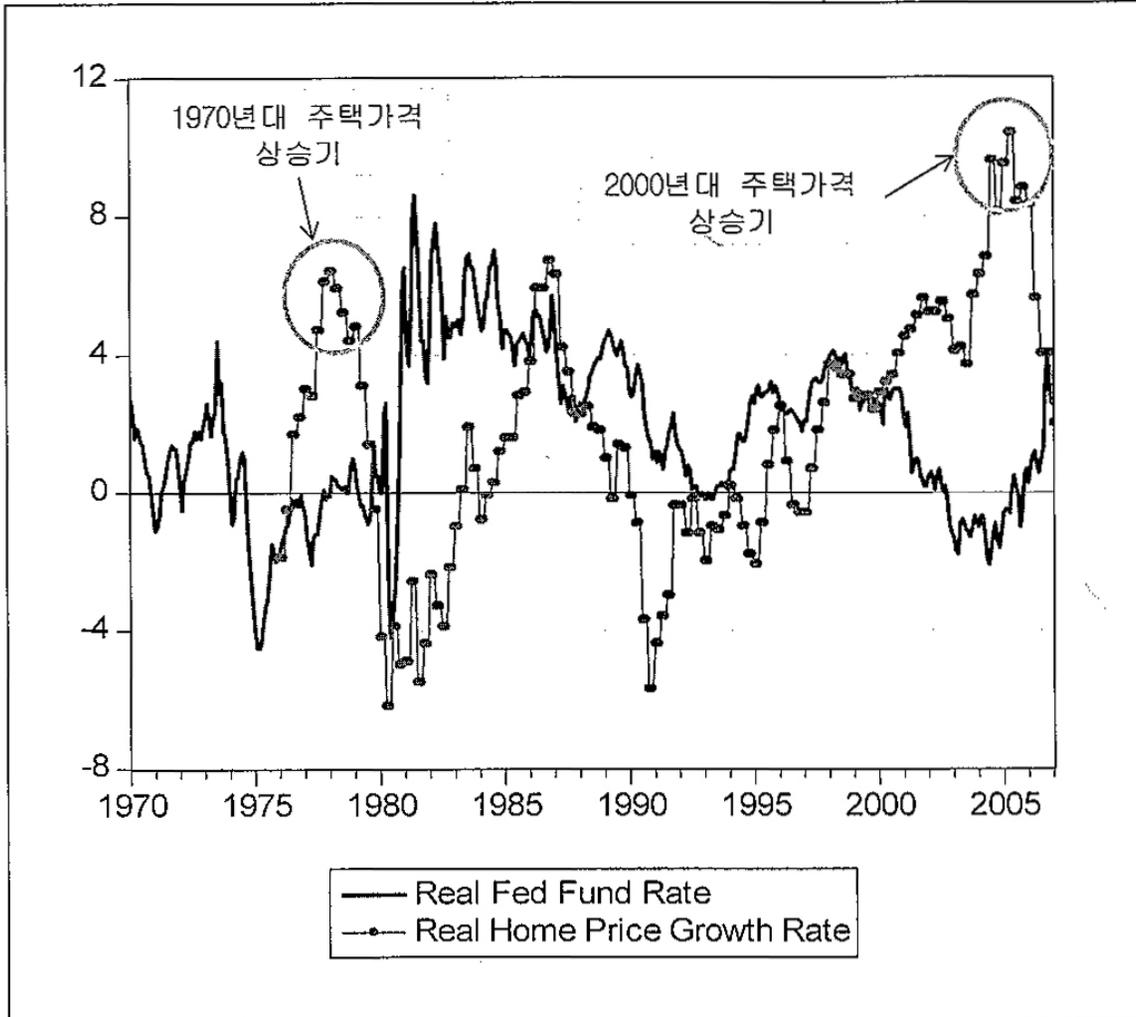


그림 5. 미국 연준의 실질정책금리(Real Fed Fund Rate)와 주택가격성장율



2000



표 2.

