

**Capitalism,
Government,
Money,
and the
Future of
the World**

*Finding
and Keeping
the Right Balance
in
Market-Capitalist
Democracies*

“The Postwar Era can be viewed as a relative long-term success in the use of government to steady the economy as a whole, and the banking sector as a special focus...

... punctuated by occasions of lapse and misjudgment...

while capitalism’s resilient instability is always looking for new ways to manifest”

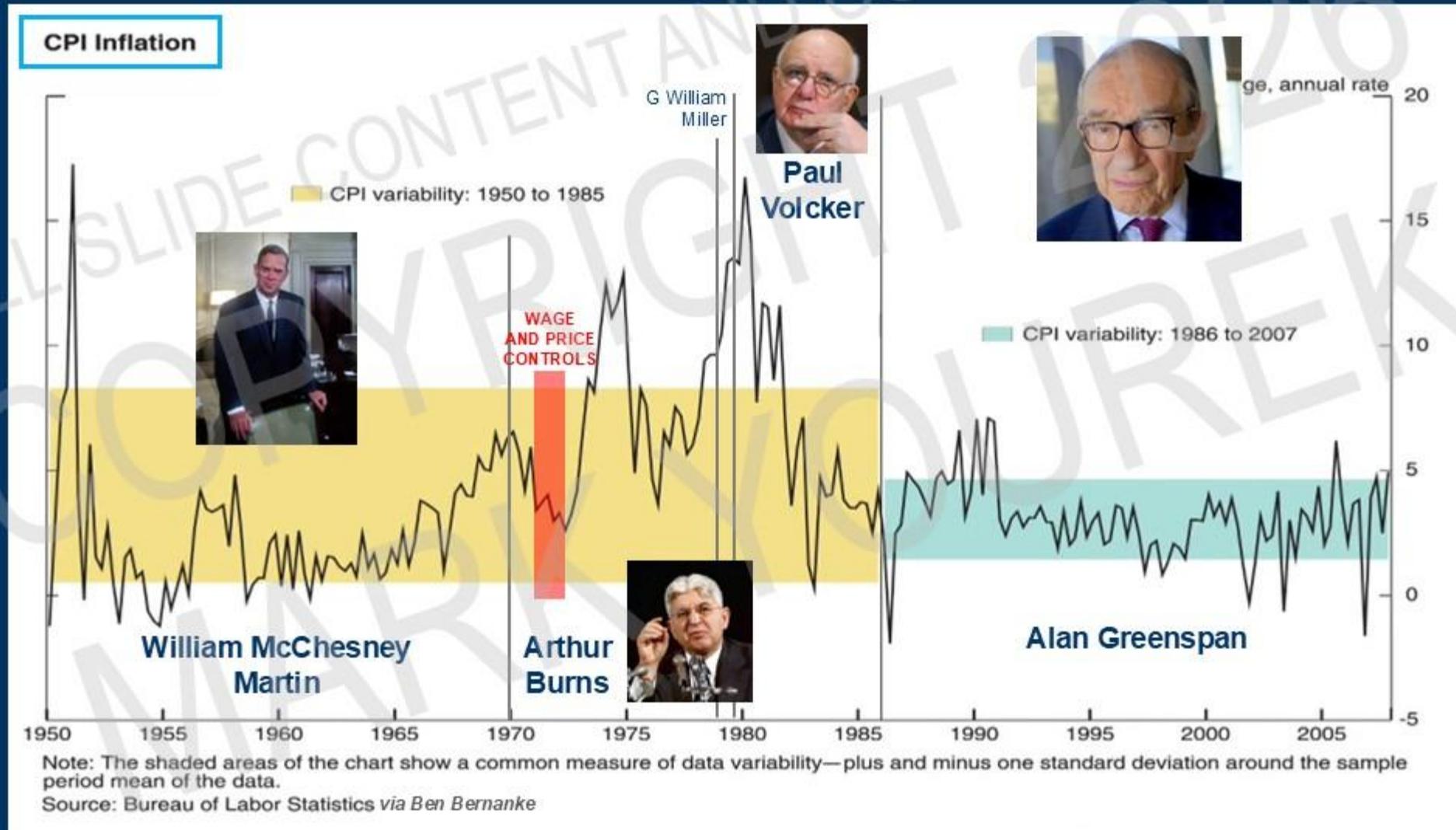
1990s

- The economy suffers a **mild recession in 1991-1992**, caused by the cost of the S&L clean-up, the oil shock associated with Iraq’s 1990 invasion of Kuwait, reduced defense spending following the end of the Cold War, and accompanied by inflationary concerns around large deficits
- By 1994, with recovery from that recession, the economy looks robust. Fed chair Alan Greenspan inspires particular confidence in America’s central bank. The ‘Great Moderation’ suggests that the Fed may have learned how to tame the business cycle. The **advent of the Internet** in the mid-1990s drives a wave of **innovation** and the **promise of radically-more-productive business models**
- In this period, the Federal Reserve shows a pattern of reacting to significant stock market drops by reducing interest rates. This becomes known as the ‘Greenspan put’, suggesting that the Fed’s actions could be interpreted as encouraging investors to ever-greater confidence. It is also noticed that this might increase the risk of bubble formation
- By late 1996 the stock market has risen enough that Greenspan gently warns of the possibility of asset-price bubbles, citing **‘irrational exuberance’**. After a brief pause, this is disregarded by the ongoing bull market, which continues for three more years
- In **2000 dotcom stocks fall dramatically**, revealing a bubble, and bringing expectations for the Internet economy down to more realistic levels. This triggers a mild **recession in 2001-02**, which becomes more severe after 9/11

