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HOW WILL THE WORLD WORK?

THE GLOBAL ECONOMY IN TRANSITION

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UNIVERSITY OF MINNESOTA

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AGENDA

- ◆ The Financial Crisis
- ◆ Business, Government, & Consumers
- ◆ Energy
- ◆ Global Financial System
- ◆ Manufacturing Case Study: The Brassiere
- ◆ Looking Forward
- ◆ Q & A

THE FINANCIAL CRISIS



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THE FINANCIAL CRISIS

- ◆ Bubble Management: Savings Glut, Technology and Housing
- ◆ Excess Leverage Through the System
- ◆ “Shadow” Leverage
- ◆ Government Regulation



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THE ECONOMIC EQUATION

Equation of Exchange (Irving Fischer)

$$P \bullet Q = M \bullet V$$

Price x Quantity = Money Supply x Velocity



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TOOLS FOR THE CRISIS

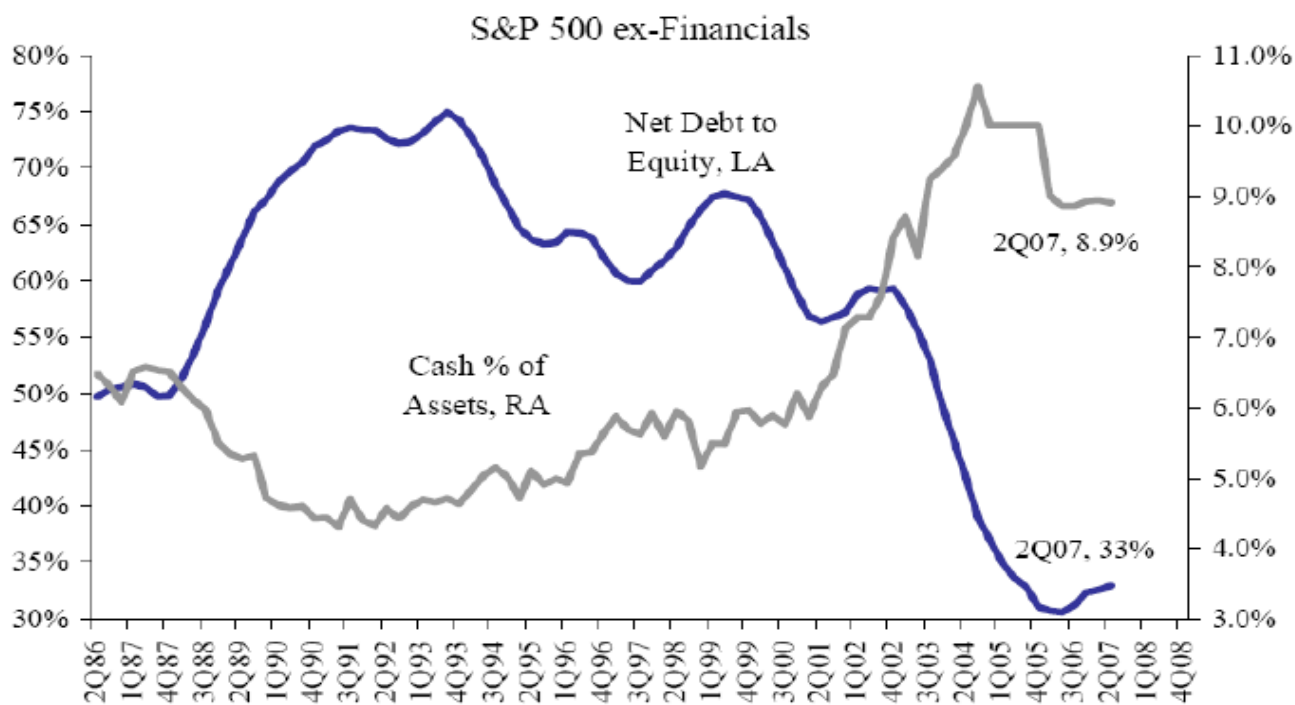
1. Crisis Management: Flood the financial system with liquidity
2. Stabilization: Stabilize the underlying asset base through quasi-nationalization and government programs
3. Other Intervention: Government spending; change in tax policy
4. Regulation: Coordinated international regulation
5. Confidence: Confidence in a restructured system such that risk capital returns

