



The Anti-Money Laundering Forum Legal Requirements & Audit Procedures

May 4, 5 of 2015 / BIEL – Pavillon Royal



In collaboration with



The Economics of *[The Unregulated]* Shadow Banking, & its Inherent Risks.



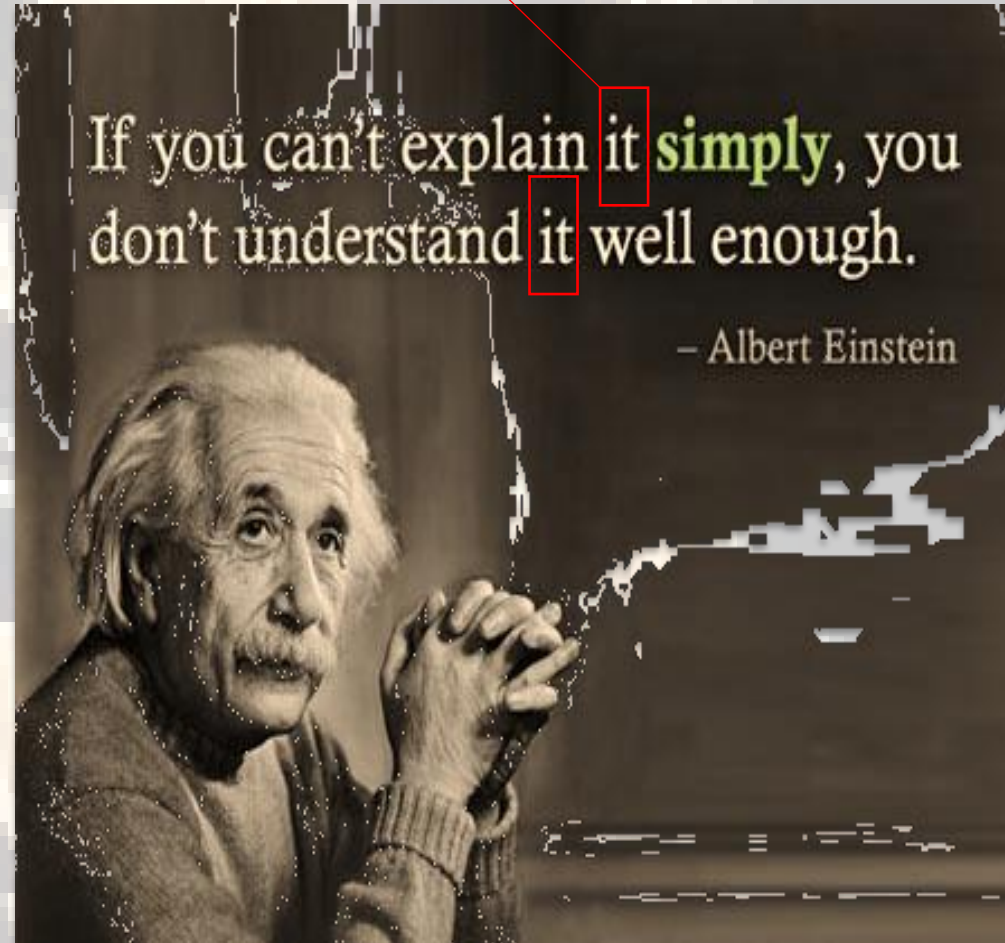
Mohammad Fheili / AGM - Jammal Trust Bank

Complexity(=Shadow Banking) has been responsible for Financial markets Panics and Banking Crisis!

14



Financial Markets are prone to panics and runs;



17



Banking crisis have become all-too-regular occurrences in market economies.

Outline

- 1 How Big Is The Shadow Banking System?
- 2 The Economics Of Channeling & Intermediation
- 3 The Collateralized Debt Obligations - CDOs
- 4 The Rating Agencies' Pitfalls
- 5 The Regulator & Regulations: Blessing or Curse?
- 6 Closing Remarks

