

Deleveraging the Global Economy

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Brave New World

“Thus a long term corporate bond could actually be sold to three separate persons. One would supply the money for the bond; one would bear the interest rate risk; and one would bear the risk of default. The last two would not have to put up any capital for the bonds, although they might have to post some sort of collateral.”

Fischer Black, 1970

“Fundamentals of Liquidity”

“One would supply the money for the bond”

Traditional Banking

Shadow Banking

Assets	Liabilities
Reserves	Deposits
Loans	
	Capital

Assets	Liabilities
Securitized loans	MM Funding
CDebtO	RP
CLoanO	ABCP
Swaps	Eurodollar

Regulated
Liquidity, Solvency

Unregulated
Liquidity, Solvency

“One would bear the risk of default”

Investor

Insurer

Investor		Insurer	
Assets	Liabilities	Assets	Liabilities
Corp bond [T bond [T bill	MM funding Corp bond] T bond]		CD Swap IR Swap

Shadow Banking: Funding

CDO		Invest. Bank		Insurance	
A	L	A	L	A	L
MBS	Hi Tranche Mid Tranche Lo Tranche	Loans			

Shadow Bank		Pension/Insurance		Hedge Fund	
A	L	A	L	A	L
Hi Tranche	MM Funding	Mid Tranche	DB/Annuity	Lo Tranche	Capital Loans

Shadow Banking: Credit Risk

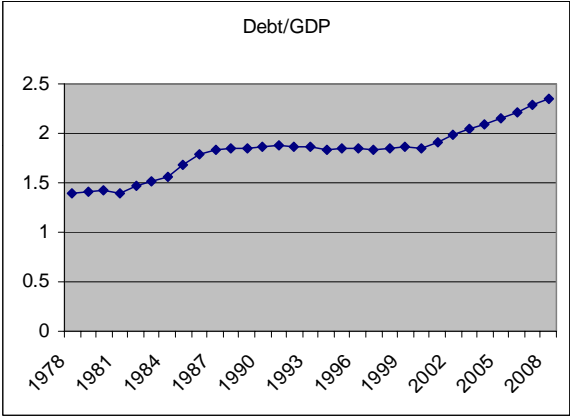
CDO		Invest. Bank		Insurance	
A	L	A	L	A	L
MBS	Hi Tranche Mid Tranche Lo Tranche	Hi CDS Loans	 Mid CDS Lo CDS		Hi CDS

Shadow Bank		Pension/Insurance		Hedge Fund	
A	L	A	L	A	L
Hi Tranche Hi CDS	MM Funding	Mid Tranche Mid CDS	DB/Annuity	Lo Tranche Lo CDS	Capital Loans

Drivers

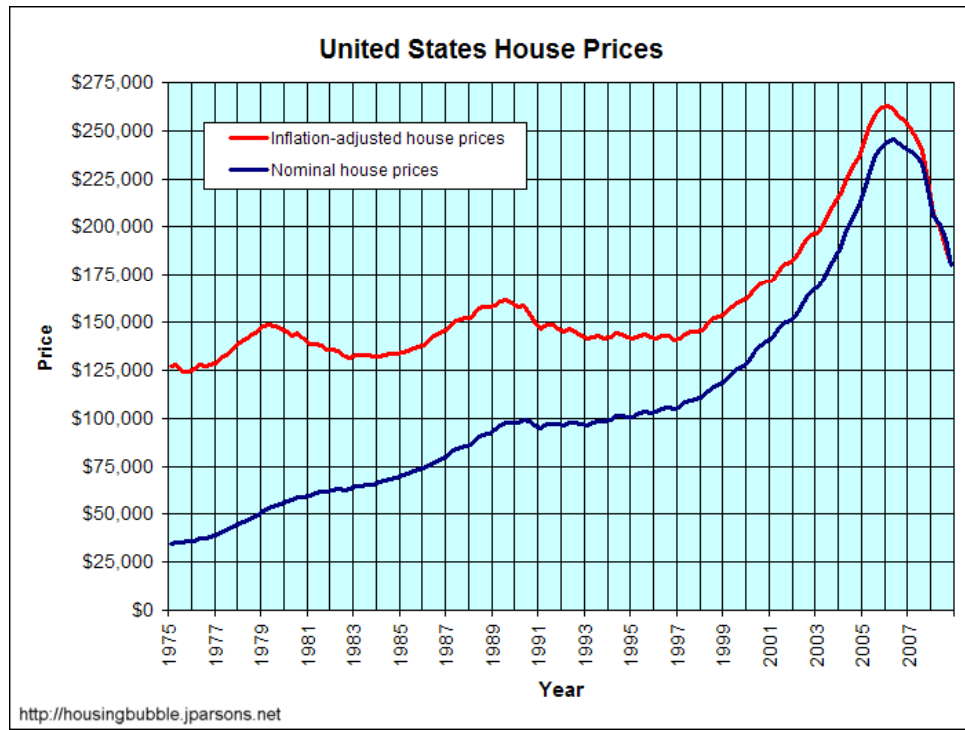
- **Demand** for dollar fixed income assets
 - Demographics (pension, insurance)
 - Global imbalances (China surplus)
 - Financial globalization (Europe)
- **Supply** of dollar fixed income assets
 - US Housing policy
 - Securitization technology
 - Credit Default Swap technology
- **Regulation**
 - 1988 Basel Capital Accord
 - 1999 Financial Services Modernization Act