BUSINESS



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CORPORATE BALANCE SHEETS

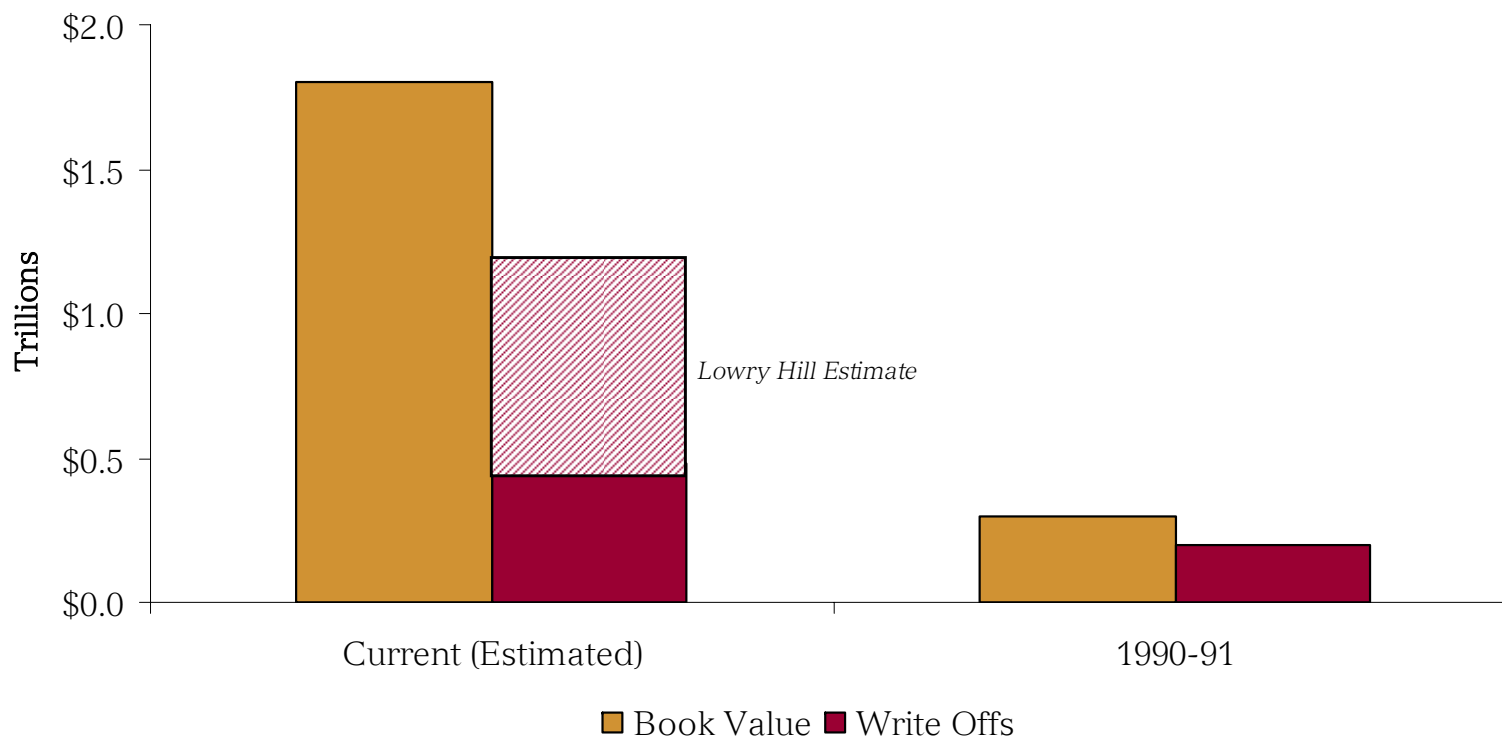


Source: Morgan Stanley



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BOOK VALUE & WRITE-OFFS OF FINANCIAL FIRMS

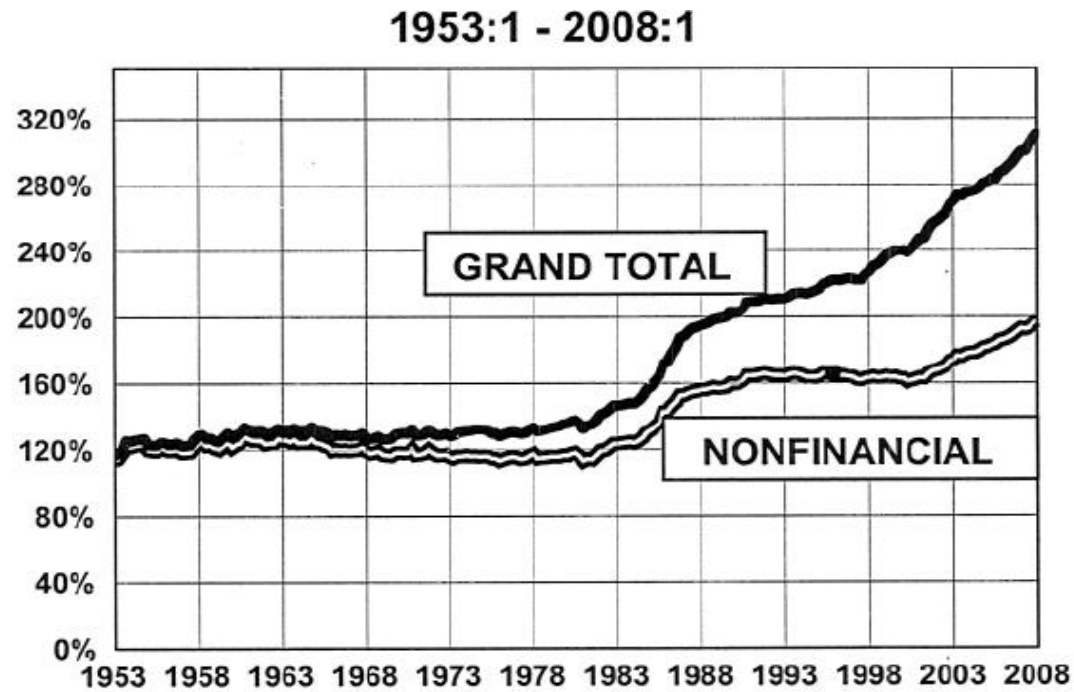


Source: Empirical Research Partners, April 2008 & September 2008/Lowry Hill Estimates



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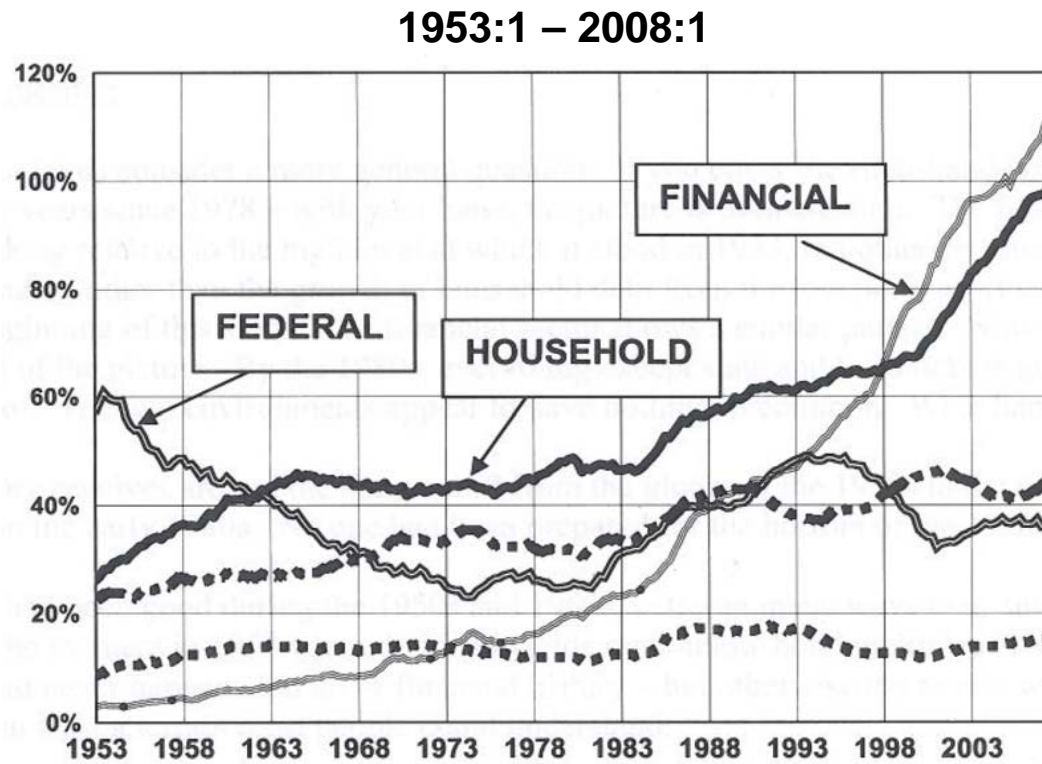
NONFINANCIAL & TOTAL DEBT OUTSTANDING *as percent of nominal GDP*



Source: Peter L. Bernstein, Inc.