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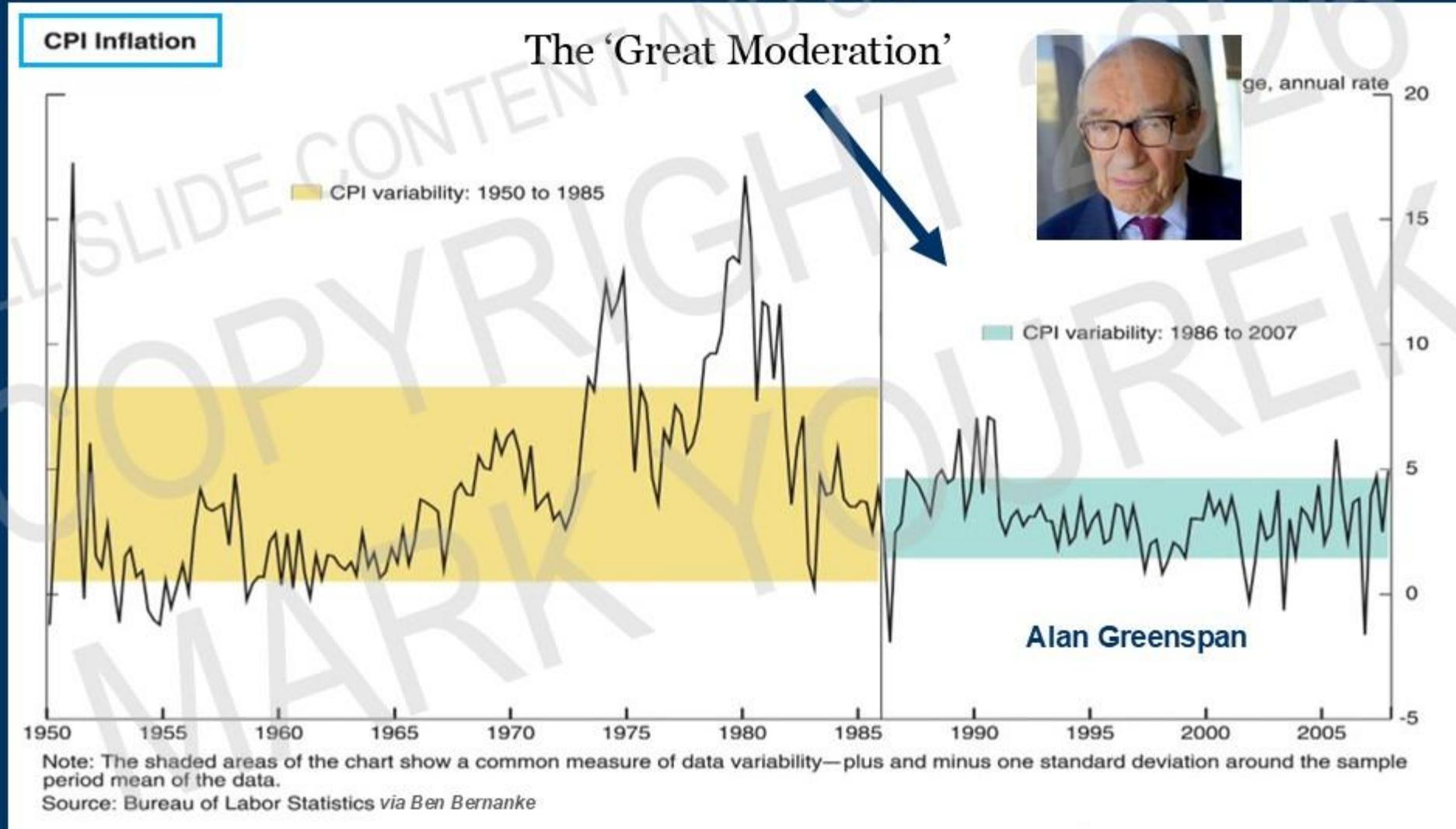
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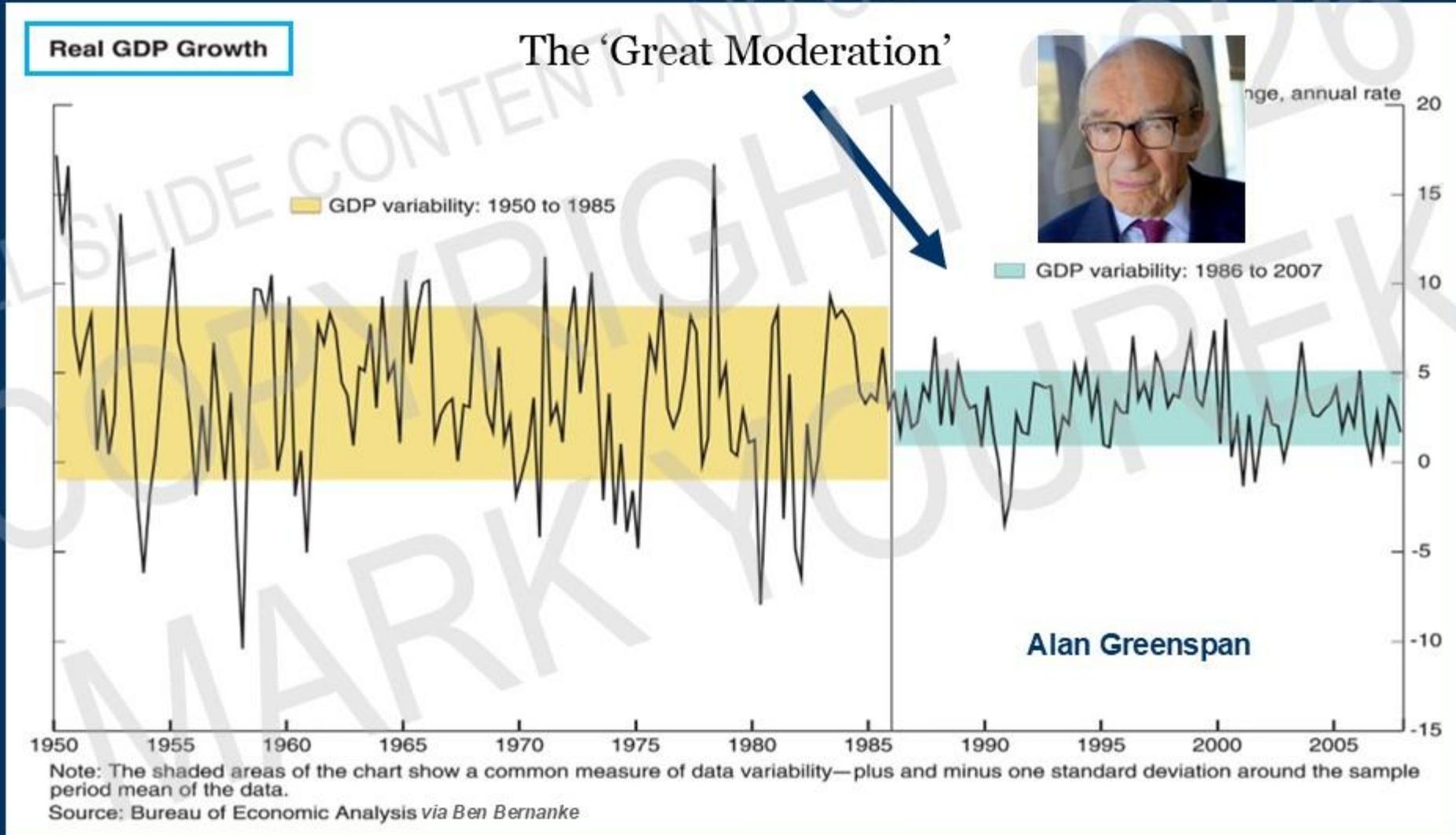
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REMINDER / POP QUIZ:

What are the two primary responsibilities of every central bank?

MAINTAIN PRICE STABILITY
continuous, low inflation is ideal

MAINTAIN OVERALL ECONOMIC STABILITY
regulate and monitor the financial sector, to prevent it from spontaneously imploding
be ready to jump in to stabilize the economy, if capitalism experiences one of its bipolar episodes

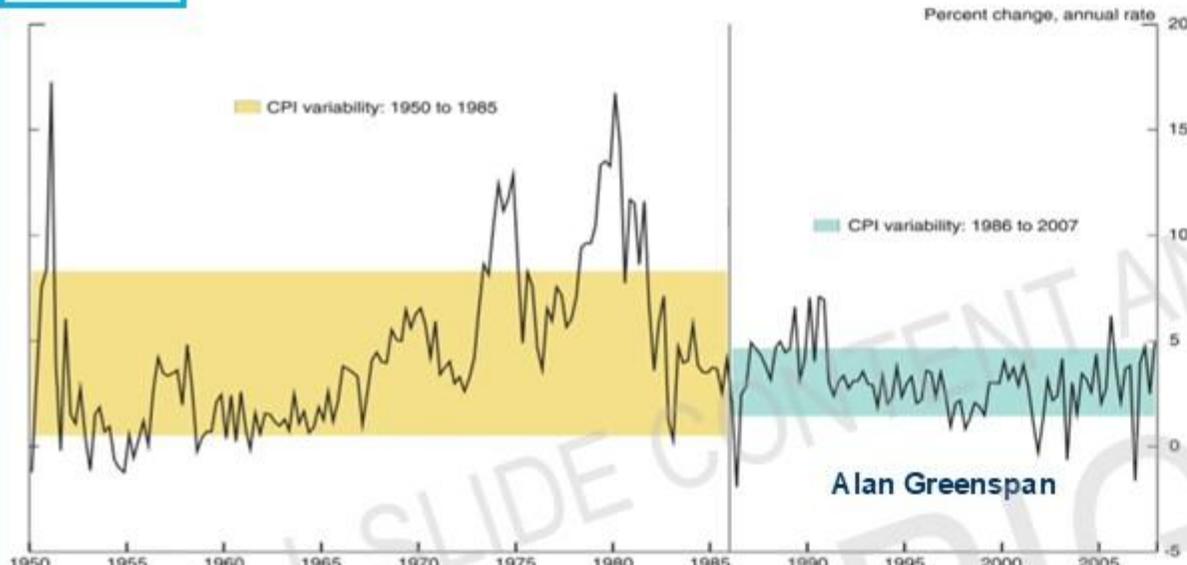
‘Great Moderation’



Note: The shaded areas of the chart show a common measure of data variability—plus and minus one standard deviation around the sample period mean of the data.

