

The Global Financial Crisis

Module 4 Safe Assets and the Global Savings Glut

Andrew Metrick

Outline

Module 4

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| 01 | Shadow banking | 07 | Manufacturing safe assets |
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01 Shadow Banking

Shadow Banking

“Runnable debt” is effectively “money”, and it comes in many forms.

In its simplest form, such debt was produced by banks in the form of demand deposits.

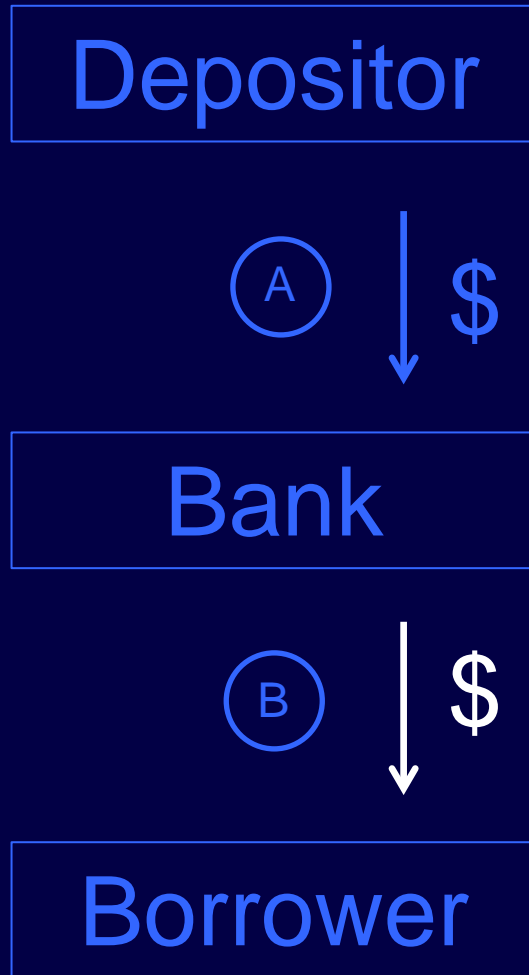
On-Balance-Sheet Financing

Traditional Banking



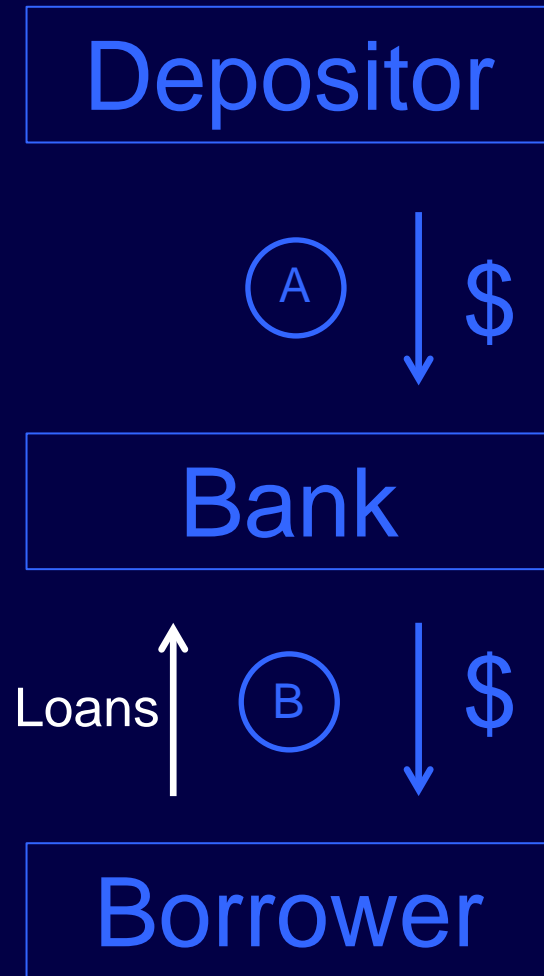
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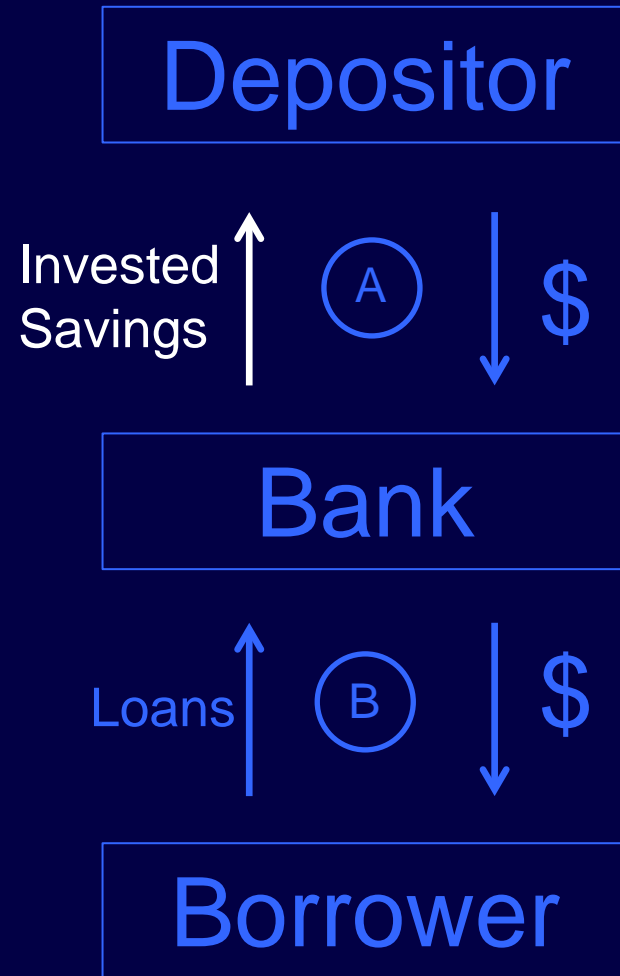
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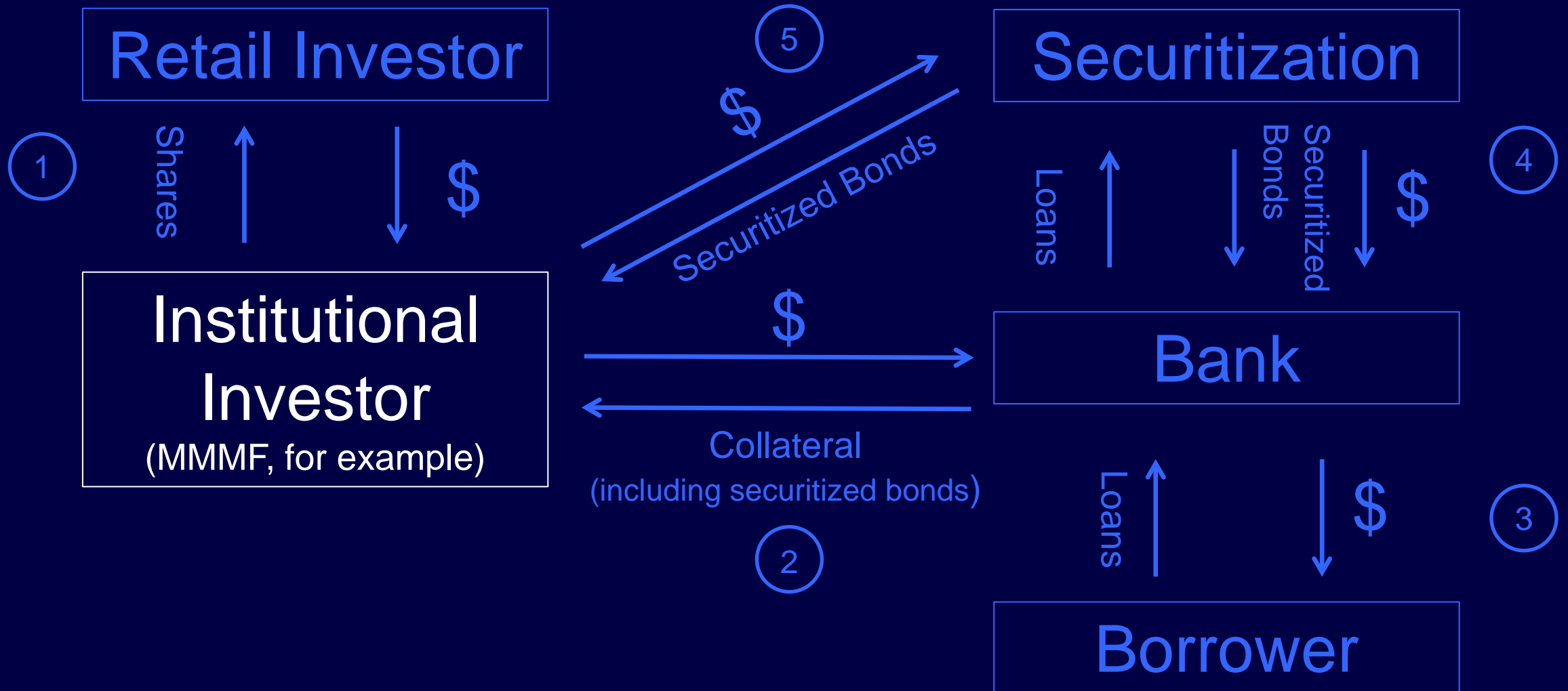