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SECTOR DEBT
as percent of nominal GDP



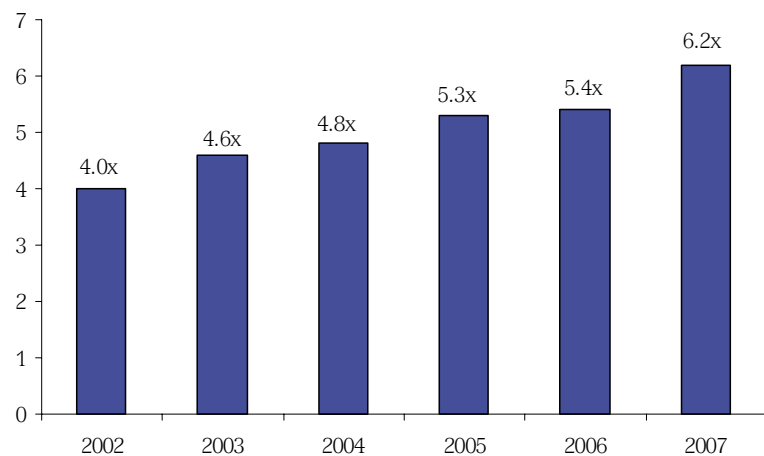
Source: Peter L. Bernstein, Inc.



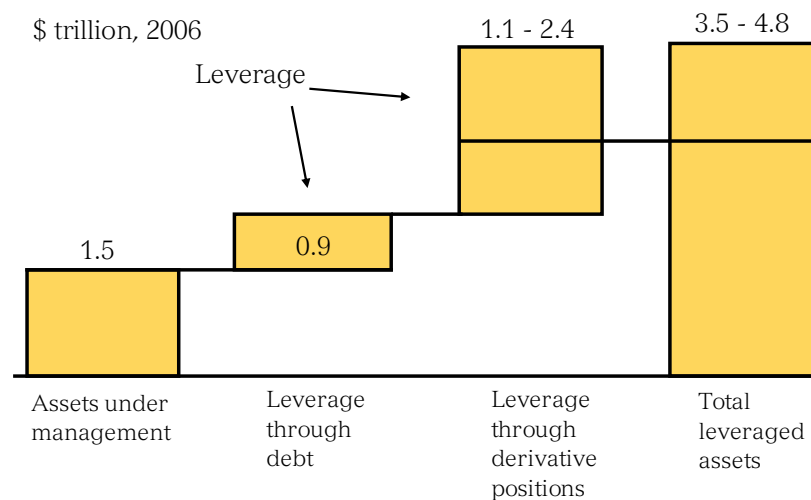
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SHADOW LEVERAGE

Private Equity Leverage Multiples



Estimated Hedge Fund Leverage



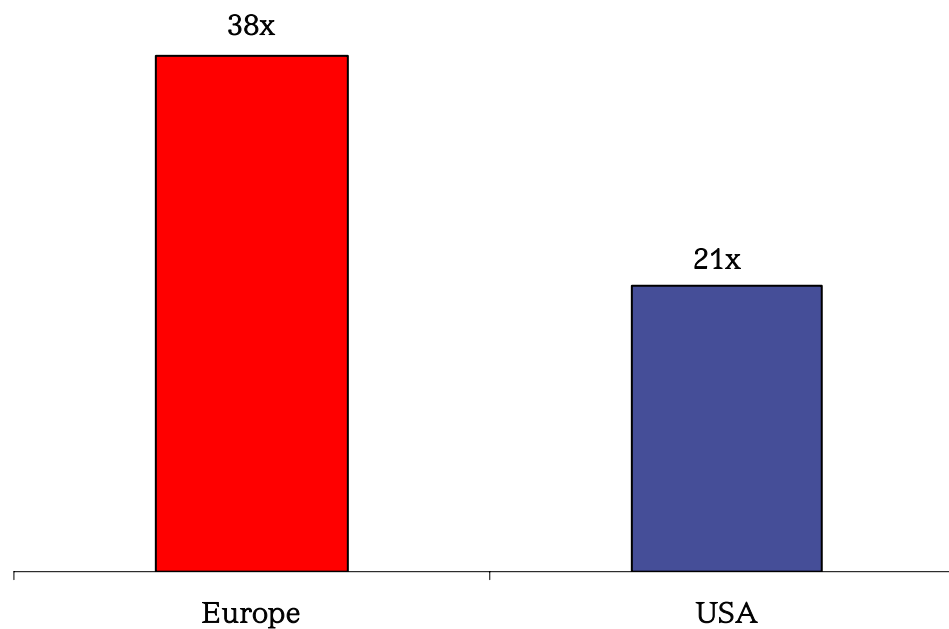
Sources: (1) Morgan Stanley, September 2008. (2) McKinsey, October, 2007.



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SHADOW LEVERAGE

Bank Leverage: Europe vs. USA
(Assets/Equity)



Sources: Citibank, "A Downward Spiral." 17 September 2008.

GOVERNMENT



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U.S. GOVERNMENT BALANCE SHEET

in billions of dollars

	2007	2006
Assets	1,581.1	1,496.5
Cash	128.0	97.9
Inventories	277.1	281.3
Property	691.1	688.5
Other	484.9	428.8
Liabilities	10,786.9	10,412.9
Debt	5,077.7	4,867.5
Employee Benefits	4,769.1	4,679.0
Other	940.1	866.4
Net Position	(9,205.8)	(8,916.4)

\$1.8 T Commercial Paper
 \$1.9 T FDIC Guarantees
 \$800 B Mortgage Markets
 \$600 B Fed Purchases
 Commercial Paper/CDs
 \$700 B Equity in Financial
 Institutions
 \$200 B Fannie/Freddie