Source: Bureau of Economic Analysis via Ben Bernanke

CPI Inflation

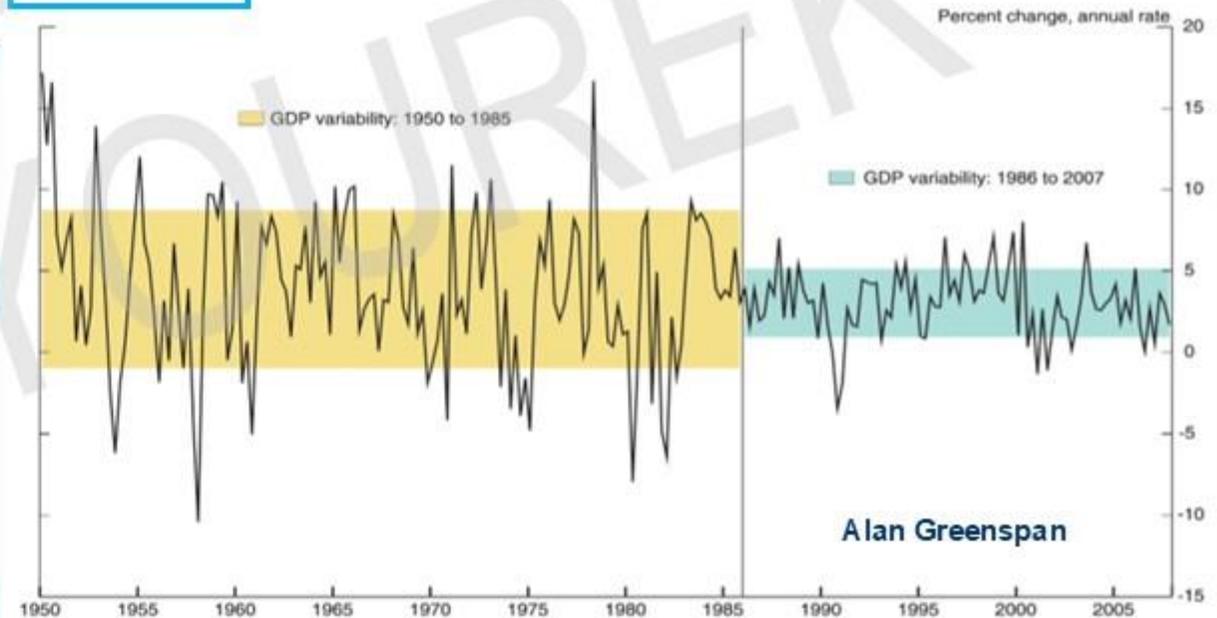


Note: The shaded areas of the chart show a common measure of data variability—plus and minus one standard deviation around the sample period mean of the data.
Source: Bureau of Labor Statistics



*One of the 'rewards' you get, for doing an extra-good job as the central-bank chairman, is that, over time, as the era of stable prosperity that you've engineered goes on for longer and longer, investor confidence will gradually build into **over-confidence** – and that will set the stage for the next crisis*

Real GDP Growth



Note: The shaded areas of the chart show a common measure of data variability—plus and minus one standard deviation around the sample period mean of the data.
Source: Bureau of Economic Analysis

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*Imagine that **you** are the chairman of the central bank*

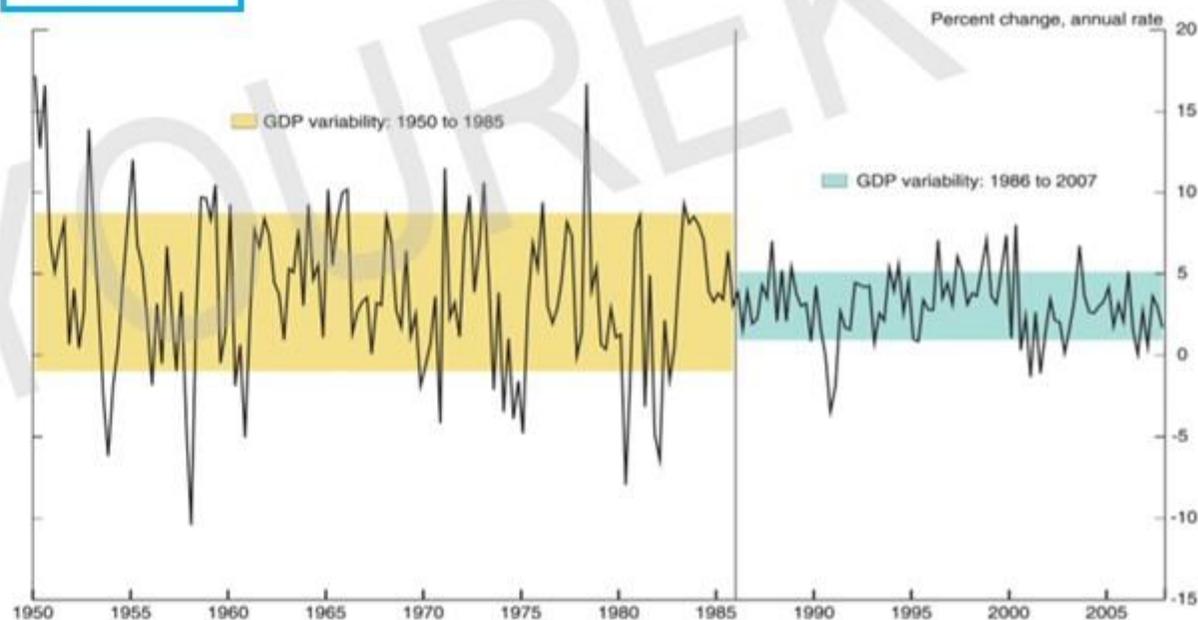
As chairman, it is your responsibility to monitor the economy, and to maintain interest rates so as to keep inflation low and steady

It is also your responsibility to watch economic conditions, so as to be on the lookout for looming trouble – a new bipolar episode that capitalism could experience at any time, that would destabilize the economy

You are doing a great job keeping inflation low, and you have been doing a terrific job now for about 17 years! The world loves you for helping drive sustained economic growth for a fantastically long and successful period of time

Here's a thought exercise for you ...