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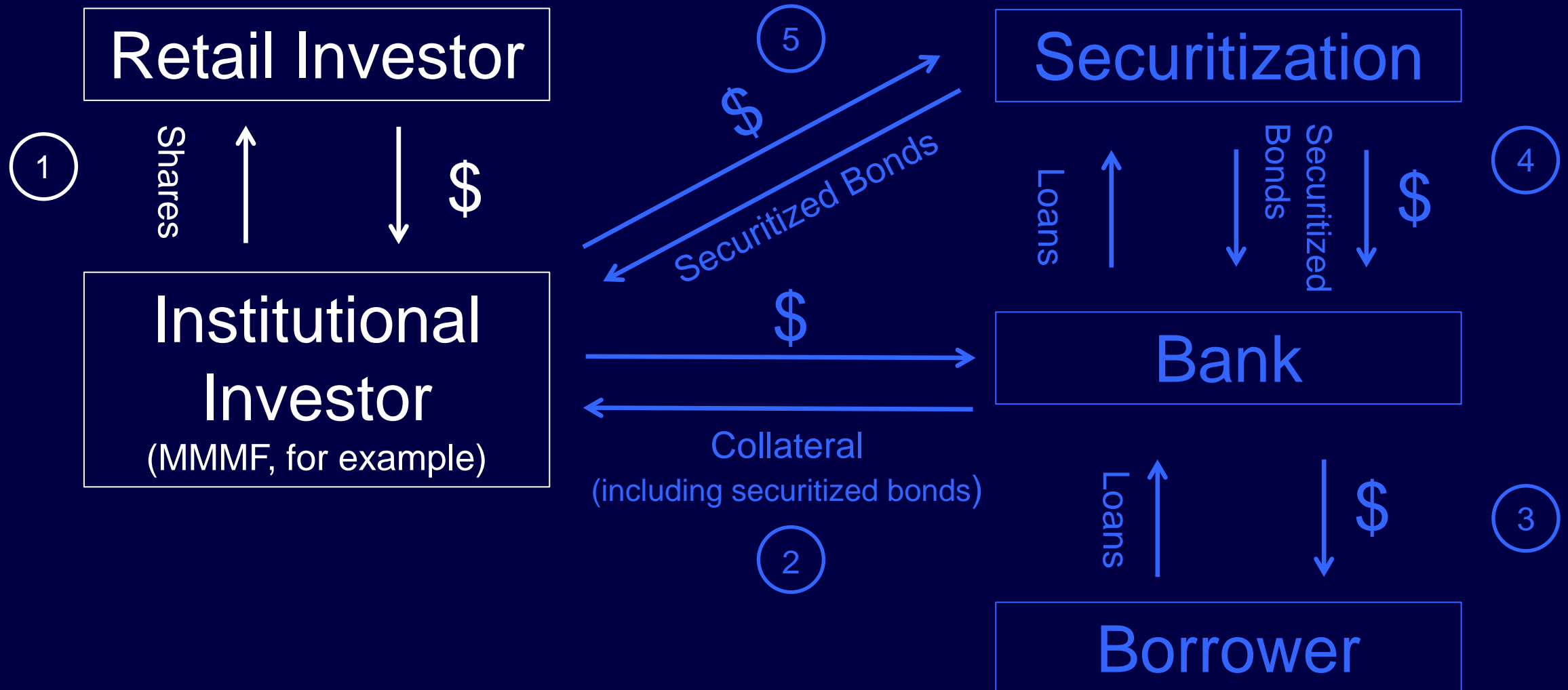
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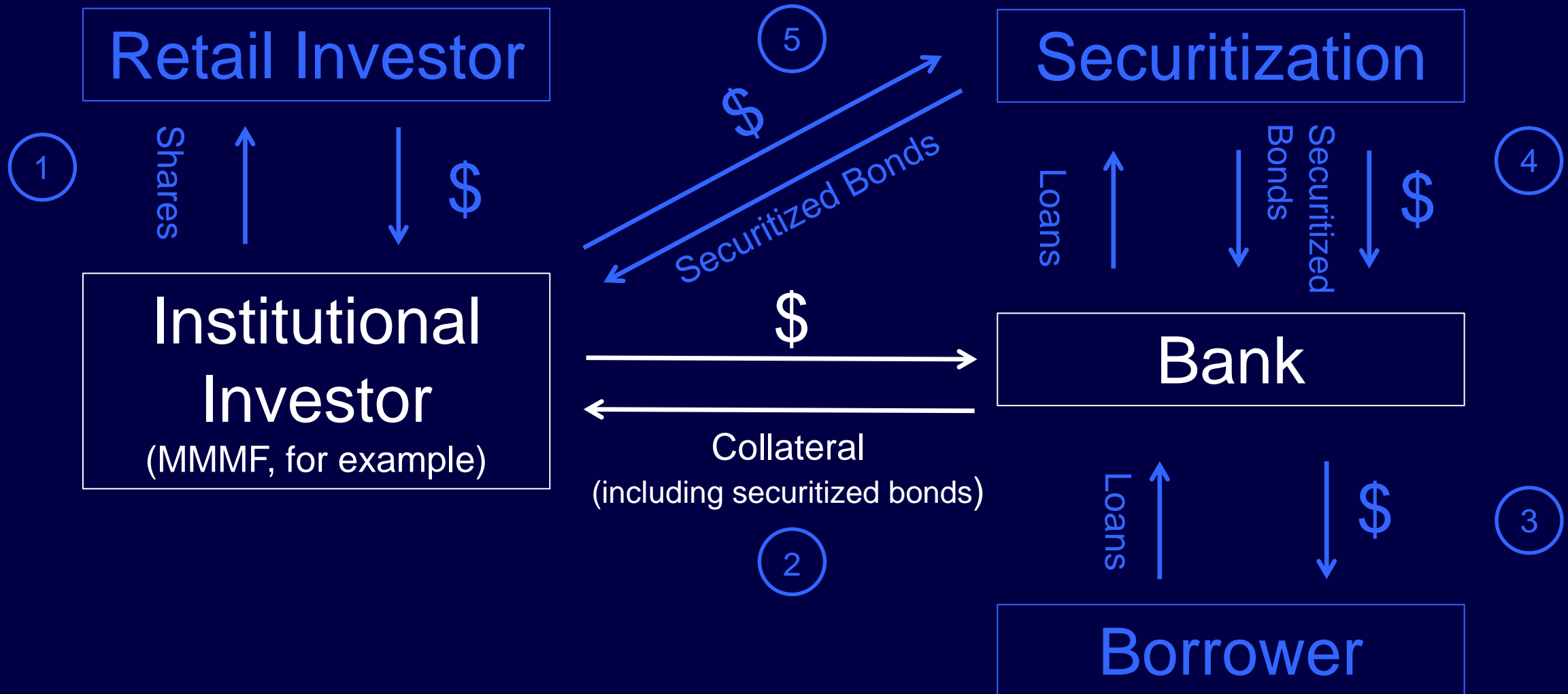
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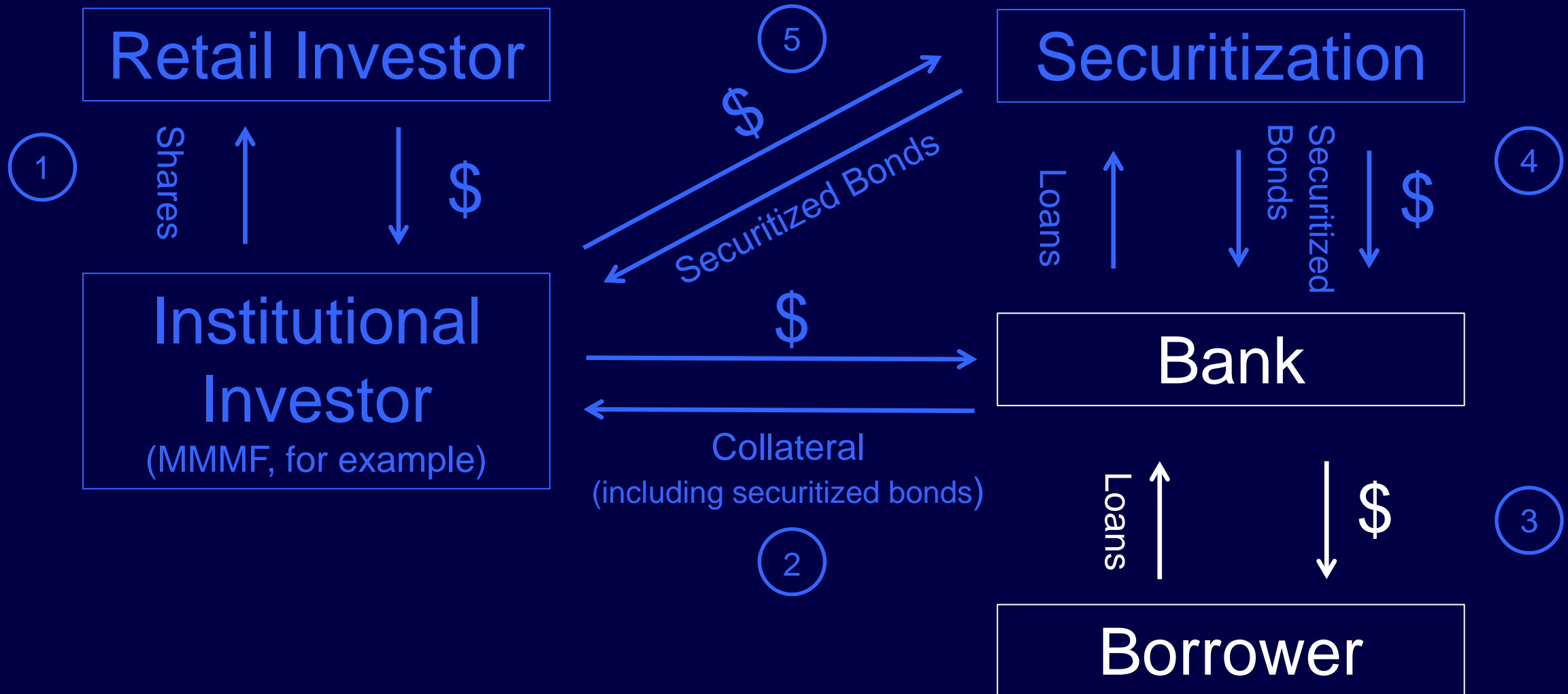
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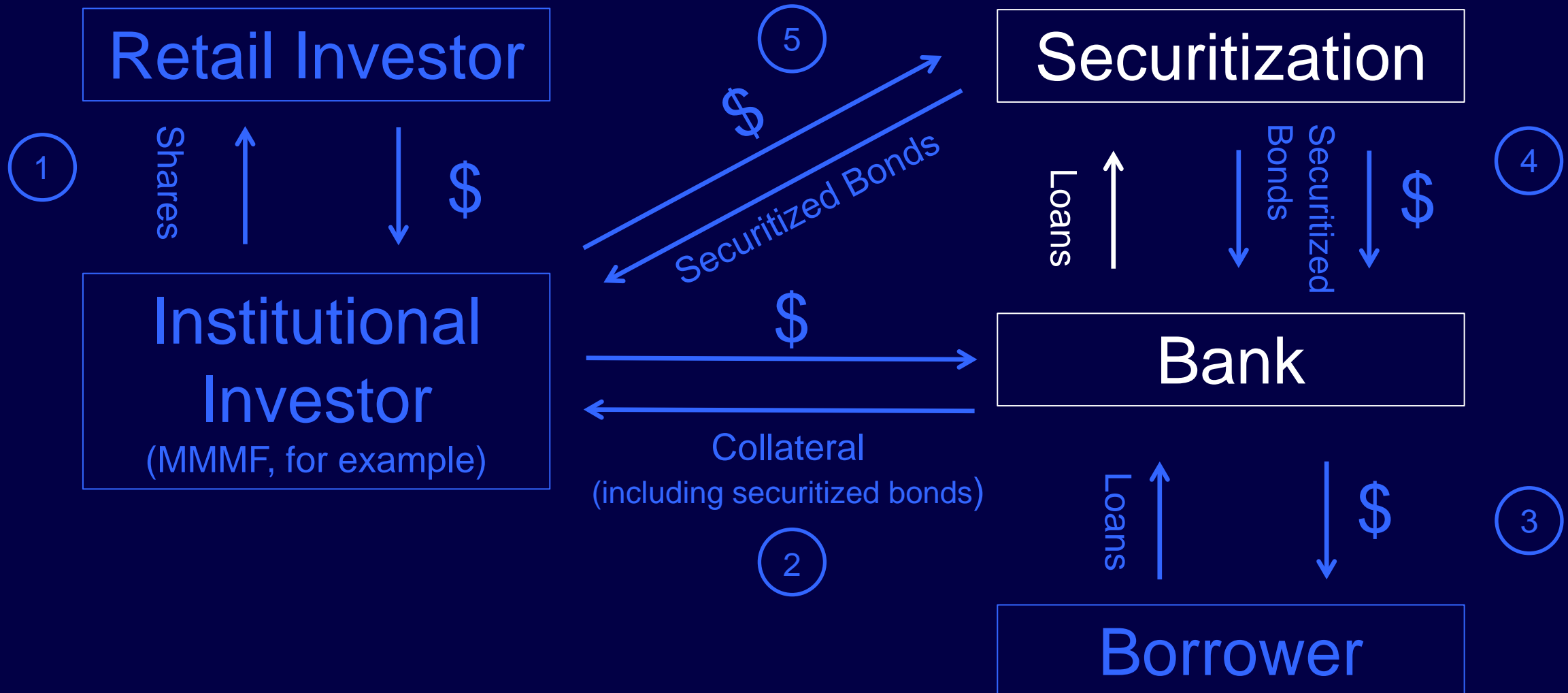
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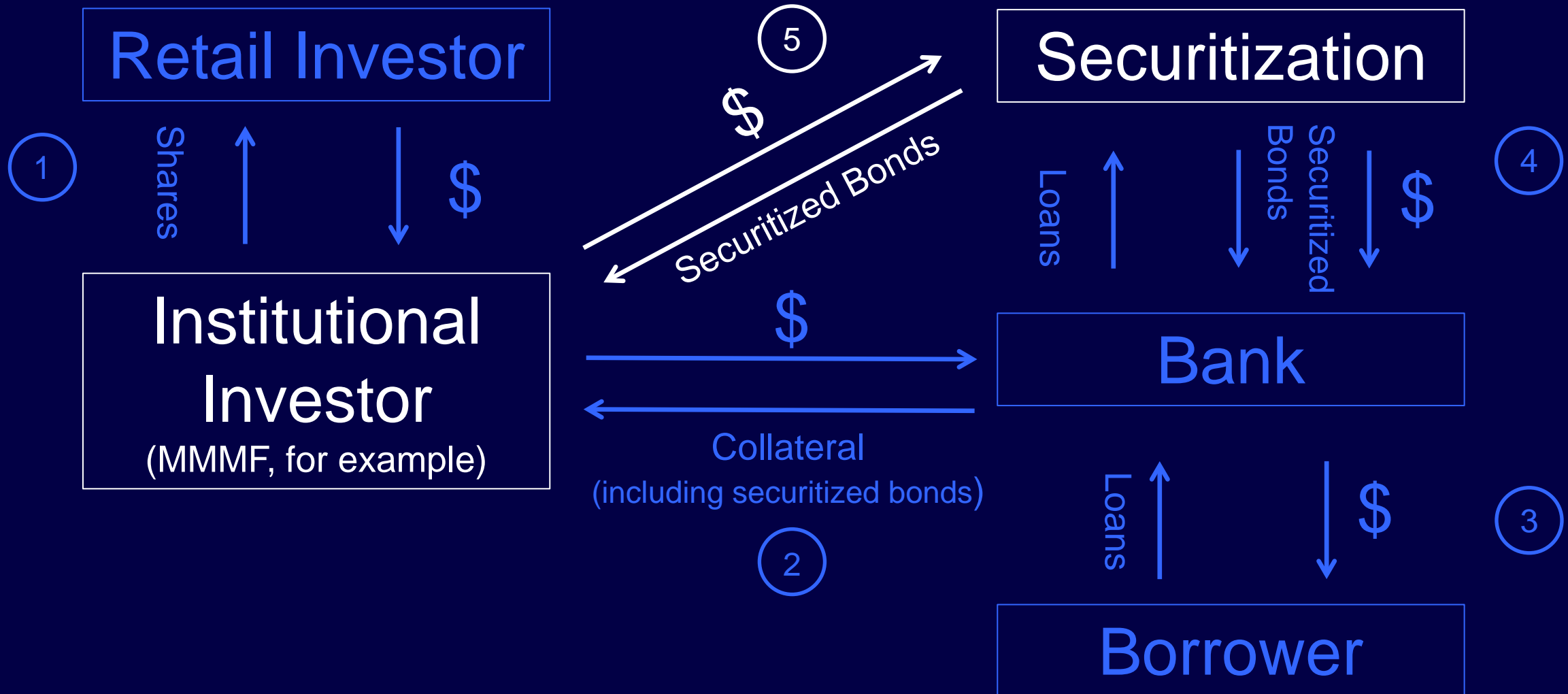