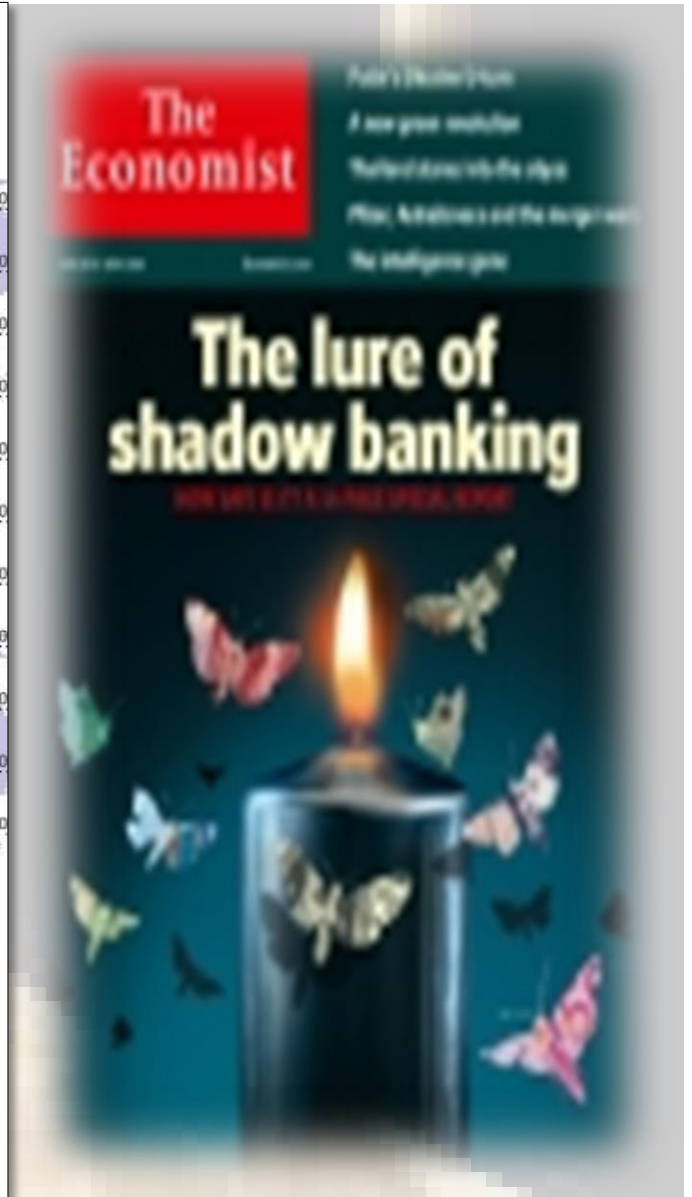
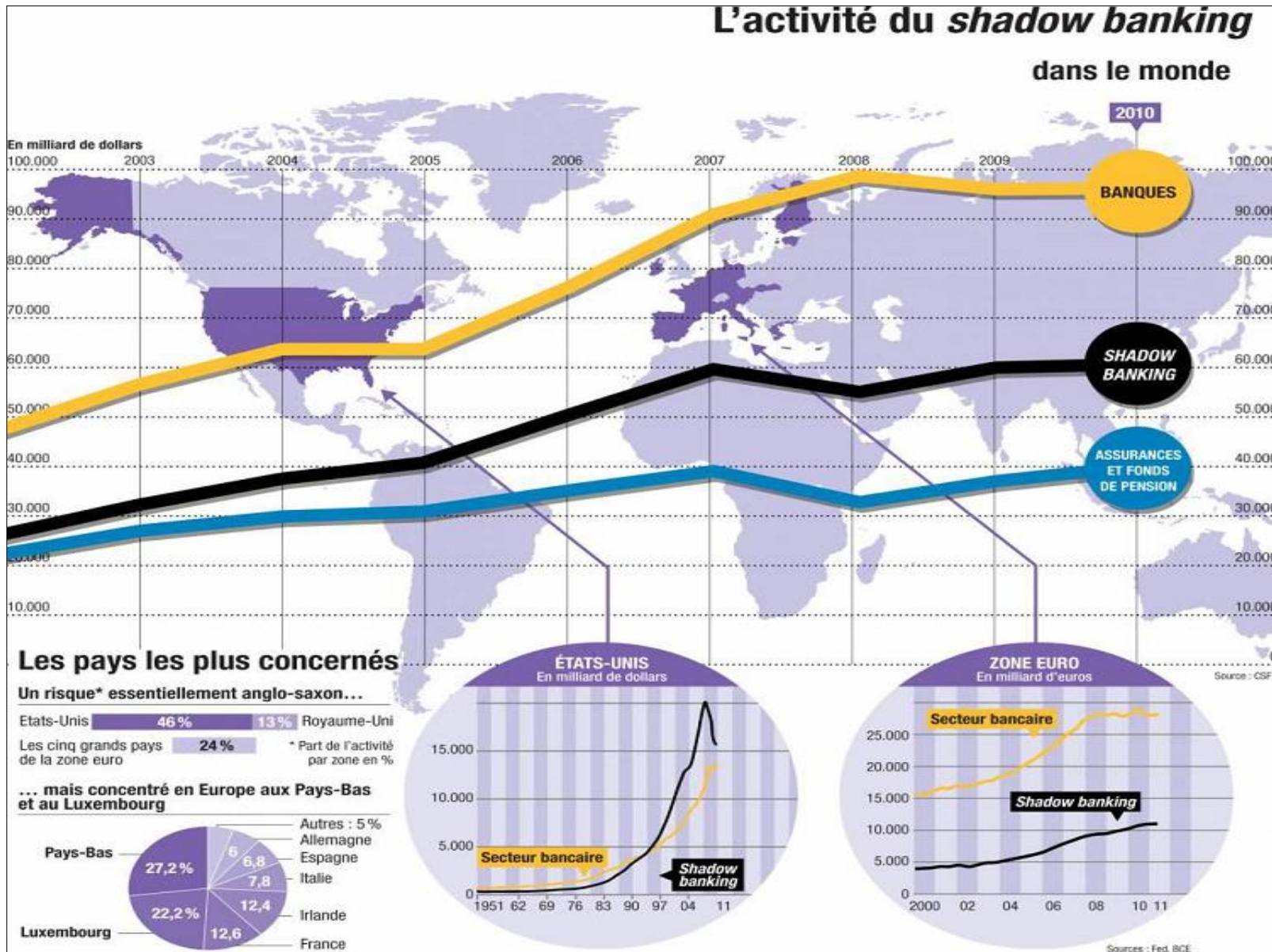