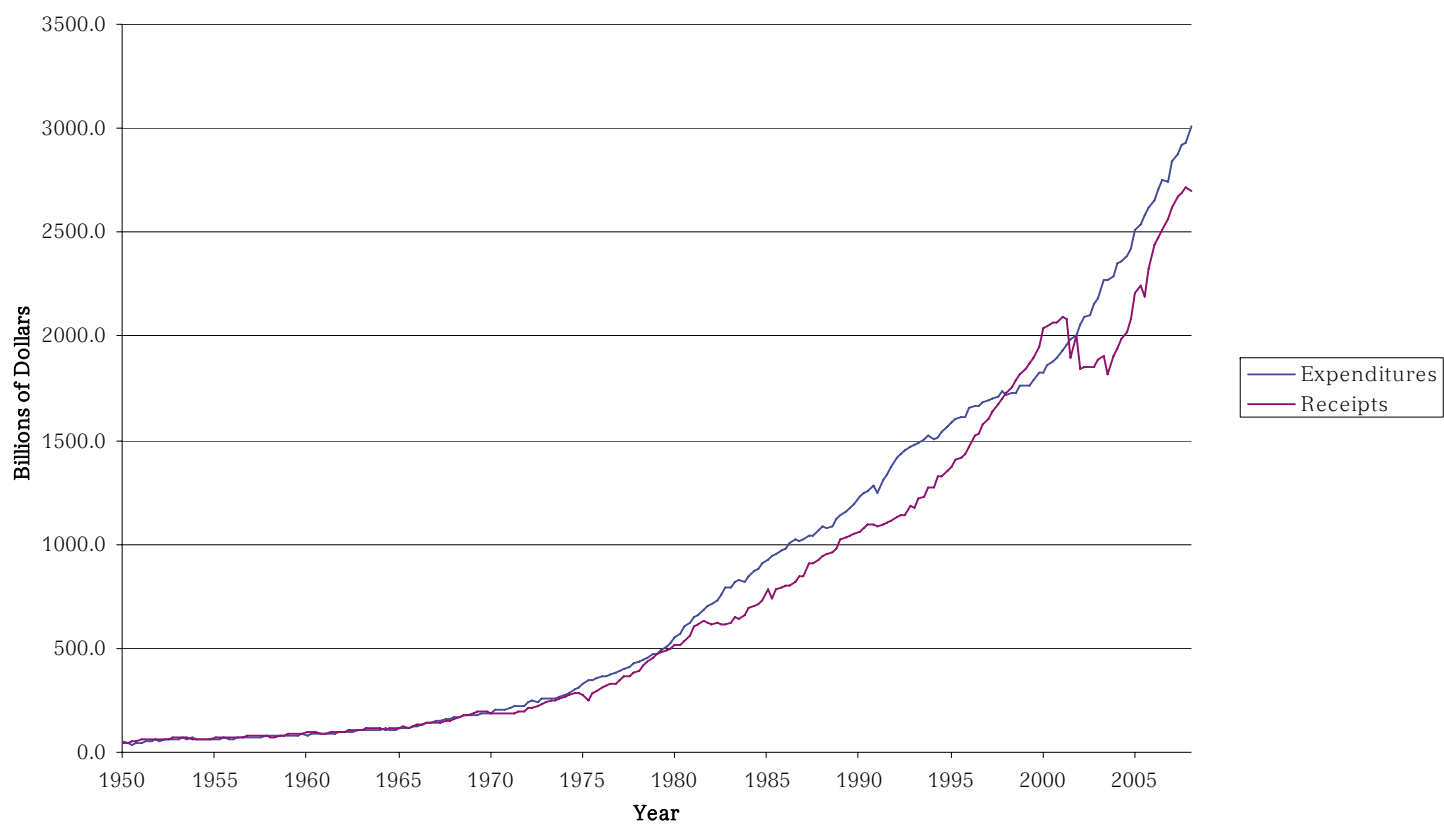
Reuter's Estimate: \$8 T

Source: United States Treasury



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GOVERNMENT INCOME & EXPENDITURES



Source: Federal Reserve Bank of St. Louis



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GOVERNMENT INCOME VS. EXPENDITURES

*in billions of dollars per decade**

	Income	Expenditures	Deficit	Debt as % of GDP***
1950s	\$21,041.21	\$19,895.80	\$1,145.41	59.2%
1960s	\$30,034.47	\$27,598.33	\$2,436.14	35.9%
1970s	\$34,371.22	\$37,747.05	(\$3,375.83)	32.2%
1980s	\$52,757.61	\$62,235.74	(\$9,478.13)	52.1%
1990s	\$73,792.60	\$80,602.11	(\$6,809.51)	61.0%
2000s**	\$69,560.70	\$76,130.70	(\$6,570.00)	65.2%

*Adjusted for inflation

** Data through 2007

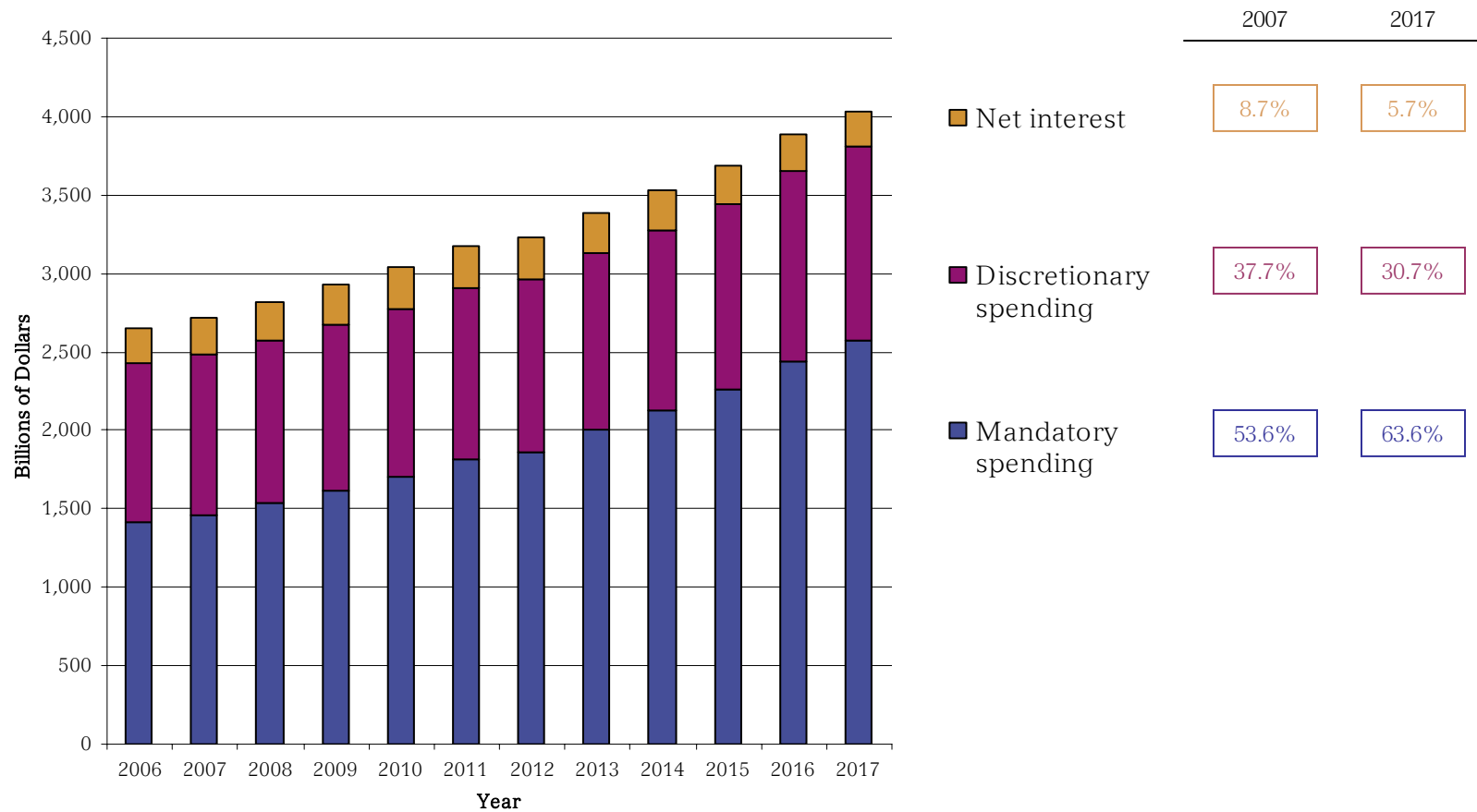
*** At end of decade

Source: Federal Reserve Bank of St. Louis; Department of the Treasury



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GOVERNMENT SPENDING BREAKDOWN