Real GDP Growth



Note: The shaded areas of the chart show a common measure of data variability—plus and minus one standard deviation around the sample period mean of the data.

Source: Bureau of Economic Analysis

CPI Inflation

CPI variability: 1950 to 1985

Percent change, annual rate

20

15

The only thing is, **house prices** across the entire country have been rising for the last three years, at an unprecedented rate

New financial innovations in mortgage securities are clearly a big factor in this huge run-up in housing values, but the **low interest rates** that you have maintained for a long time, are also quite clearly a factor, fueling the housing boom

Unfortunately, this nationwide run-up in house prices looks like it could be a **dangerous credit-fueled price bubble**... which might eventually trigger a severe downturn, if and when it deflates

If you choose to react to this, there are at least a few obvious moves you could consider

Inflation-adjusted U.S. home prices, Population, Building costs, and Bond yields (1890–2005)



Real GDP Growth

GDP variability: 1950 to 1985

GDP variability: 1986 to 2007

Percent change, annual rate

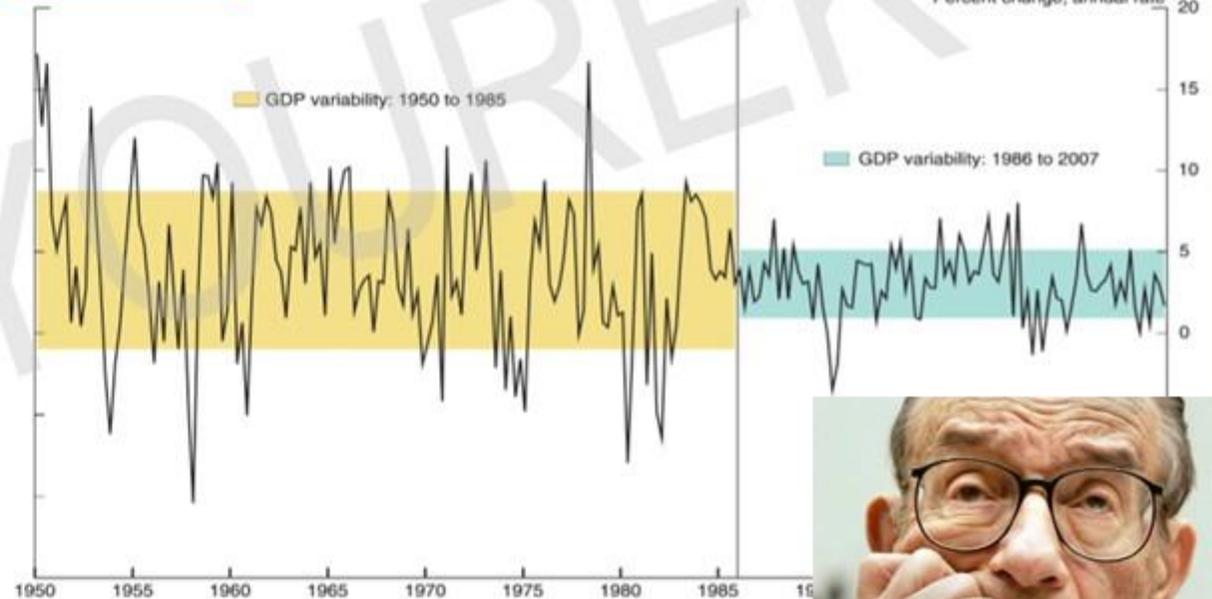
20

15

10

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Note: The shaded areas of the chart show a common measure of data variability—plus and minus period mean of the data.
Source: Bureau of Economic Analysis



If you want to act, you could, for example:

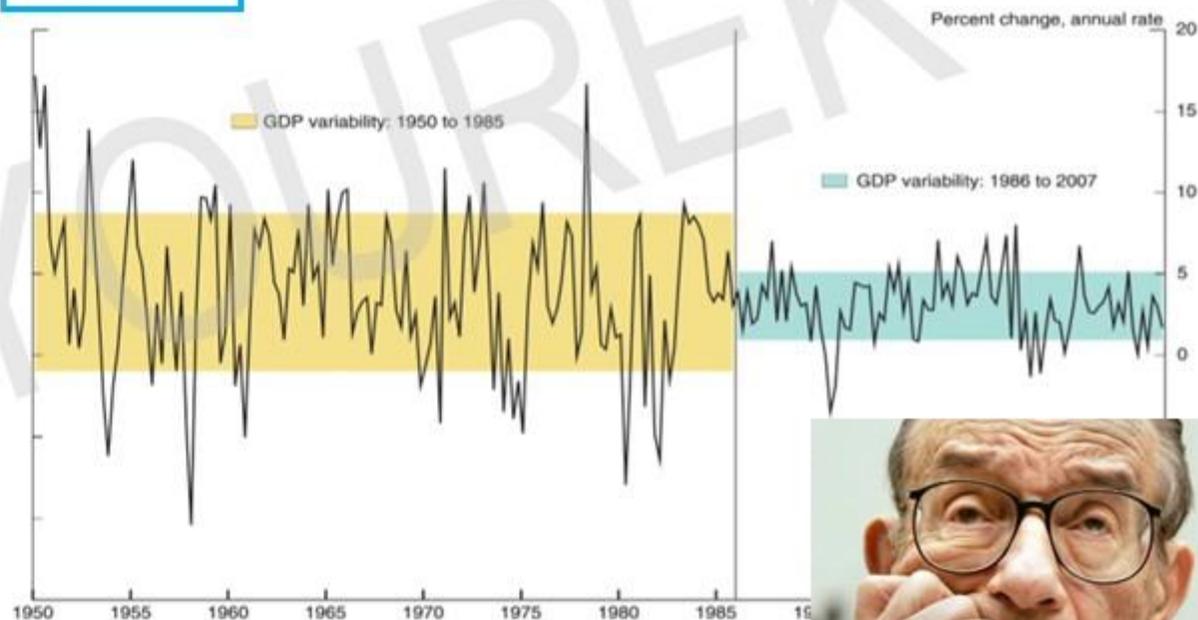
- *Start raising interest rates, in an effort to cool off the rate of new bank lending, and to signal implicitly that it's time for people to sober up and not let this situation get any more dangerous*
- *Start tightening up capital requirements on banks, letting them know that you are doing so to force them to slow down new lending, to cool the boom*
- *Start tightening up regulations on home-mortgage lending, to restrict the issuance of riskier forms of loans*

What would you do, if anything?

Inflation-adjusted U.S. home prices, Population, Building costs, and Bond yields (1890–2005)



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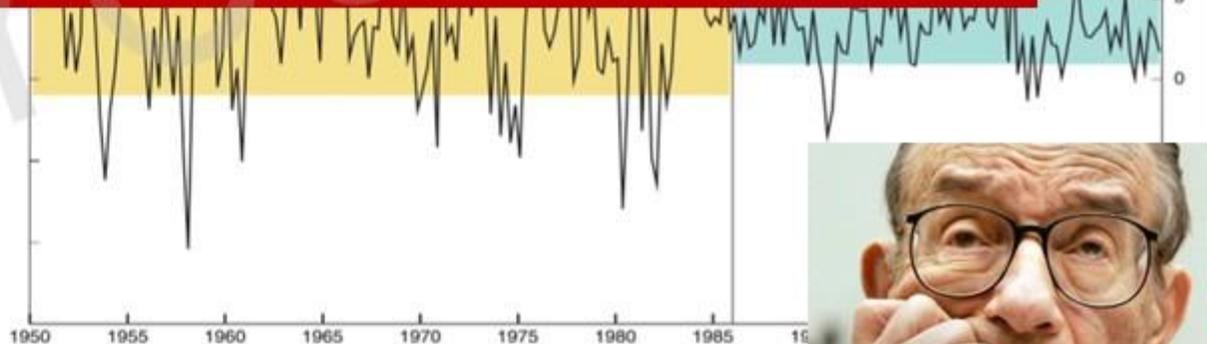
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What would you do, if anything?

Notice that this move would mean that you have decided to set aside **inflation-targeting**, as **the goal of interest rates**, to pursue a different goal: **macroeconomic stability**, specifically, deflating what you think may be a dangerous bubble

You should be aware that if you do either of these things, the banking lobby will start howling and fussing, and will say *the Fed is making it harder to make mortgages to would-be home buyers!*

So, you can expect that there will be political pressure, for you to back off...



Note: The shaded areas of the chart show a common measure of data variability—plus and minus one standard deviation from the long period mean of the data.
Source: Bureau of Economic Analysis



If you want to act, you could, for example:

- *Start raising interest rates, in an effort to cool off the rate of new bank lending, and to signal implicitly that it's time for people to sober up and not let this situation get any more dangerous*
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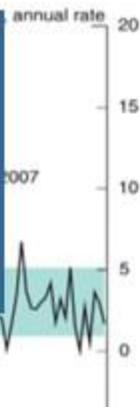
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- *Another option: give a speech, cautioning the country about the situation, and warning that rate hikes and other moves may become necessary, if conditions get any more dangerous*

Does the Federal Reserve have the established institutional authority to try to proactively identify and deflate asset price bubbles? **Is that one of its recognized roles / responsibilities?**



If Greenspan had done any or all of these things, and those moves had been successful in deflating the housing bubble, would he and the Federal Reserve have been regarded positively, by the public?

implicitly that it's time for people to sober up and not let this situation get any more dangerous

- **Start tightening up capital requirements on banks**, letting them know that you are doing so to force them to slow down new lending, to cool the boom
- **Start tightening up regulations on home-mortgage lending**, to restrict the issuance of riskier forms of loans

What would you do, if anything?

“Three months ago my house was worth \$500,000, and now it’s only worth \$300,000 – and the reason why is, because that damned Alan Greenspan opened his mouth”

“We had a great economy going... but once again, government had to go and put its big fat foot on it, and ruined everything”

- **Another option: give a speech**, cautioning the country about the situation, and warning that rate hikes and other moves may become necessary, if conditions get any more dangerous

Does the Federal Reserve have the established institutional authority to try to proactively identify and deflate asset price bubbles? **Is that one of its recognized roles / responsibilities?**



Capitalism, Government, Money, and the Future of the World



A Brief Look
at the
Economic
History
of the United States

The Panic of 2008

It's 2004

Surefire Business Proposition

- **Mini-investment partnership**
- **We go in as equal partners, each putting in \$500,000 in starting capital**
- **We can borrow \$10,000,000 on a rolling daily basis, in the 'repo' markets, at 3% interest, so at a cost of \$833 a day**
- **We can buy these things called mortgage bonds, that pay 5% interest. If we buy \$11,000,000 of them, that will be \$1528 a day in income**
- **Our profit will therefore be: $\$1528 - \$833 - \$37 = \658 a day**

\$118,440 a piece per year

What are the risks? What could go wrong?