Consequence: Debt Explosion



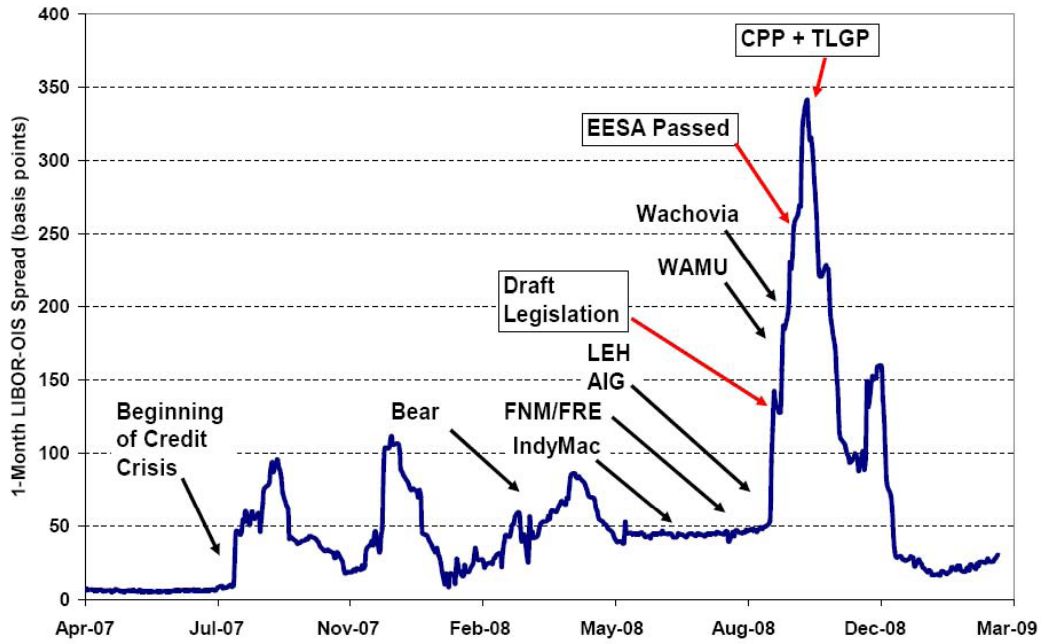
	HH %	Bus %	Govt %
1981	34.6	38.1	27.3
1993	34.1	29.7	36.2
2006	44.3	32.1	23.6