U.S. Debt Outstanding, By Instrument (2000Q1-2006Q4; Billions)

	2000Q1	2006Q4	CAGR**
Mortgage*	6,332	13,510	13.5%
Consumer	1,554	2,418	7.7%
Municipal	1,462	2,403	8.6%
Treasury	3,626	4,862	5.0%
Corporate, non-financial	4,410	5,976	5.2%

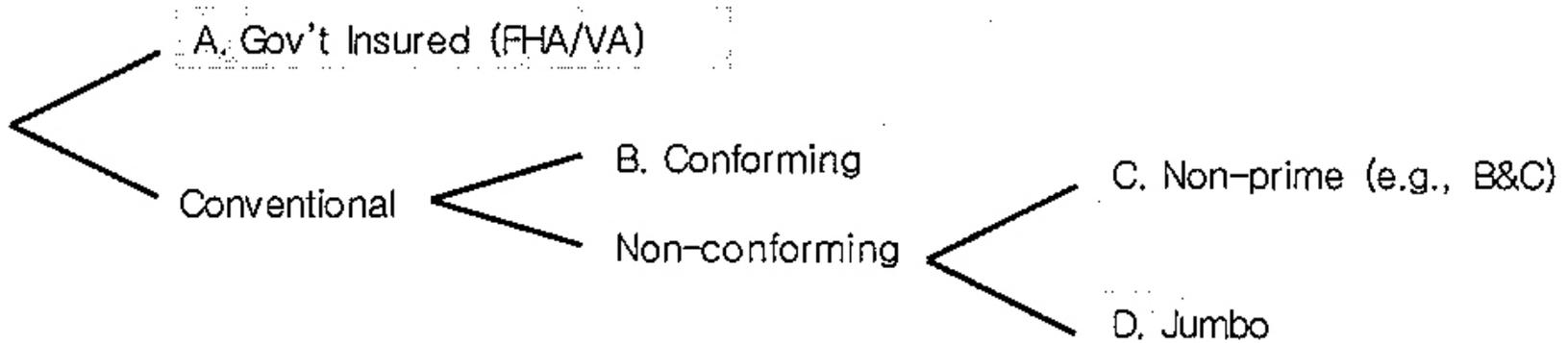
Data source: Fed Flow of Funds

* Including residential and commercial mortgages

** Compounded Annual Growth Rate



그림 6. 미국 모기지시장의 분할



- A. Gov't-insured (FHA/VA): Explicit gov't guarantee; Securitized by Ginnie Mae
- B. Conforming conventional: Implicit gov't guarantee; Securitized by GSEs
- C. Non-conforming, non-prime: No gov't guarantee; Securitized by Private Labels (PLs) via CDO & CDO-Squared
- D. Non-conforming, jumbo: No gov't guarantee, Securitized by PLs