Some of our lenders in the repo markets might reduce our line of credit with them someday, for whatever reason

Some of the mortgages inside our bonds might default

House prices might decline, causing defaults and making it hard to sell the houses for enough to cover losses; the market value of our bonds would therefore decline

We would have to find new lenders, or sell some of our bonds, and reduce the size of our business

The bonds are backed by the real estate, as collateral

There's a company called AIG that will sell you insurance against your mortgage bonds going down in value, and this insurance is a good deal: 0.12% per year

It's 2004

Surefire Business Proposition

- **Mini-investment partnership**
- **We go in as equal partners, each putting in \$500,000 in starting capital**
- **We can borrow \$30,000,000 on a rolling daily basis, in the 'repo' markets, at 3% interest, so at a cost of \$2500 a day**
- **We can buy these things called mortgage bonds, that pay 5% interest. If we buy \$31,000,000 of them, that will be \$4306 a day in income**
- **Our profit will therefore be: $\$4306 - \$2500 - \$103 = \1703 a day**

\$306,540 a piece per year

What are the risks? What could go wrong?

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Surefire Business Proposition

- **Mini-investment partnership**
- **We go in as equal partners, each putting in \$2,000,000 in capital**
- **We can borrow \$120,000,000 on a rolling daily basis, in the 'repo' markets, at 3% interest, so at a cost of \$10,000 a day**
- **We can buy these things called mortgage bonds, that pay 5% interest. If we buy \$124,000,000 of them, that will be \$17,222 a day in income**
- **Our profit will therefore be: $\$17,222 - \$10,000 - \$413 = \6809 a day**

\$1,225,620 a piece per year

What are the risks? What could go wrong?

Some of our lenders in the repo markets might reduce our line of credit with them someday, for whatever reason

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It's summer, 2006

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What are the risks? What could go wrong?

Some of our lenders in the repo markets might reduce our line of credit with them someday, for whatever reason

Some of the mortgages inside our bonds might default

★ **House prices more or less stabilize across the country, stop going up**

We would have to find new lenders, or sell some of our bonds, and reduce the size of our business

The bonds are backed by the real estate, as collateral

There's a company called AIG that will sell you insurance against your mortgage bonds going down in value, and this insurance is a good deal: 0.12% per year

It's summer, 2007

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What are the risks? What could go wrong?

Some of our lenders in the repo markets might reduce our line of credit with them someday, for whatever reason

Some of the mortgages inside our bonds might default

**House prices start going down
in quite a few places around the country**

We would have to find new lenders, or sell some of our bonds, and reduce the size of our business

The bonds are backed by the real estate, as collateral

There's a company called AIG that will sell you insurance against your mortgage bonds going down in value, and this insurance is a good deal: 0.12% per year

It's summer, 2008

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\$1,225,620 a piece per year

What are the risks? What could go wrong?

Some of our lenders in the repo markets might reduce our line of credit with them someday, for whatever reason

Many of the mortgages inside our bonds might default

House prices are in sharp decline all over, indicating the likelihood that there has been a huge asset-price bubble in housing

We would have to find new lenders, or sell some of our bonds, and reduce the size of our business

The bonds are backed by the real estate, as collateral

There's a company called AIG that will sell you insurance against your mortgage bonds going down in value, and this insurance is a good deal: 0.12% per year

It's summer, 2008

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\$1,225,620 a piece per year

What are the risks? What could go wrong?

Some of our lenders in the repo markets might reduce our line of credit with them someday, for whatever reason

The market value of our mortgage bonds is starting to go down

House prices are in sharp decline all over, indicating the likelihood that there has been a huge asset-price bubble in housing

We would have to find new lenders, or sell some of our bonds, and reduce the size of our business

The bonds are backed by the real estate, as collateral

There's a company called AIG that will sell you insurance against your mortgage bonds going down in value, and this insurance is a good deal: 0.12% per year

It's Friday, September 12, 2008

Surefire Business Proposition

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\$1,225,620 apiece per year

What are the risks? What could go wrong?

Our lenders in the repo markets are worried about our collateral, so they all demand their money back

The market value of our mortgage bonds is starting to go down

House prices are in sharp decline all over, indicating the likelihood that there has been a huge asset-price bubble in housing

We look for other lenders, but the repo markets have completely dried up

We try to start selling our mortgage bonds, but the market for them has completely disappeared

Oops! AIG didn't plan for a huge housing bubble; they don't actually have the money to pay out on all those credit-default swaps

★ It's Monday, September 15, 2008

- Mini-investme
- We go in as e
- We can borrow
- We can buy th
- Our profit will

Monday, September 15, 2008

We can't sell our mortgage bonds

We can't pay off our lenders, who all want their money back on Monday

We file for bankruptcy

**Our lenders in the
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indicating the likelihood that there has been
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Monday, September 15, 2008

We can't sell our

markets,

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It was great while it lasted!