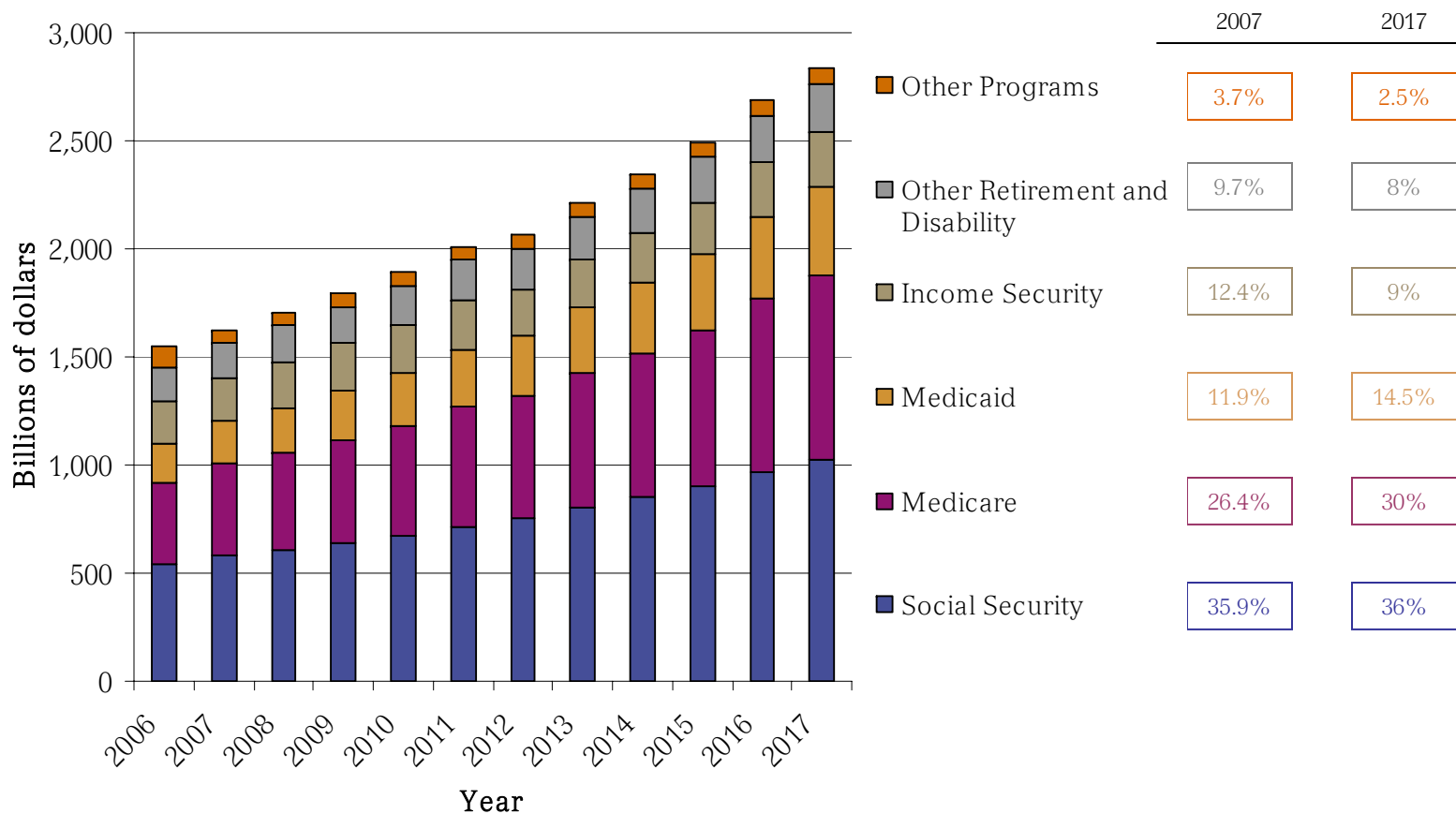


Source: Congressional Budget Office, January 2007



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MANDATORY SPENDING BREAKDOWN



Source: Congressional Budget Office

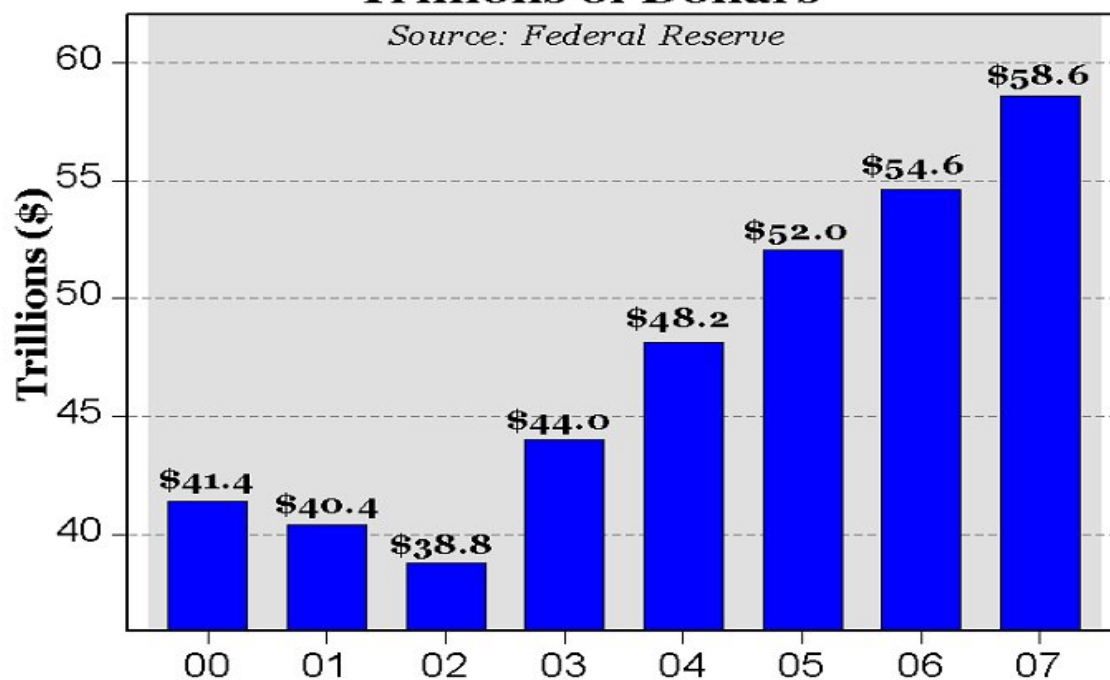
CONSUMERS



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HOUSEHOLDS IN THE UNITED STATES