The Bubble

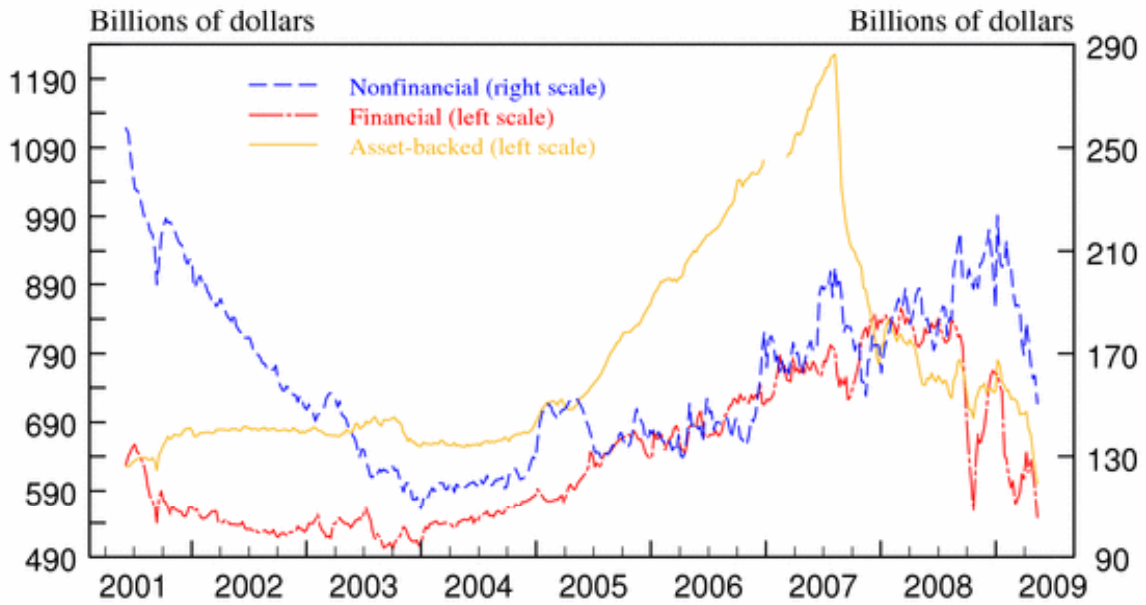


MM Funding Stress: Stage 1,2

(Swagel 2009)