back Monday

**Our lenders in the
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It's Monday, September 15, 2008

Surefire Business Plan

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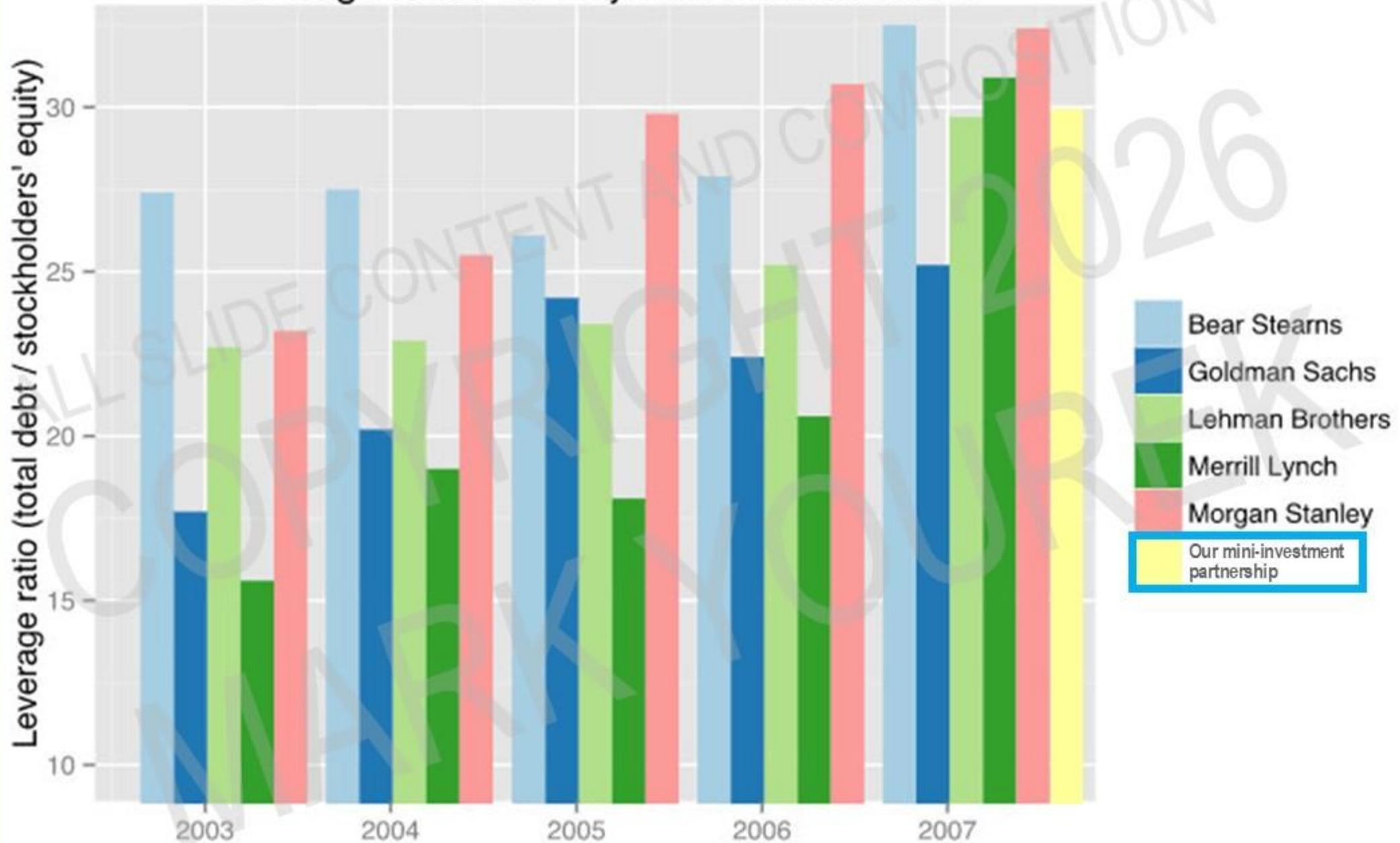
Our lenders in the repo markets are worried about our collateral, so they all demand their money back

The market value of our mortgage bonds is starting to go down

House prices are in sharp decline all over, indicating the likelihood that there has been a huge asset-price bubble in housing

- **Our investment partnership was in fact an informal bank – an uninsured lending institution, borrowing short-term, to lend out long-term. As such, it was inherently unstable, as banks always are, and subject to bank runs**
- **This business model is characteristic of what became known as the shadow banking sector**
- **Our leverage ratio was about the same as the real-life Lehman Brothers: 30:1. Lehman was just 5,700 times bigger**
- **September 15, 2008 was the day Lehman was forced to declare bankruptcy, under circumstances very similar to this**
- **The electric excitement and determination to keep it going for as long as possible, because of the incredible profits, is pretty much exactly what motivated the real players during this period**
- **The willful unwillingness to consider the risks – both to our business and, more importantly, to the economy as a whole – is also highly characteristic of the mind frame of many of the real players of this period**

Leverage ratios for major investment banks



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MARK YOUREK

What happened, in the financial crisis of 2008?

Backdrop of steadily rising housing values feeds confidence

'Global savings glut'

Backdrop of apparent macroeconomic stability feeds confidence

Innovations in mortgage origination



Innovations in mortgage securitization

People willing to buy houses on speculation, to flip

Loosening of standards / gaming of standards

Principle of diversification as providing safety

Assumption that mortgage securities are very safe

Complexity of overall ecosystem discourages attempts at deep understanding, in real time

Profits so wonderful, no one wants to question the overall dynamic, or its sustainability

Use of vast leverage, to make HUGE amounts of money

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