Net Worth of U.S. Households, 2000 - 2007
Trillions of Dollars



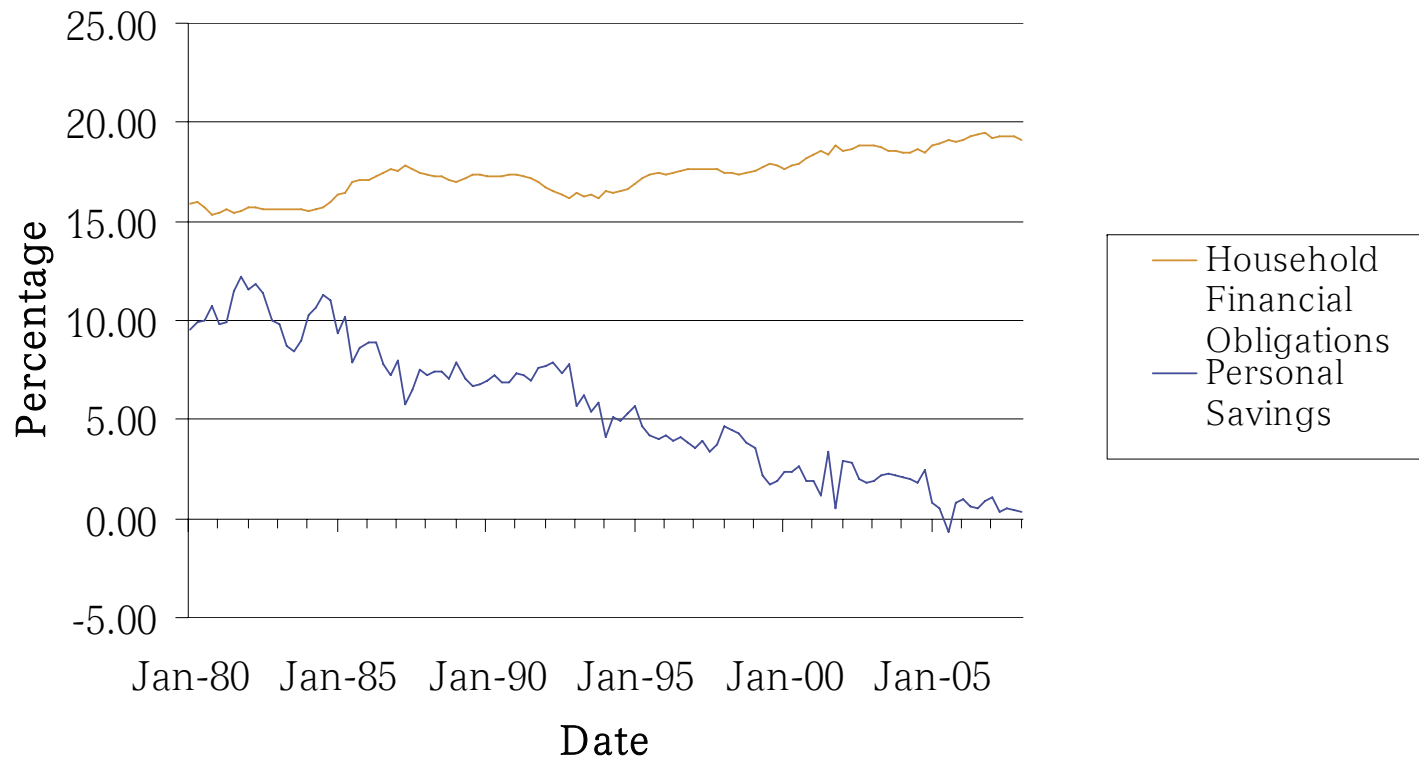
Potential decline
due to crisis:
\$12-16 trillion

Source: Federal Reserve, M.J. Perry



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HOUSEHOLD FINANCIAL OBLIGATIONS & PERSONAL SAVINGS *as a percentage of disposable income*



Source: Bureau of Economic Analysis; Federal Reserve Bank of St. Louis



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ENERGY



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PETROLEUM
Import/Export and Usage

Petroleum (thousands of barrels per day)	Saudi Arabia	Russia	USA	China
Oil Production	10,246.93	9,875.77	8,487.40	3,900.96
Consumption	2,311.00	2,858.00	20,697.53	7,578.00
Net Exports/Imports (-)	7,936.00	7,018.00	(12,210.13)	(3,677.00)
Proved Reserves (thousands of barrels)	262,300,000	60,000,000	21,760,000	16,000,000
Exports to U.S.	1,489.00	413.00	-	13.00
Oil Producer Rank	1	2	3	5
Population in 2007 (thousands)	27,586.53	141,377.75	301,139.95	1,321,851.89
Consumption per 1,000 Persons (barrels per day)	83.77	20.22	68.73	5.73

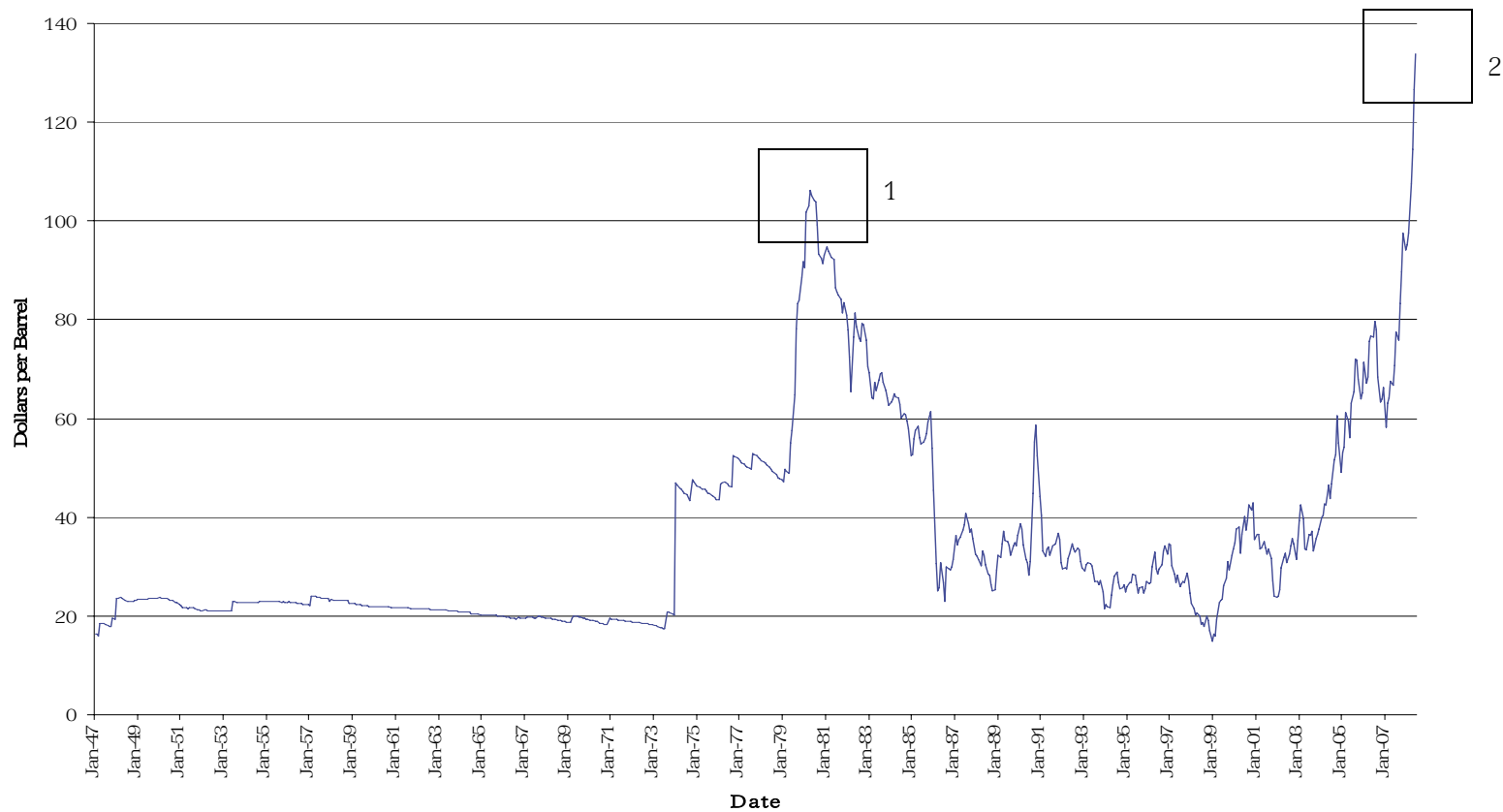
Note: European consumption per day = 14,861.00. (A consumption of 37.6 barrels per day per 1,000 persons.)