VS

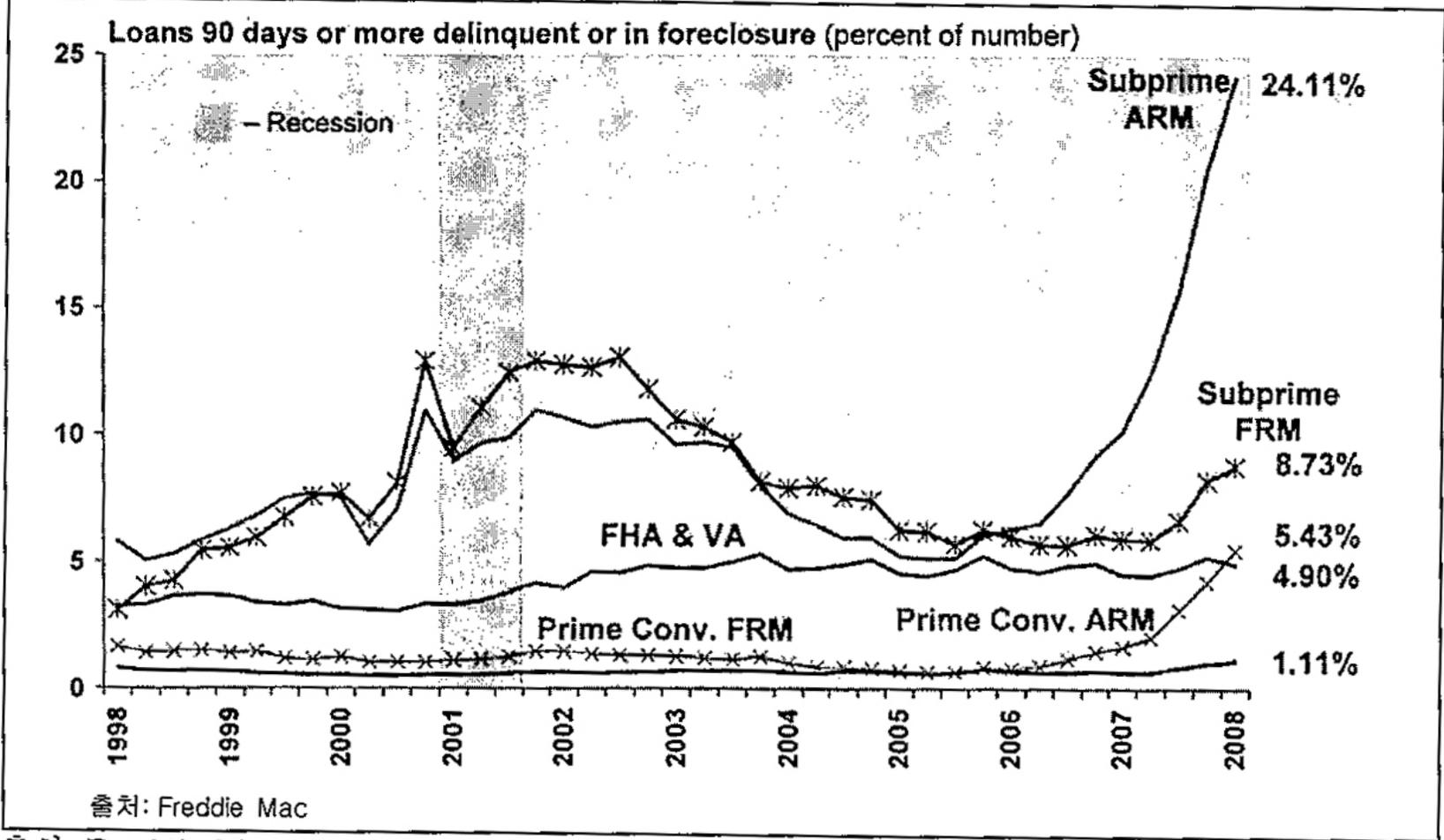


표 3. 프라임 MBS 와 서브프라임 MBS 의 차이점

	Prime MBS	Subprime ABS
담보	<ul style="list-style-type: none"> ▪ 약 90%가 15 과 30 년 고정금리 모기지("plain vanilla" 대출)의 두가지 형태의 모기지론에 의해 담보 ▪ 대부분 조기 상환 벌금이 없음 ▪ 최근 수익 증명을 낮은 수준으로 요구 또는 요구하지 않는 대출 증가 (NINA/SISA) 	<ul style="list-style-type: none"> ▪ 약 90%가 변동금리 모기지 또는 혼합모기지(예 2/28 ARM, Option ARM, IO-ARM) 에 의해 담보 ▪ 아주 낮은 초기 이자율 ▪ 대부분 수익증명 요구가 없거나 낮은 수준의 대출이 많은 부분 차지 (최근 약 50%에 다다름)
구조	<ul style="list-style-type: none"> ▪ Pass-Through(정부보증 모기지업체), CMO. 그리고 Stripped MBS(IO-PO) - 조기상환 위험 관리를 위한 구조화(순차적 상환구조-Sequential-pay, PAC, TAC 와 같은 다양한 CMO 구조를 통해) 	<ul style="list-style-type: none"> ▪ 선/중/후순위 tranche 를 갖는 CDO, CDO-squared 구조 ▪ 신용위험을 관리하기 위해 구조화 또는 규모화 : tranche 등급별 신용등급은 중요한 시장 메이커로서 작용
리스크 관리	<ul style="list-style-type: none"> ▪ 신용위험: 공적, 민간 모기지 보험과 정부 채무불이행 보증을 통한 외부 신용보강, 고위험 대출에 대해서는 보험료 부과 (보험 제공회사의 경쟁으로 결정되어진 보험료 부과에 대한 "가시장가") ▪ 조기상환위험: 발행 당시 사전적 위험 지표로서 PSA 배수, CMO tranche 의 상대적 가치를 측정하는 도구로서의 옵션조정스프레드, 이자율 스왑 옵션 헤지 도구로 사용되어지는 캡, MBS 발행자의 자산 풀 특징에 대하여 월간 정보 공개 	<ul style="list-style-type: none"> ▪ 신용위험 : 구조화를 통한 내부 신용보강 을 통해 관리(CDO tranche 와 연동되어지는 신용 리스크 시장 지수 ABX 에 의해 신용위험 측정됨), ▪ 조기상환위험 담보에 대한 조기상환벌금에 의해 관리

출처: Cho (2008)