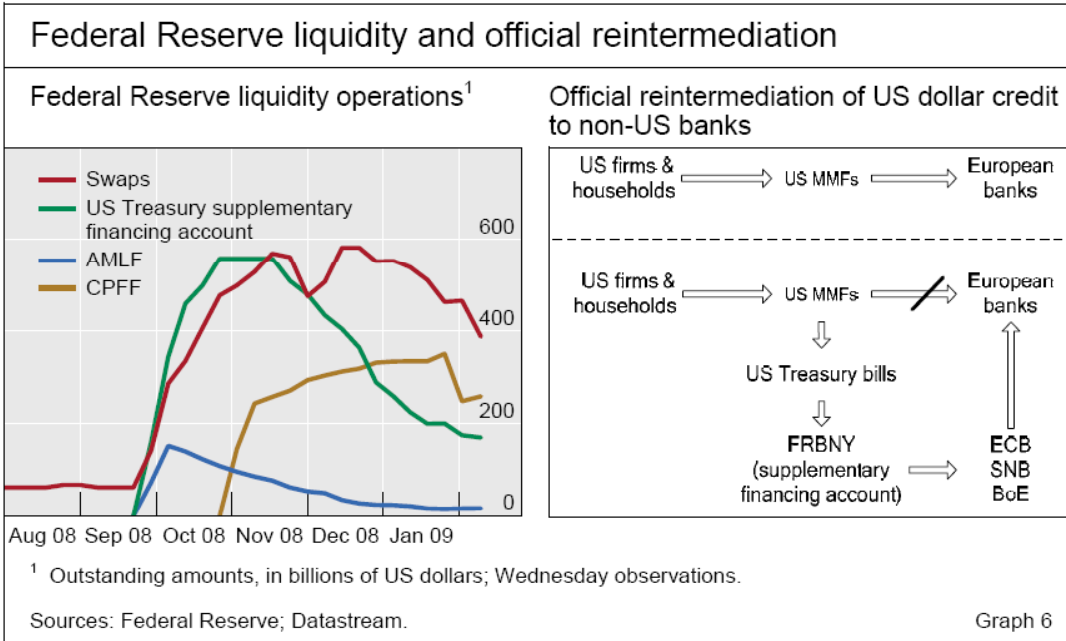


Stage 1: Collapse of SIVs

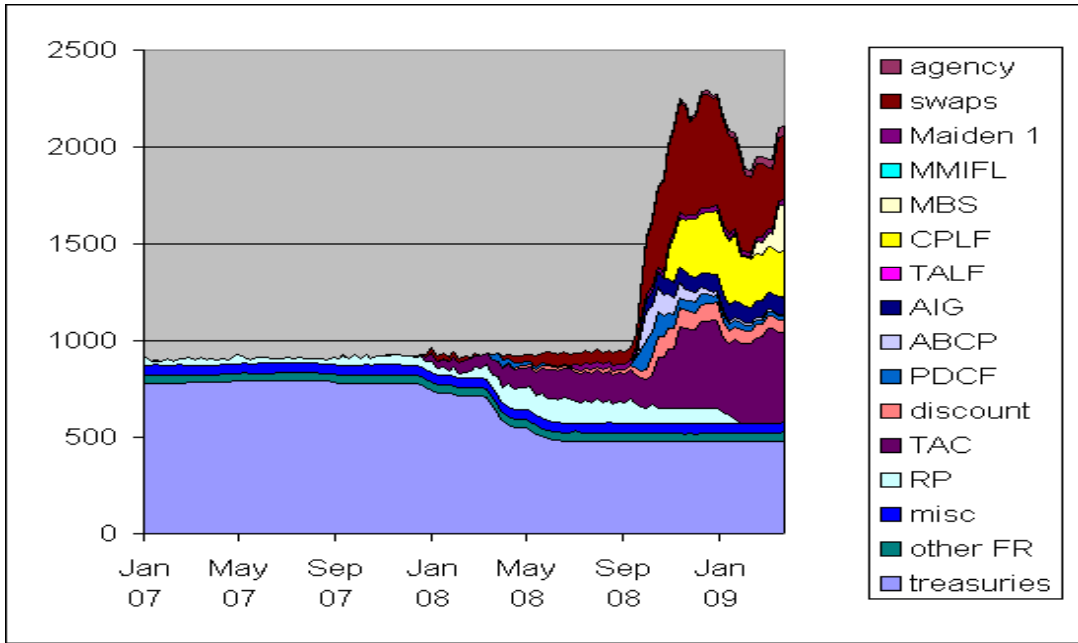


Stage 2: (Shadow) Bank Run

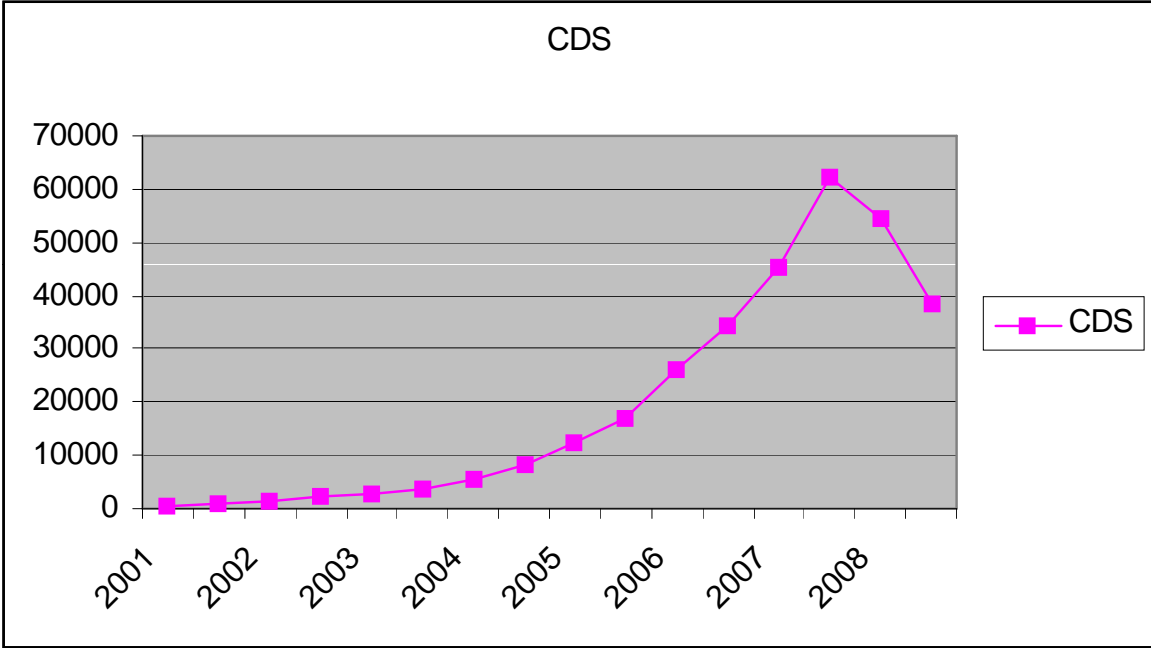
(BIS March 2009)