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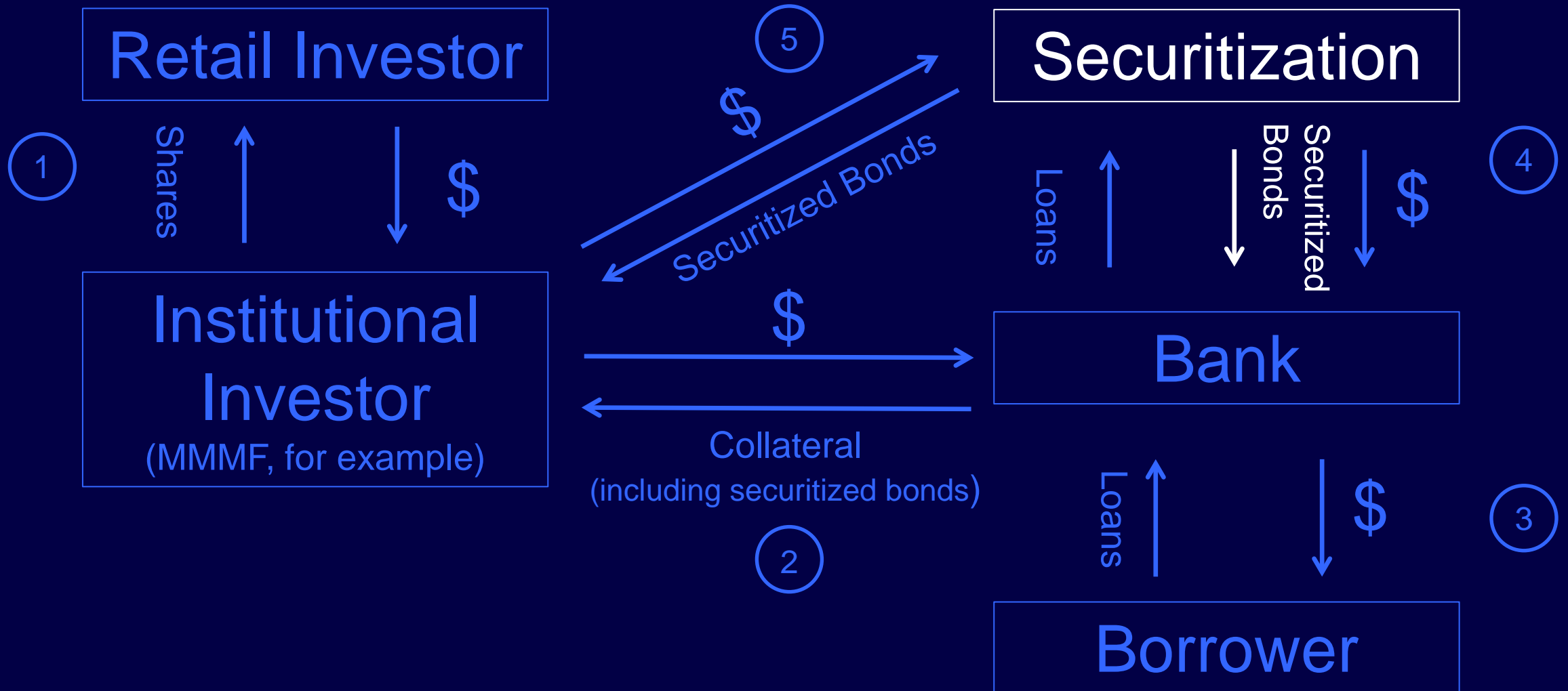
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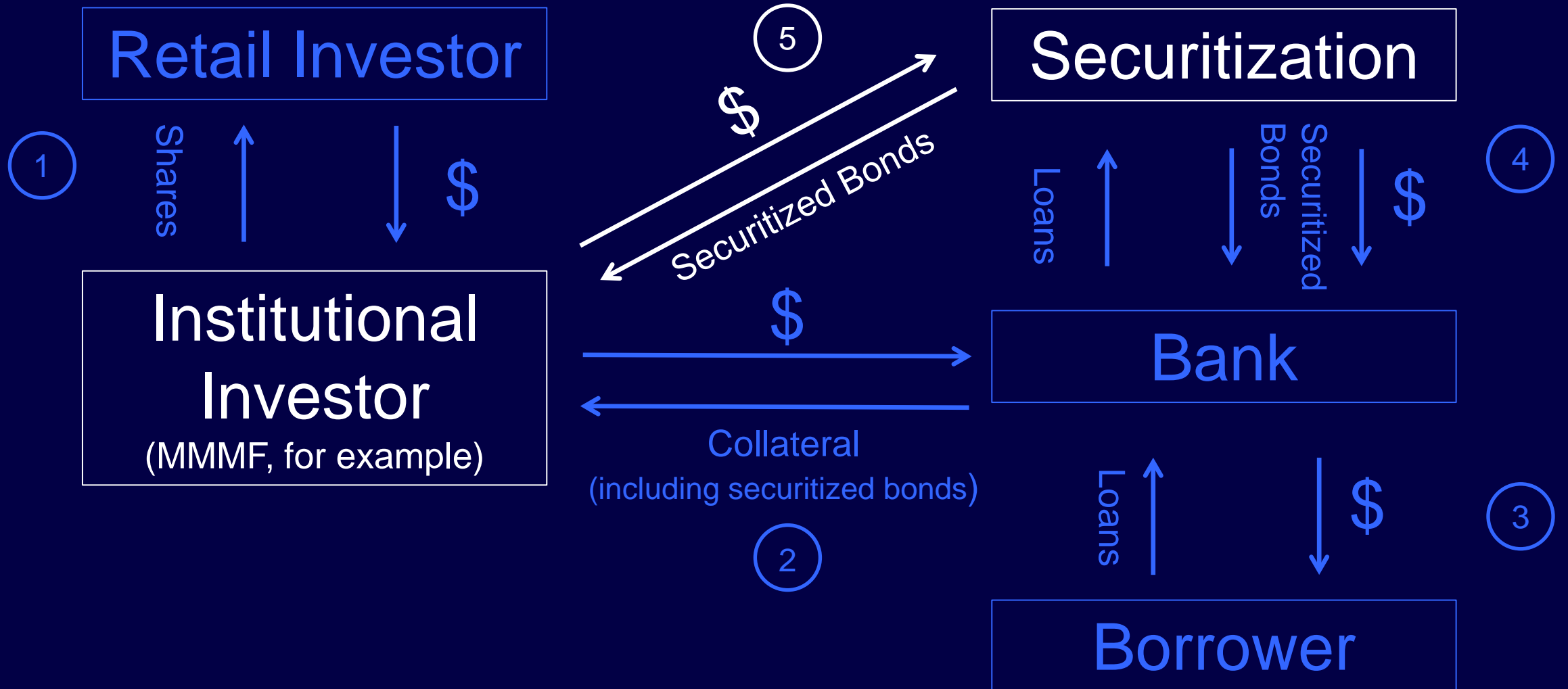
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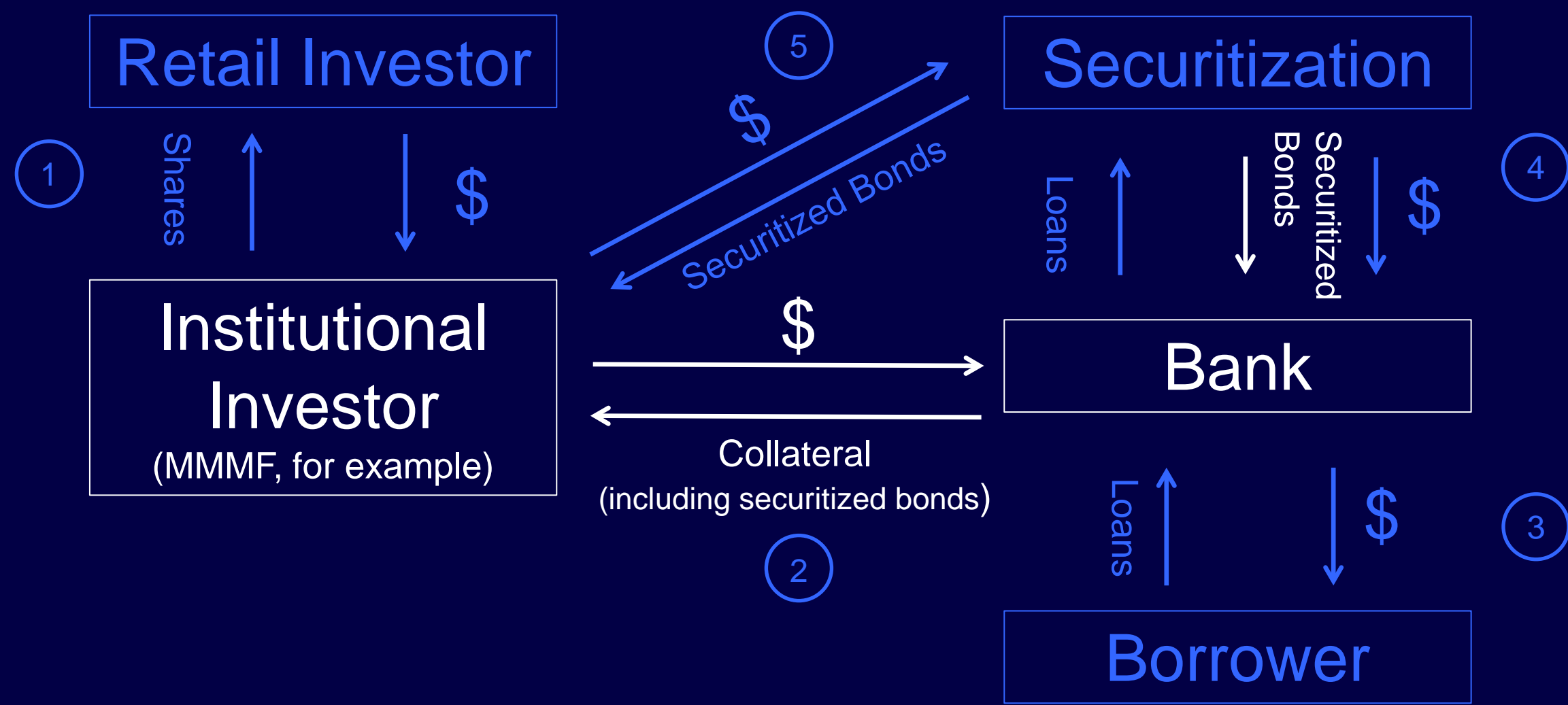
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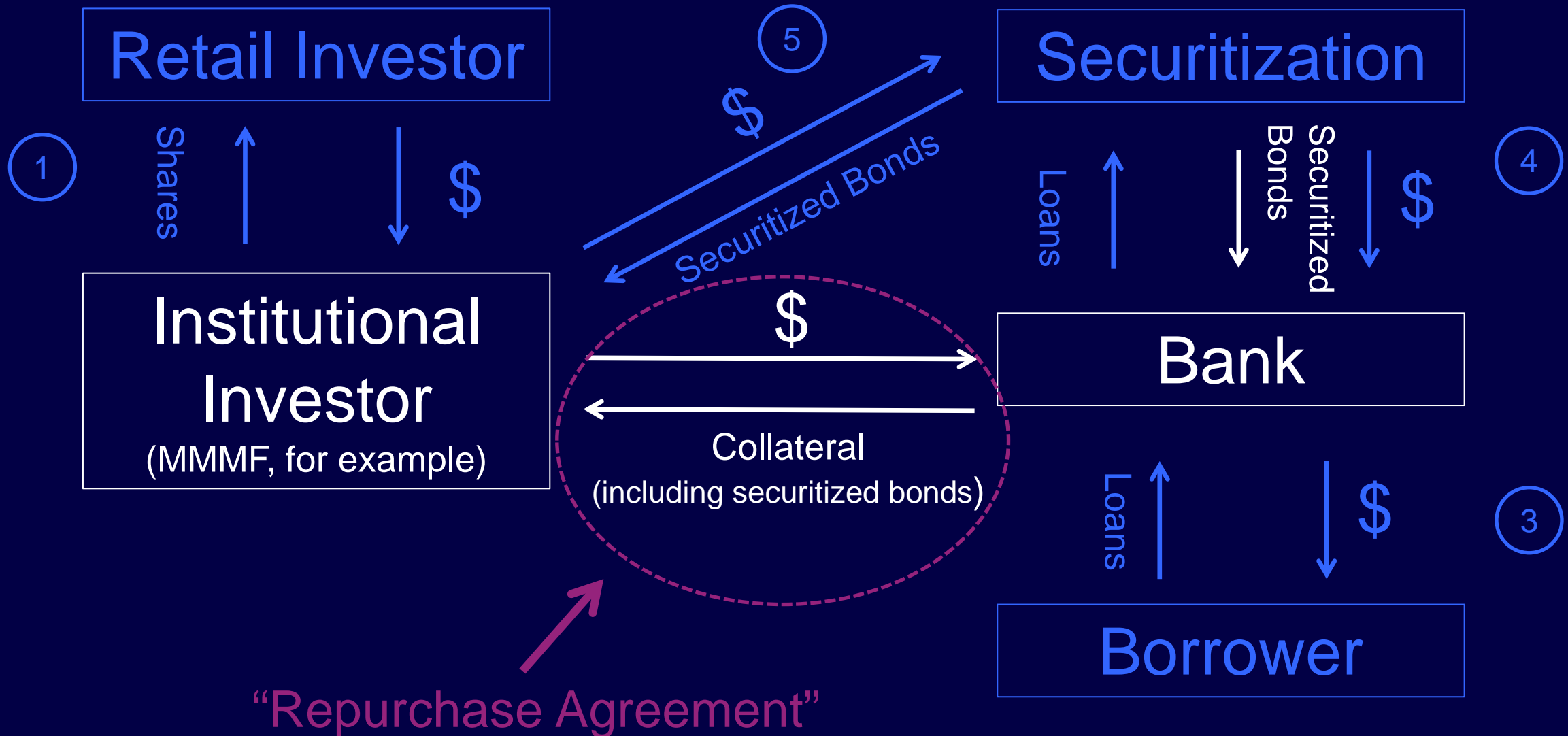
Off-Balance-Sheet Financing