그림 5. 미국 주택담보대출의 90일 이상 연체율



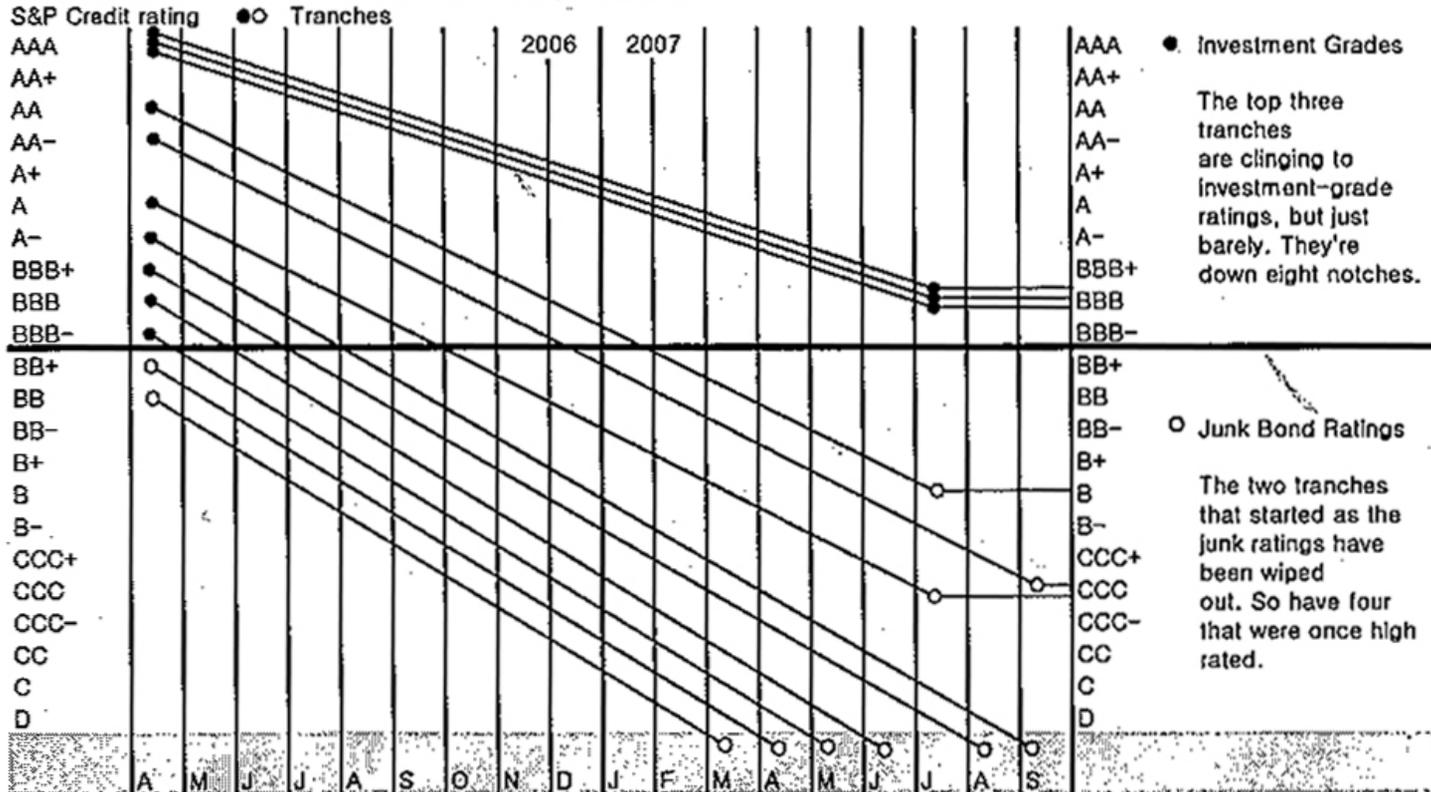
출처: Freddie Mac

CDO



Goldman Sachs CDO Deal (GSAMP 2006-S3): An "Eye-Opening" Case of Rating Migrations

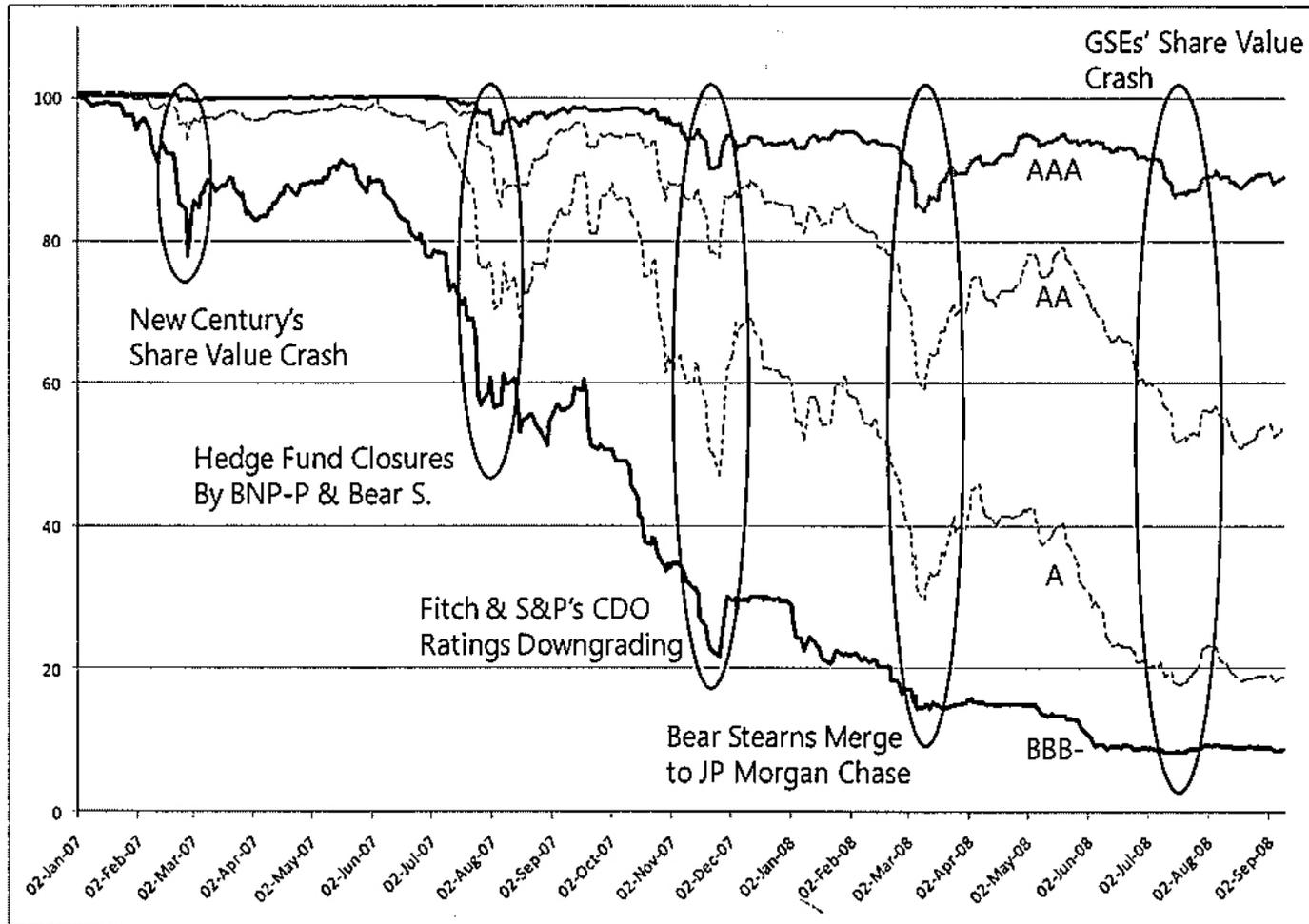
CDO Tranches of GSAMP Trust 2006 S3 Issued by Goldman Sachs