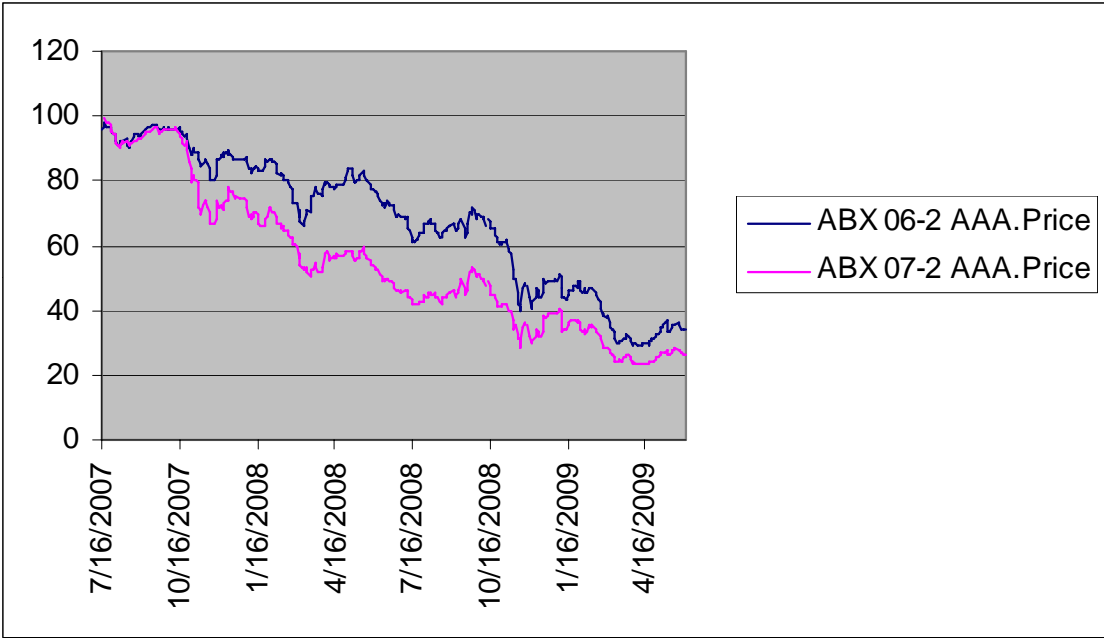
Fed Policy: Stage 1, 2



Credit Risk Stress, Notional



Credit Risk Stress, Valuation



Fed Policy: Stage 3
TALF = Funding + Insurance

Investor

Assets	Liabilities
Securitized Loans, AAA	90% Loan LIBOR +100 Non-recourse 10% Capital

NYFRB

Assets	Liabilities
Loan 10% TARP Ins.	

First consumer loans,
then CMBS, then legacy?