Shadow Banking



Off-Balance-Sheet Financing

Shadow Banking



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Module 4 Safe Assets and the Global Savings Glut

02 Safe Assets

What Are Safe Assets?

Information Insensitivity

No incentive to produce information about the asset

Can also think of this as “no adverse selection”

Not the same thing as “risk free” — this is tricky!

Includes

Currency

Government bonds of stable countries

Insured deposits in banks

Excludes

Stocks

Private debt of third parties

Government bonds of unstable countries

The Demand for Safe Assets

Why do we need safe assets?

Investments

Investment portfolio for consumers, institutions,
and other capital pools

Transactions

Collateral for financial transactions

These are the same functions we often ascribe to
traditional money

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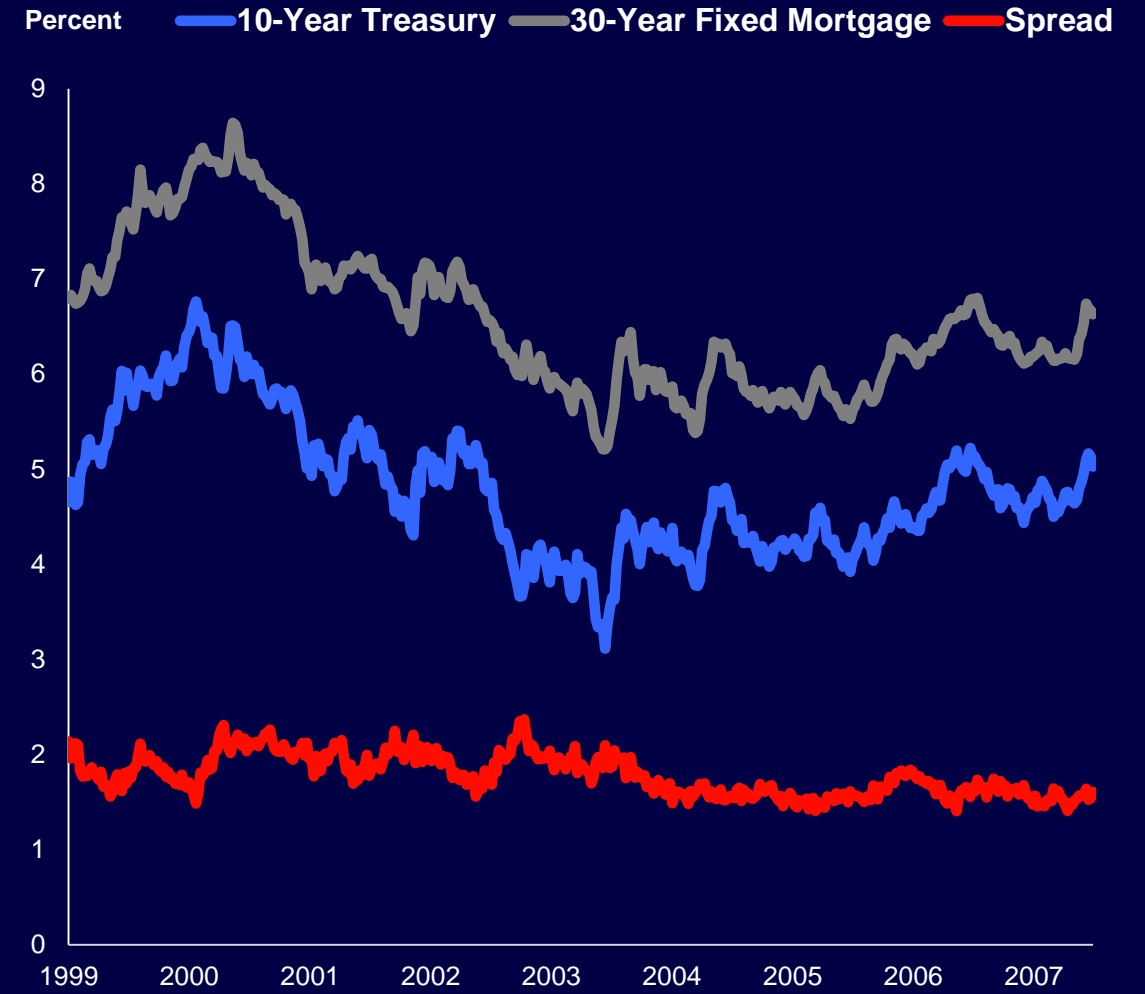
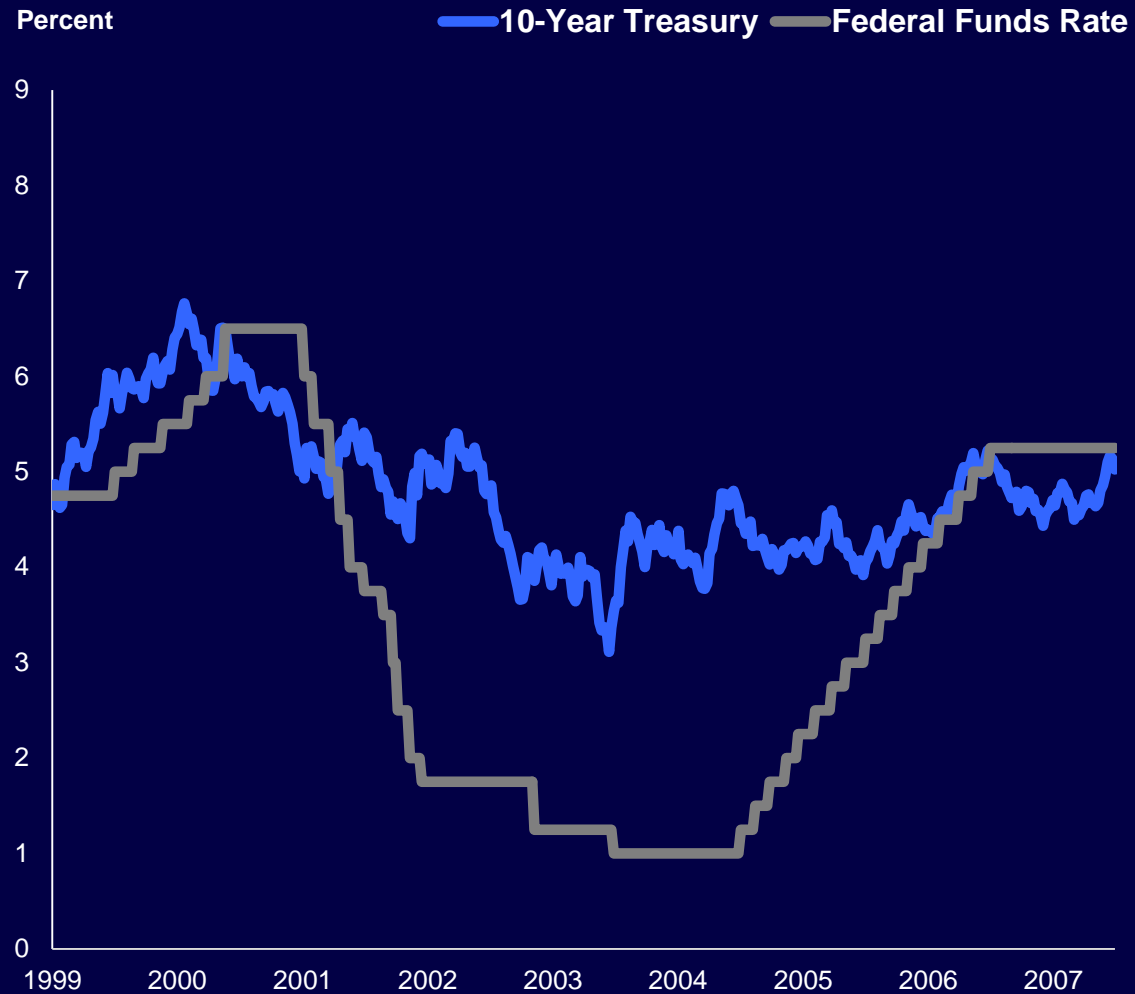
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03 The Global Savings Glut Hypothesis

Between 2003 and 2007, short-term interest rates in the United States increased, which would normally also increase long-term rates.

That didn't happen. Ten-year rates stayed about the same.

The Global Savings Glut



Source: Bernanke, B., C. Bertaut, L. DeMarco, and S. Kamin, 2011, International Capital Flows and the Return to Safe Assets in the United States, 2003-2007, FRB International Finance Discussion Paper No. 1014.

Ben Bernanke proposed that one cause of this “conundrum” was a “global savings glut” (GSG) from emerging-market and commodity rich countries with large current-account surpluses.

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04 Global Savings Glut: Data

01

GSG demand for safe assets and agency debt

02

Non-GSG European countries demanded safe government debt and AAA-rated substitutes

03

“Institutional cash pool” demand also grew significantly

01

GSG demand for safe assets and agency debt

02

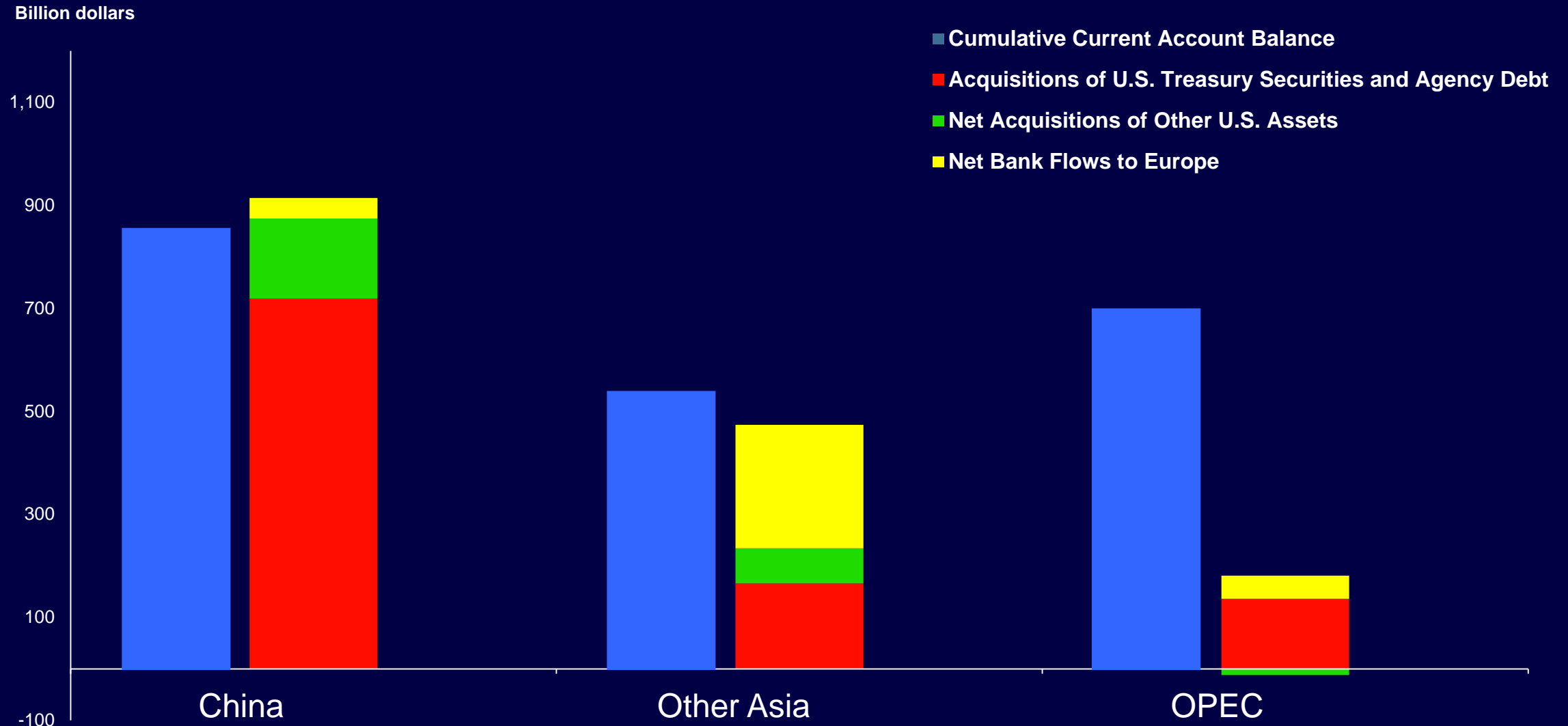
Non-GSG European countries demanded safe government debt and AAA-rated substitutes

03

“Institutional cash pool” demand also grew significantly

The Global Savings Glut

Current account surplus and certain financial acquisitions of GSG regions, 2003-2007



Source: Bernanke, B., C. Bertaut, L. DeMarco, and S. Kamin, 2011, International Capital Flows and the Return to Safe Assets in the United States, 2003-2007, FRB International Finance Discussion Paper No. 1014.