SOURCE : Reproduced from Allan Sloan's column in Washington Post (October 16, 2007)

ABX

그림 9. ABX 지표의 가격변화, 채권등급별 추세 (2007년 1월 - 2008년 9월)





- FSA (), FSA(),
()

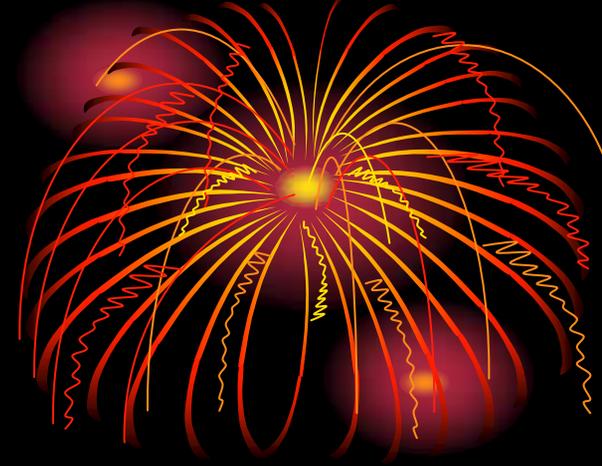


- ⁶
(OCC, FRB, FDIC, OTS, CFTC, SEC)



→IB

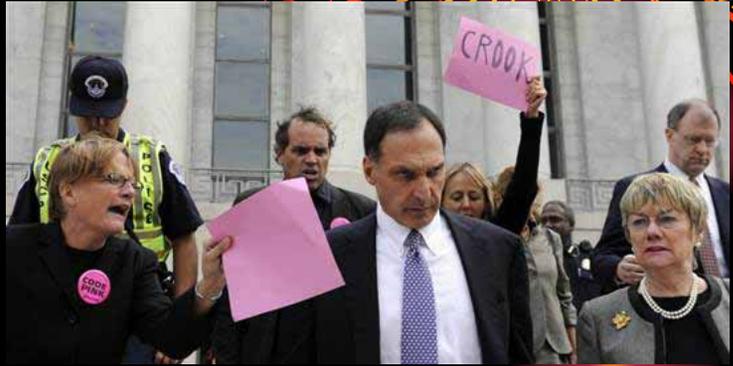
Edward Grammlich



- FRB Governer
 - 2007
 - *Subprime Mortgage: America's Latest Boom and Bust (2007)*
- Home Mortgage Disclosure Act(1975)
 -
 -