Source: Oil Data - Energy Information Administration (of the U.S. Government); Population Data - International Database of the U.S. Census Bureau. All data from 2007.



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INFLATION-ADJUSTED OIL PRICE



Source: Federal Reserve Bank of St. Louis

GLOBAL FINANCIAL SYSTEM



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HISTORY OF MONEY IN THE UNITED STATES

- ◆ 1862 – Congress began issuing Legal Tender Notes, redeemable for gold and silver coin. Prior to 1862, each bank issued its own currency; some of it was redeemable for face value (in gold or silver coin), some was worthless.
- ◆ 1863 – The National Banking Act established a national banking system and a uniform national currency, which was issued by banks under contract with the government. The currency was backed by U.S. Government securities.
- ◆ 1913 – The Federal Reserve Act created the Federal Reserve system as the nation's central bank to regulate the flow of money and credit.

Source: Federal Reserve Bank of San Francisco, 1995 Annual Report



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BRETTON WOODS SYSTEM (1944-1971)

- ◆ Floating exchange rates of the 1930's led to de-stabilizing speculation and competitive depreciation.
- ◆ Bretton Woods: Pegged currency value (par value) in which central banks intervene to limit fluctuations. Liquidity provided by international stock of gold; there was a limit to the amount of global liquidity.
- ◆ The dollar becomes the standard from which all currencies are measured because the U.S. controls 2/3 of the global supply of gold.
- ◆ 1971 - The system collapses and the dollar becomes de facto gold standard for currencies.

Source: Benjamin J. Cohen, University of California, Santa Barbara



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BRETTON WOODS II (1971-?)

Age of Fiat Currency

- ◆ Stockpiling of dollars from the rise in oil prices has led to imbalances in the reserve accounts for many countries.
- ◆ Will the dollar hold as the reserve currency for the global economy?
- ◆ Will the euro hold as a currency?



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U.S. TREASURY

Foreign Central Bank holdings at treasuries and agencies:
\$2.395 trillion

Federal Reserve Bank credit: \$888.2 billion

(As of Sept. 10, 2008)

Source: Bloomberg



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FOREIGN HOLDINGS OF U.S. SECURITIES

in millions of dollars

Country	Holdings
China	922,046
Oil Exporters*	306,257
Russia	147,699

* Oil exporters include Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, the United Arab Emirates, Gabon, Algeria, Libya, and Nigeria.

Source: U.S. Department of the Treasury (Data as of June 30, 2007)



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UNITED STATES IMPORTS/EXPORTS

in billions of chained 2000 dollars

As of	Exports (-)	Imports (+)	Deficit
January 1, 1947	78.3	46.0	-32.3
January 1, 1960	87.2	105.6	18.4
January 1, 1980	319.8	336.6	16.8
January 1, 2000	1,060.9	1,411.5	339.6
January 1, 2006	1,284.3	1,920.2	635.9
January 1, 2008	1,500.6	1,962.6	462.0
April 1, 2008	1,547.9	1,924.5	376.6