01

**GSG demand for safe
assets and agency
debt**

02

**Non-GSG European
countries demanded
safe government debt
and AAA-rated
substitutes**

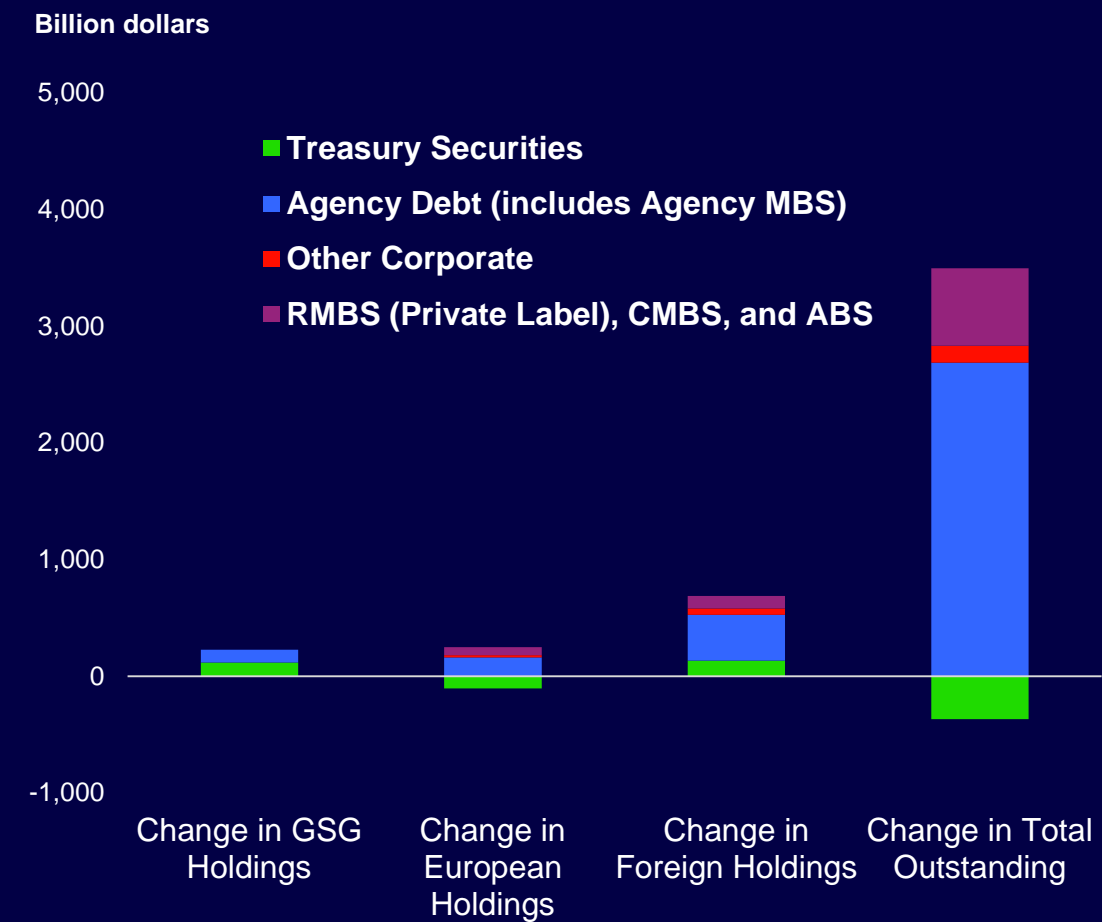
03

**“Institutional cash
pool” demand also
grew significantly**

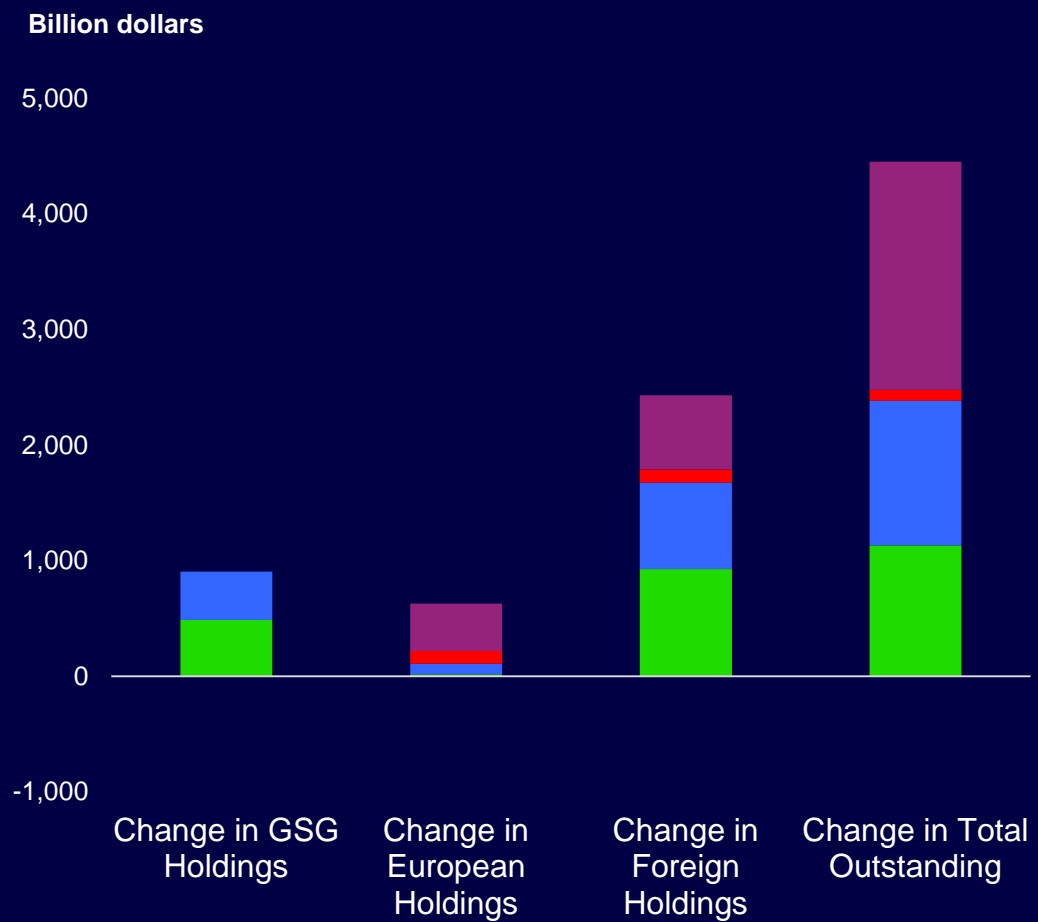
The Global Savings Glut

Inflows to U.S. AAA-rated securities

1998-2002



2003-2007:H1



Source: Bernanke, B., C. Bertaut, L. DeMarco, and S. Kamin, 2011, International Capital Flows and the Return to Safe Assets in the United States, 2003-2007, FRB International Finance Discussion Paper No. 1014.

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05 Global Savings Glut: Data, Part II

01

GSG demand for safe assets and agency debt

02

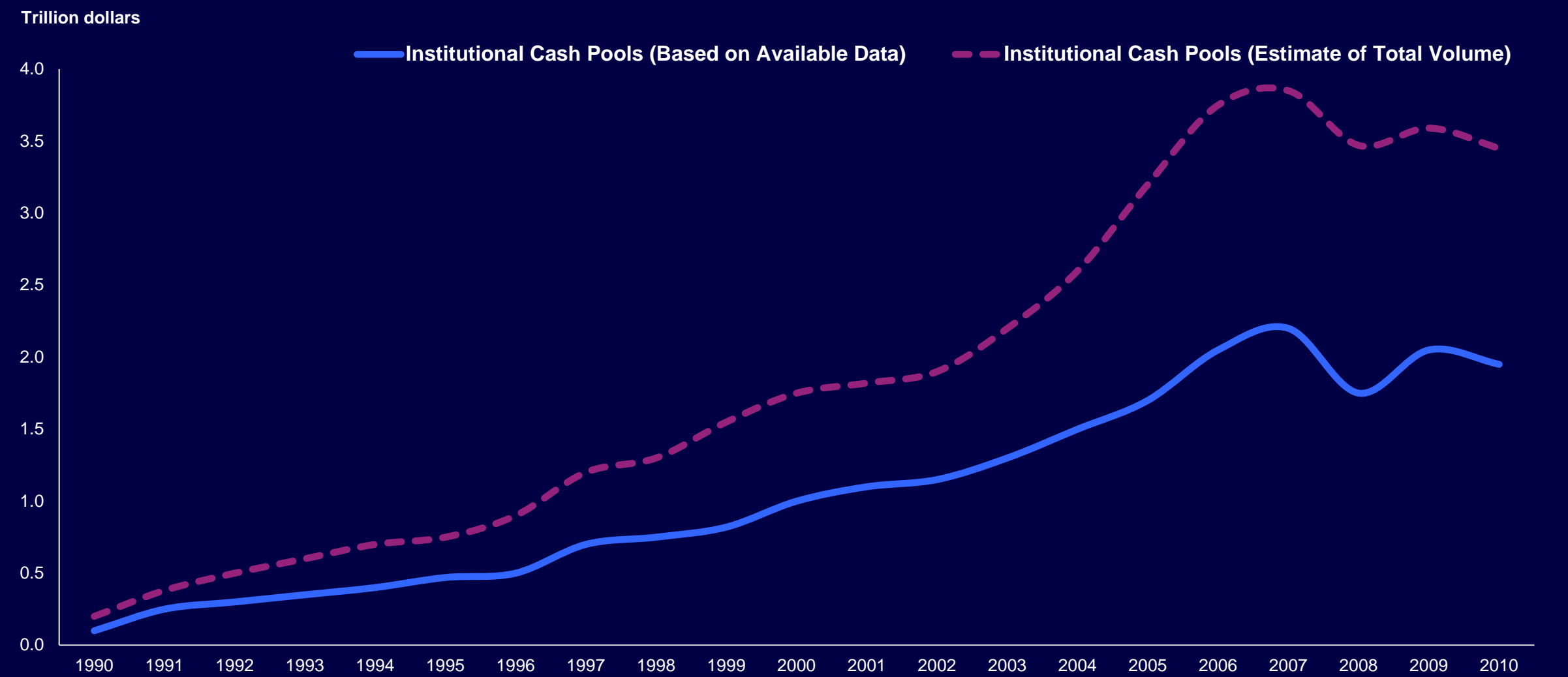
Non-GSG European countries demanded safe government debt and AAA-rated substitutes

03

“Institutional cash pool” demand also grew significantly

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The Secular Rise of Institutional Cash Pools



Source: Pozsar, Zoltan. 2011, Institutional Cash Pools and the Triffin Dilemma of the U.S. Banking System, International Monetary Fund Working Paper 11/190.

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06 Safe Asset Supply

Supply of Safe Assets

Precious metals

Debt and currency of stable countries: U.S.,
U.K., Germany

By 2007, we were running out of U.S. securities
for to serve as safe assets.