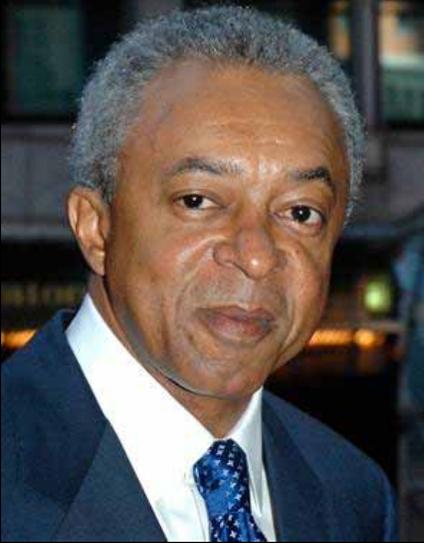


- Richard Fuld
- CEO, Lehman Bros
- “Gorrila”

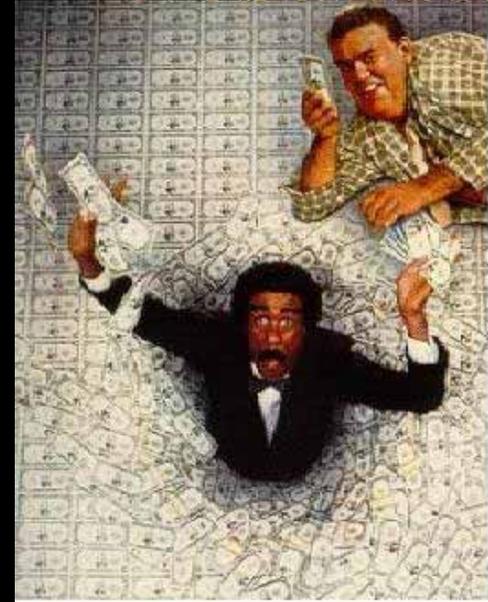


- Jimmy Cayne
- CEO, Bear Sterns
- Central Park 2



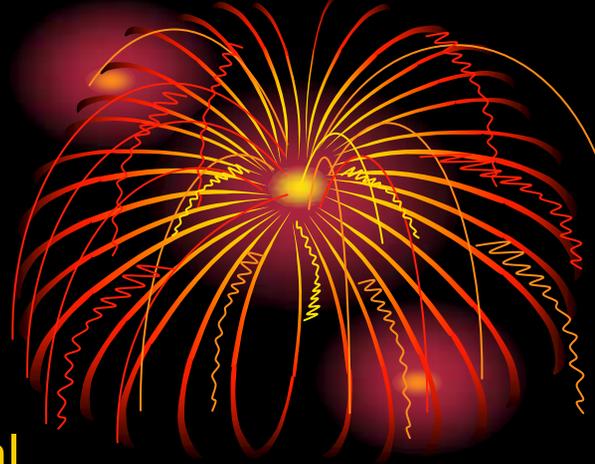


- Stanley O'Neal
- CEO, Merrill Lynch
-



- Martin Sullivan
- CEO, AIG
-





- Ken Thompson
- CEO, Wachovia
- Golden West Financial



- Kerry Killinger
- CEO, Washington Mutual



- Angelo Mozilo
- CEO, CountryFinancial



Countrywide HOME LOANS

Home Loans Made Easy!

You Could Save \$\$\$ With The Combo Loan.

- Low Monthly Payments
- 4 out of 5 Approved¹
- No Up-Front Cost Or Obligation
- Loans for Homeowners With Less Than Perfect Credit

Done to a turn

It's hard to imagine things getting any hotter for Countrywide boss Angelo Mozilo amid more bad financial news and another subpoena, this one from Illinois.

Month	Price
Apr.	~\$35
July	~\$20
Dec.	Close \$10.08 -45c

ANGRY HOMEOWNERS **ILLINOIS**
CONGRESS **SEC**

Bloomberg Part photo composite



- Daniel Mudd
- CEO, Fannie Mae
- (GE)



- Richard Syron
- CEO, Freddie Mac
- FRB