Consumer De-leveraging

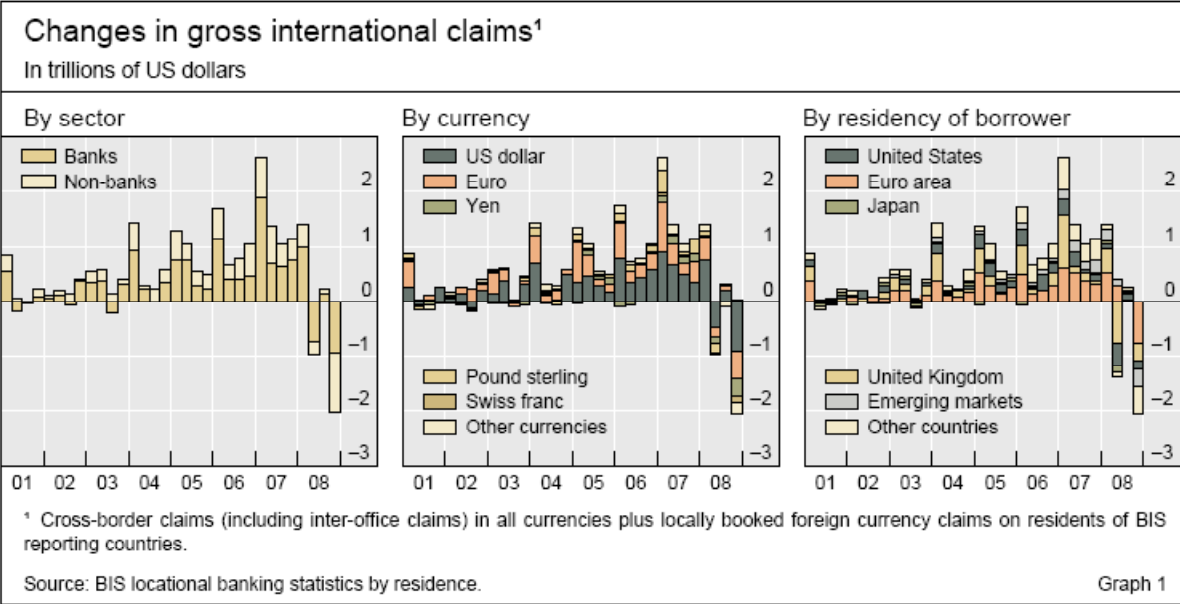
	2007 I	II	III	IV	2008 I	II	III	IV	2009 I
Borrowing (FoF)	940	949	784	766	409	44	29	-279	
Consumption (PCExp.)	9525	9658	9766	9893	10002	10138	10164	9928	9941
Saving	1.1%	.3	.5	.4	.2	2.5	1.3	3.2	4.4

Secondary Contraction

- **Business** Investment spending
 - Revenue erosion
 - Pension fund re-capitalization
- **State and Municipal** spending
 - Tax base erosion
- **Federal** spending, automatic + “stimulus”
 - Debt expansion

Financial De-globalization

(BIS June 8, 2009)

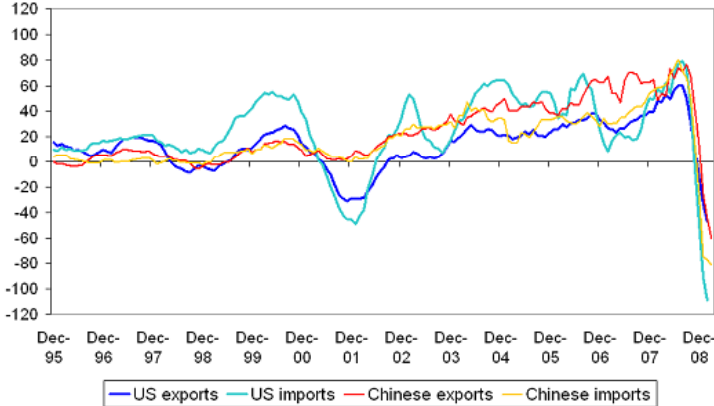


Collapsing world trade

(Brad Setser, CFR, April 19)

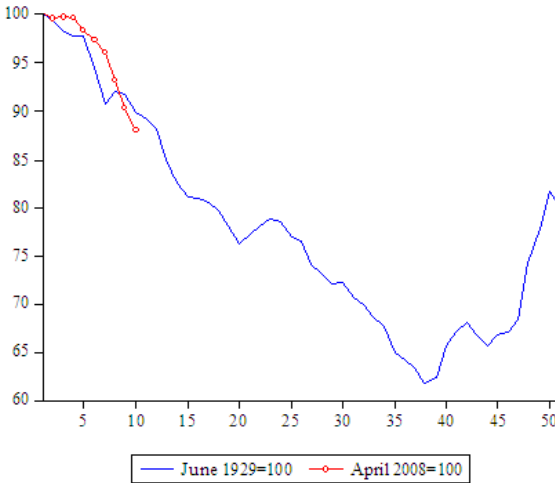
Charting the downturn

Y/y increase in 3m sum of goods exports and imports, \$ billion



World Industrial Output

(Eichengreen and O'Rourke, 2009)



Credit Insurer of Last Resort

- Analogue to Bagehot principle
 - 1873: “Lend freely but at a high rate”
 - 2009: “Insure freely but at a high premium”
- Price of systemic insurance as policy instrument
 - Ex ante pricing of systemic risk externality
 - Countercyclical control
- Other benefits
 - Penalize complexity, reward simplicity
 - Rating agency oversight

The New Lombard Street

(Princeton Press 2010)