Supply of Safe Assets

Sources of Institutional Demand for Treasury Bills and Agency Debt

Billion dollars

	2005	2006	2007	2008	2009	2010
Outstanding Amounts						
Short-term Treasury securities	1,146	1,173	1,192	1,909	2,558	2,487
Short-term agency securities	568	489	560	903	844	618
Total	1,714	1,662	1,752	2,812	3,402	3,105
(-) Foreign Official Holdings						
Short-term Treasury securities	216	193	181	273	562	na
Short-term agency securities	112	110	80	130	34	na
Total	328	303	261	403	596	na
(-) Demand from Institutional Cash Pools						
Institutional cash pools (based on available data)	1,771	2,120	2,216	1,834	2,041	1,911
Institutional cash pools (estimate of total volume)	3,120	3,735	3,852	3,467	3,596	3,432
Average	2,446	2,928	3,034	2,651	2,819	2,672
= Deficit of safe, liquid, short-term products	-1,060	-1,569	-1,543	-242	-13	na

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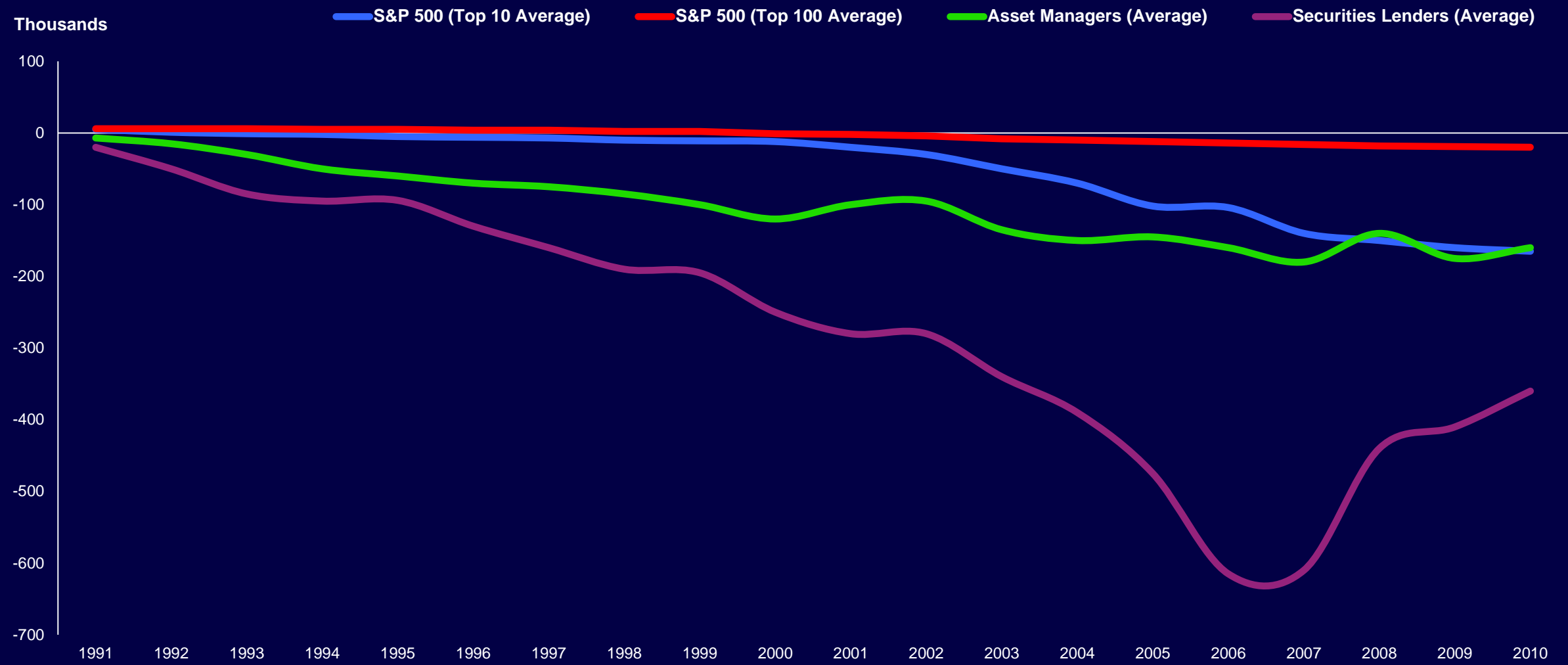
07 Manufacturing Safe Assets

Supply of Safe Assets

Insured deposits in commercial banks can act like safe assets... but there aren't enough insured bank deposits.

Not Enough Banks to Source Safety for Cash Pools

of additional banks needed to get safety through insured, \$100,000 deposits



Source: Pozsar, Zoltan. 2011, Institutional Cash Pools and the Triffin Dilemma of the U.S. Banking System, International Monetary Fund Working Paper 11/190.

When there is excess demand for something, we can expect somebody to try to make it.

“Manufacturing” Safe Assets

The key principle is to use only part of an asset as collateral.

A house is purchased for \$1 million in cash. How safe would a security be that is based on getting at least \$1,000 on that property? How much work would you need to do to figure that out?

A large tech company has a market capitalization of \$100 billion in equity, with zero debt. How safe would be the first \$1 million of debt?

The key here is to set the debt to value ratio low enough that nobody has an incentive to analyze default probabilities.

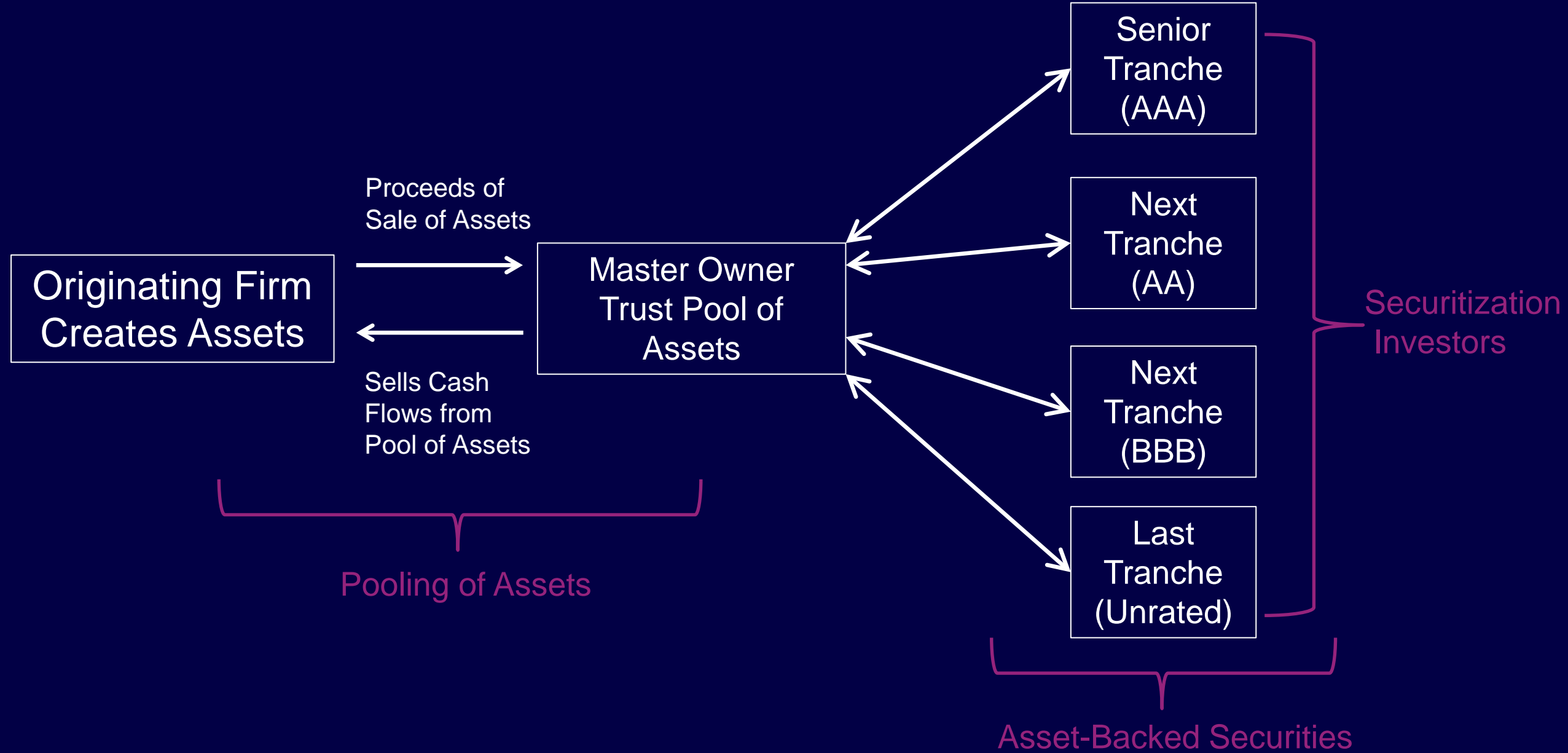
This is not the same thing as “default is impossible”!