Source: Federal Reserve Bank of St. Louis

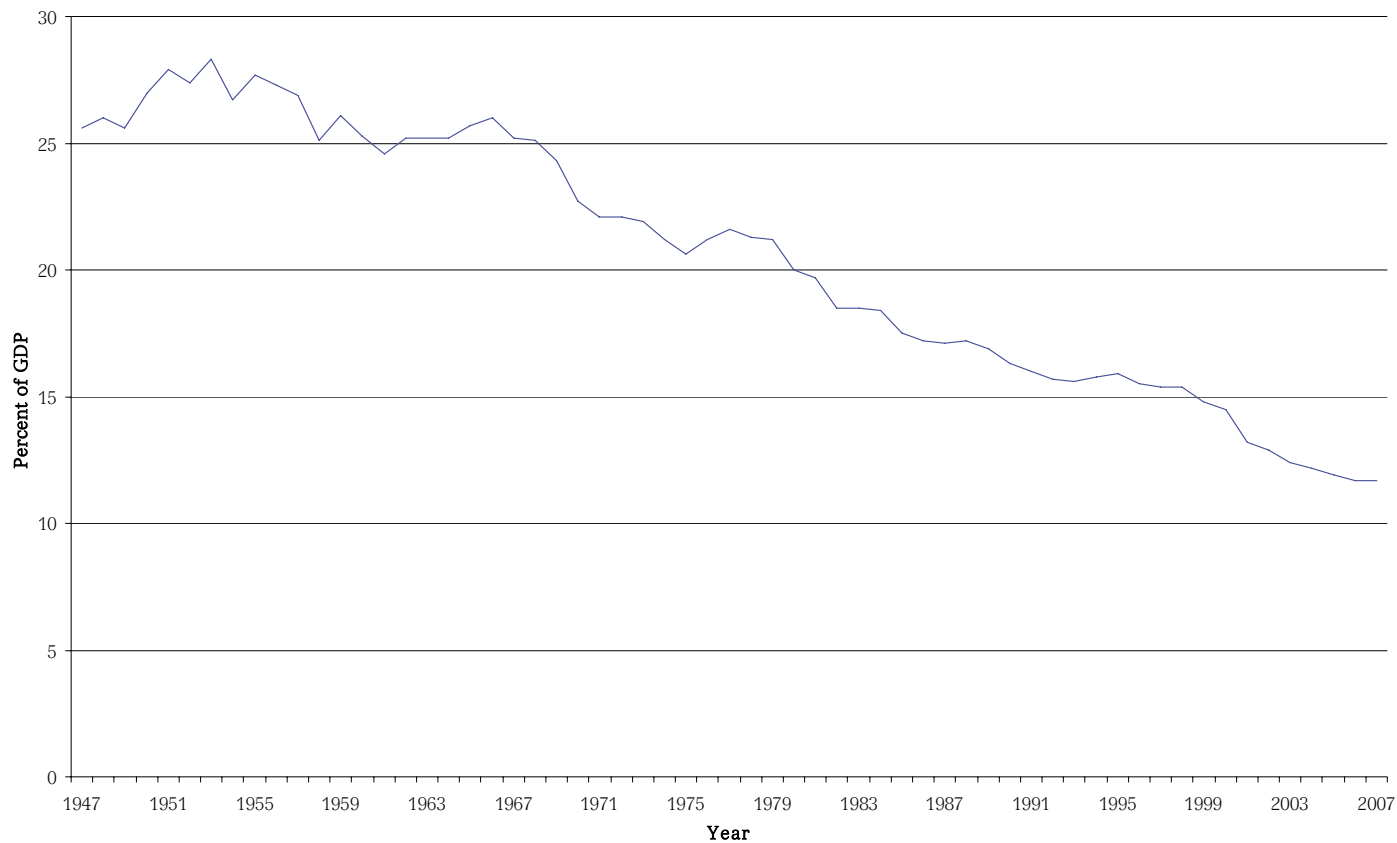
MANUFACTURING CASE STUDY:
THE BRASSIERE



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MANUFACTURING IN THE UNITED STATES

as a percentage of GDP



Source: Bureau of Economic Analysis



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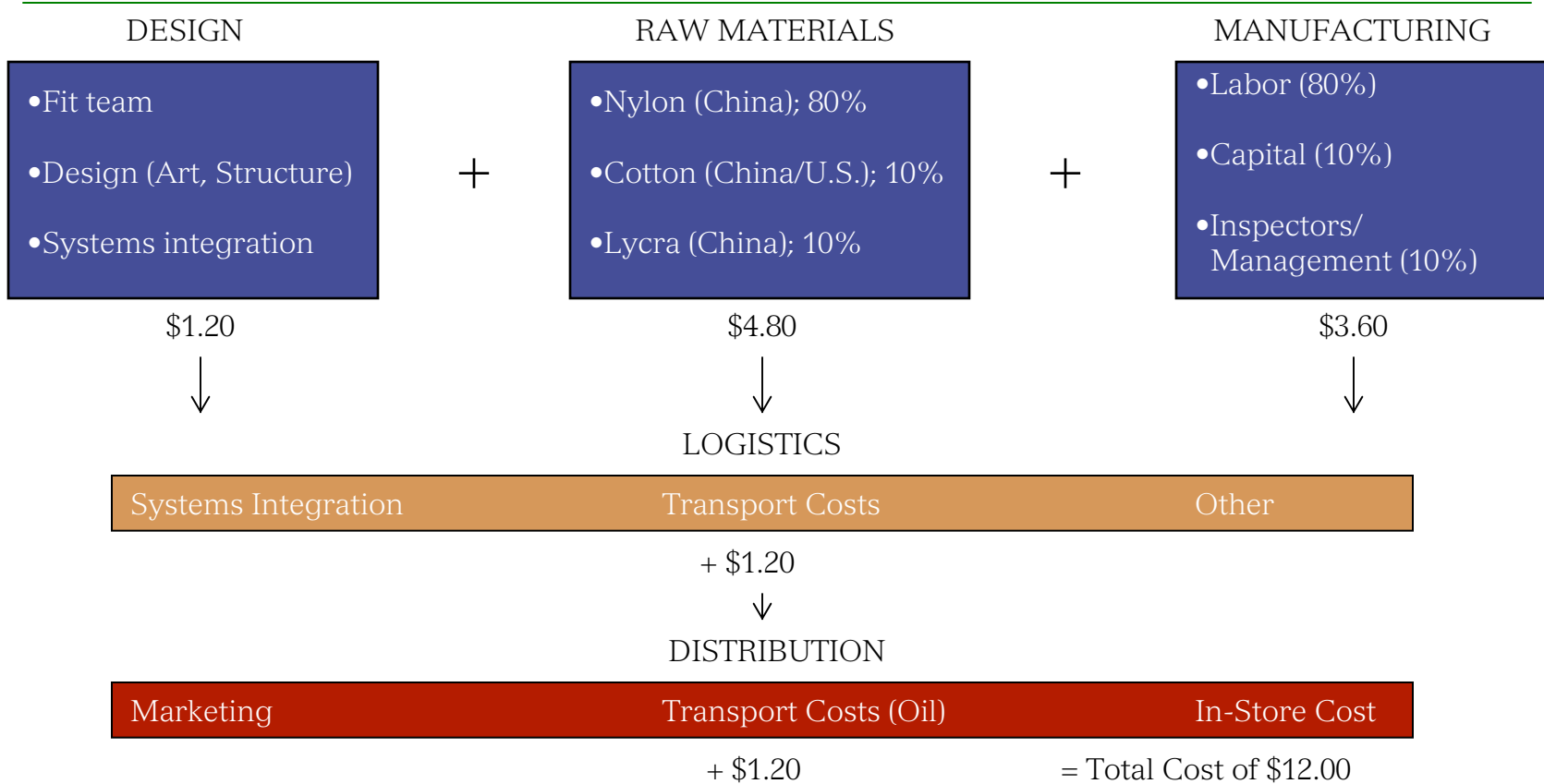
HISTORY OF THE BRASSIERE

- ◆ The Brassiere was developed in the late 19th century to replace the corset.
- ◆ It was originally manufactured in the United States and made of cotton and silk. The silk was imported from Japan and created in Patterson, New Jersey (the silk capital of North America).
- ◆ The onset of WWII and the invention of nylon led to the availability of new materials.
- ◆ Throughout the 1970s and 1980s, all manufacturing migrated to Asia and, recently, China (which produces the highest quality nylon).



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THE VALUE CHAIN OF THE BRASSIERE



RETAIL MARKUP OF 50 – 75% = RETAIL PRICE OF \$18 - \$22



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HIERARCHY OF COST INPUTS

1. Raw materials (nylon, wire, etc.)
2. Capital costs (manufacturing capability)
3. Labor (low cost)
4. Logistic costs (oil & other transport costs)
5. Taxes



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“GREEN PLANT” IN SRI LANKA



Brassiere and lingerie manufacturing plant for Marks & Spencer

Image Source: Christian Science Monitor

LOOKING FORWARD



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LOOKING FORWARD

1. Getting our house in order: financial system, business, consumer, government
2. Transition to a new energy system: a mixed solution
3. Will Bretton Woods hold?
4. Investment opportunities come from change.



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LONG-TERM RETURN

2009 Base Earnings = \$70

S&P = 950

EPS Growth	10-Year EPS	P/E 15x	Compound Rate
3%	\$94	1,411	4.0%
6%	\$125	1,880	7.1%
9%	\$166	2,486	10.1%

For illustrative purposes only.

QUESTIONS



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FOR MORE INFORMATION

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