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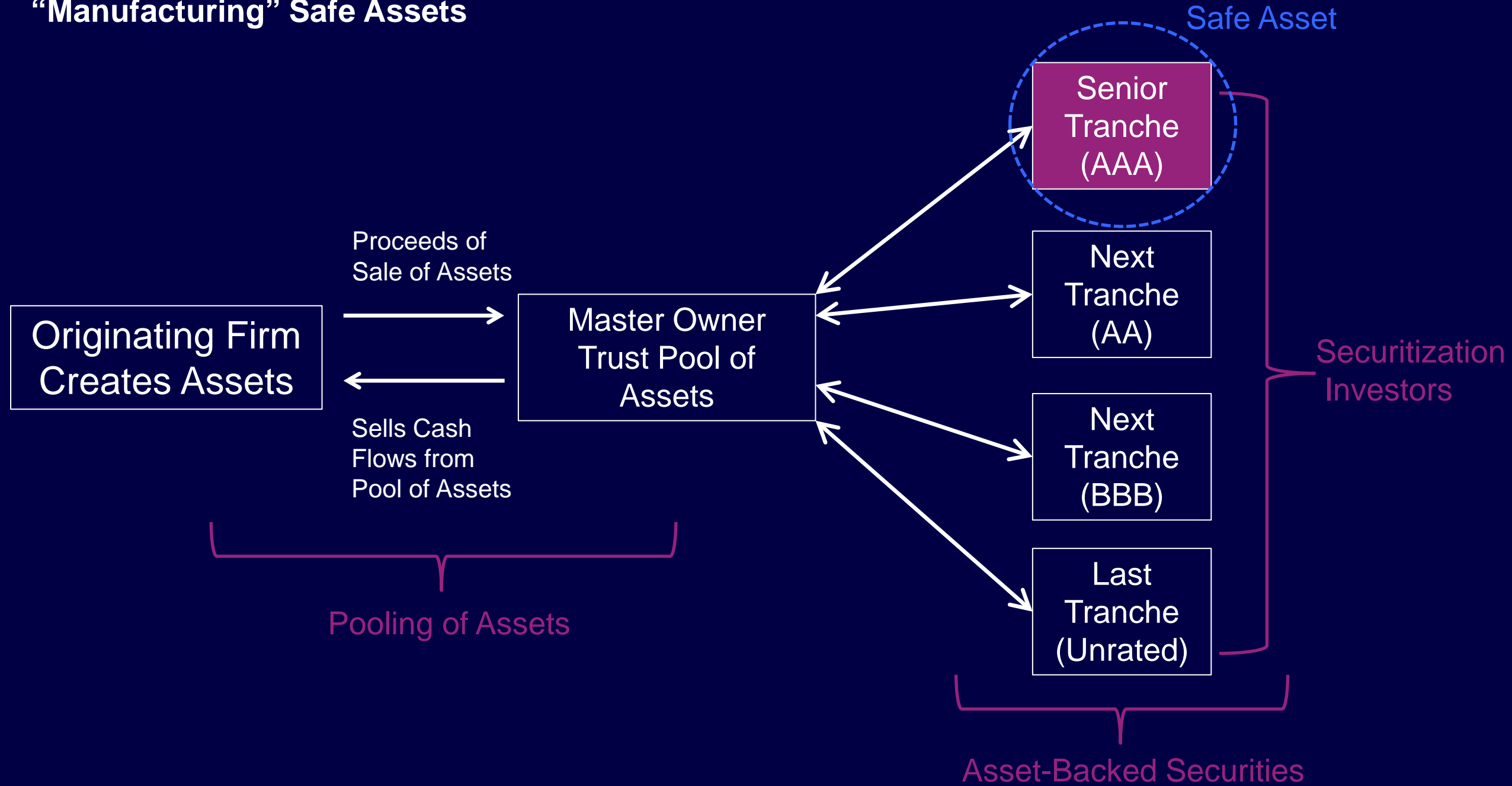
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08 Securitization: Overview

“Manufacturing” Safe Assets



“Manufacturing” Safe Assets



“Manufacturing” Safe Assets

Why do it this way?

Agency Risk

Risk that bank’s management makes a mistake and harms the rest of their business operations

But since these assets don’t require maintenance – they just collect cash payments –you don’t need the bank’s management to be involved any longer

Market Risk

If the value of the assets fall far enough, the special purpose vehicle has unique bankruptcy rules which are much cheaper than usual bankruptcy costs

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09 Securitization: Data, Part 1

Securitization: Data

01

**U.S. MBS issuance
was dominated by
agencies until 2003.**

02

**U.S. non-mortgage
ABS issuance
increased sharply in
the early 2000s.**

Securitization: Data

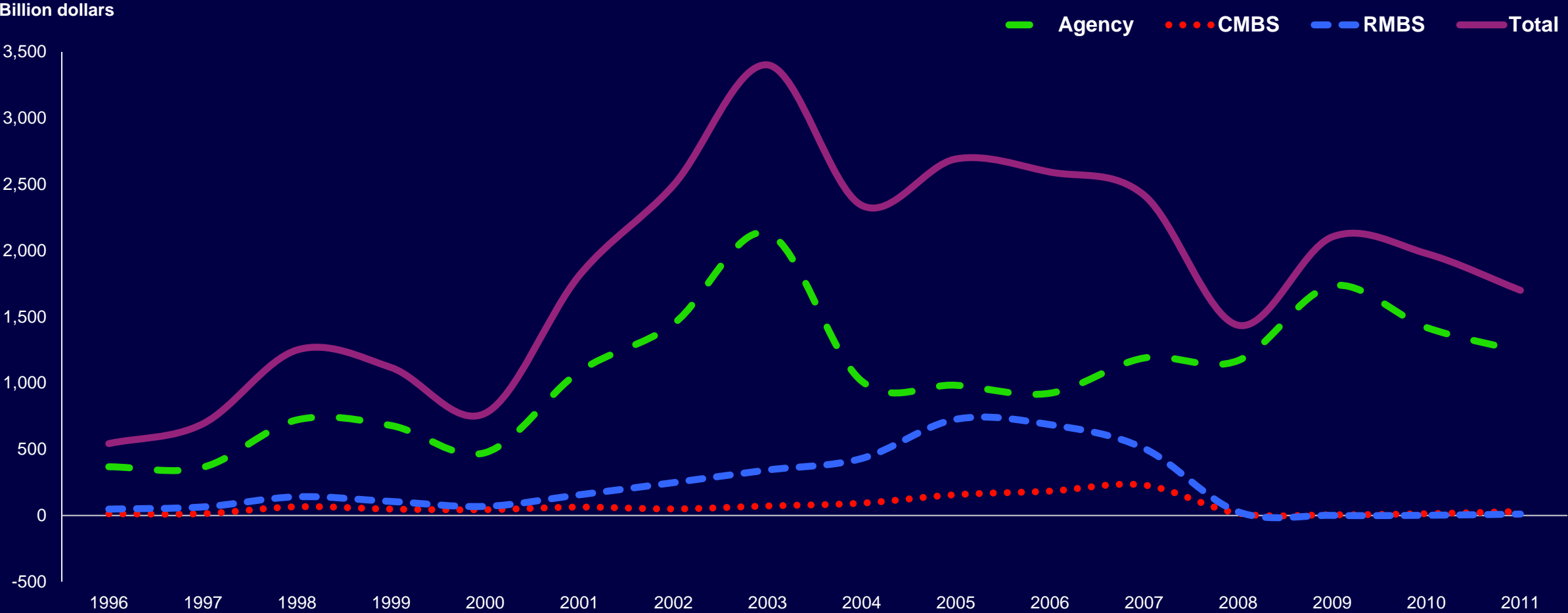
01

U.S. MBS issuance
was dominated by
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02

U.S. non-mortgage
ABS issuance
increased sharply in
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U.S. Mortgage Related Securities Issuance



Source: Gorton, Gary B. and Andrew Metrick, Securitization, 2013, Handbook of the Economics of Finance, Volume 2A, George Constantinides, Milton Harris, and Rene Stulz eds., 1-70, Elsevier.

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10 Securitization: Data, Part 2

Securitization: Data

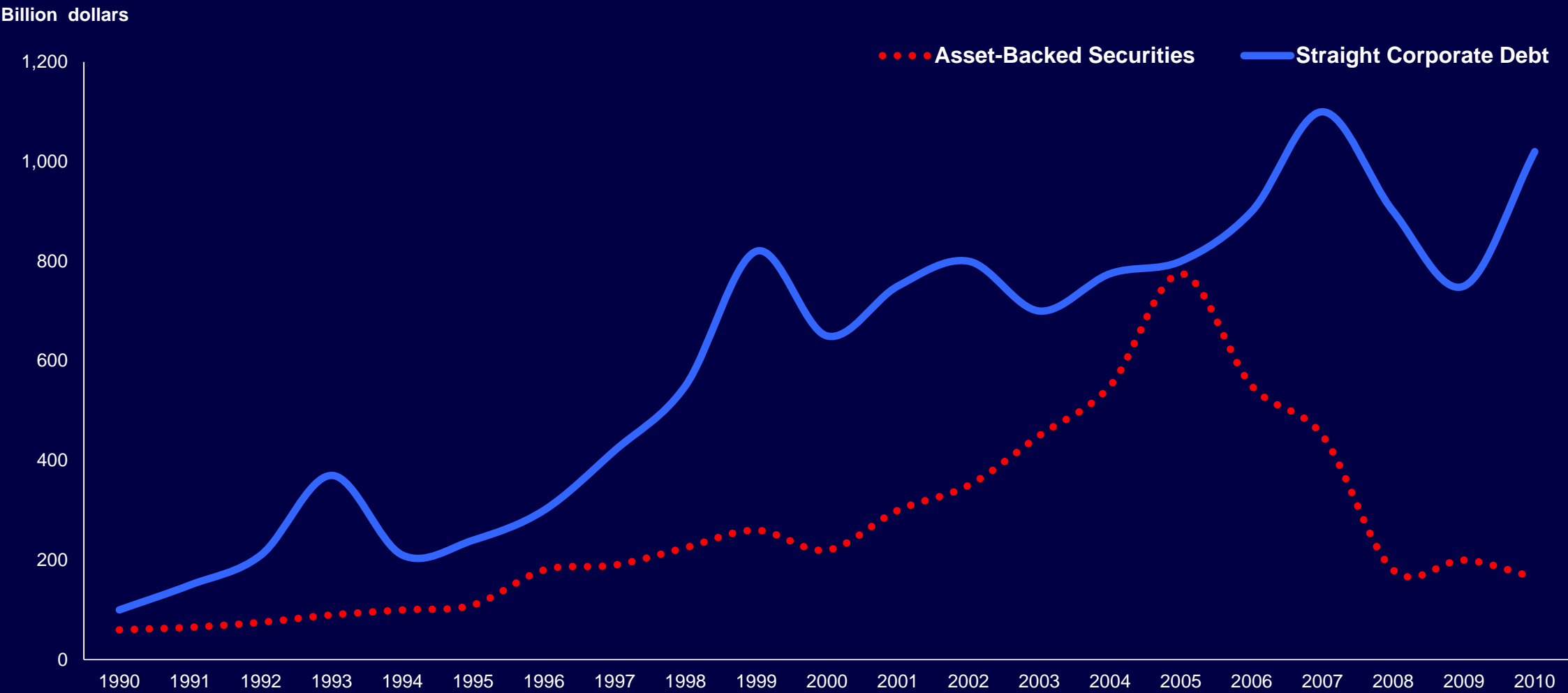
01

U.S. MBS issuance
was dominated by
agencies until 2003.

02

U.S. non-mortgage
ABS issuance
increased sharply in
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Non-Mortgage ABS Issuance vs. Corporate Debt Issuance



Source: Gorton, Gary B. and Andrew Metrick, Securitization, 2013, Handbook of the Economics of Finance, Volume 2A, George Constantinides, Milton Harris, and Rene Stulz eds., 1-70, Elsevier.

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11 Summary

Summary

Module 4

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|----|--|----|---|
| 01 | Safe assets are information-insensitive | 04 | Supply of safe government debt was insufficient to meet the resulting increased demand. |
| 02 | Global demand for safe assets increased significantly before the Global Financial Crisis | 05 | Financial institutions responded by manufacturing information-insensitive debt, primarily using securitization. |
| 03 | Countries with large current account surpluses, European banks, and institutional cash pools increasingly demanded safe assets | 06 | Securitization reduces agency risk and lowers liquidation costs should the value of the assets fall too far |