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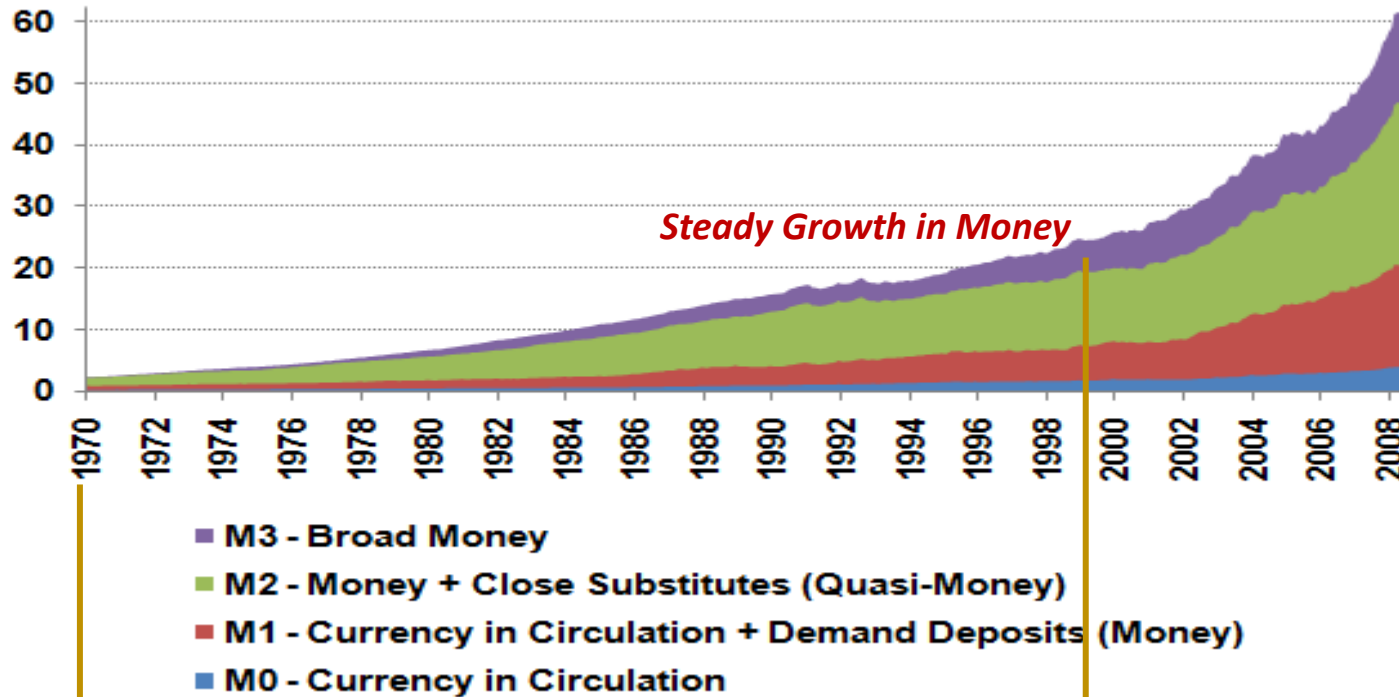
How Big is the Shadow Banking System?



The Interconnectivity and Complexity which Characterizes Shadow Banking Makes It Near Impossible to effectively size the problem. ... but here is what's available.



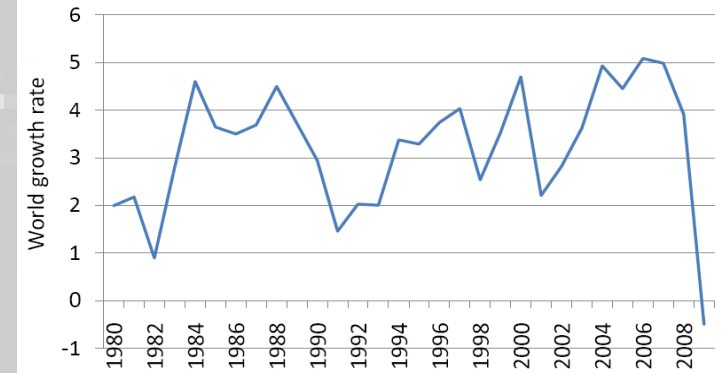
Global Money Supply from Jan 1970 - Oct 2008 Measured in US\$ Trillions



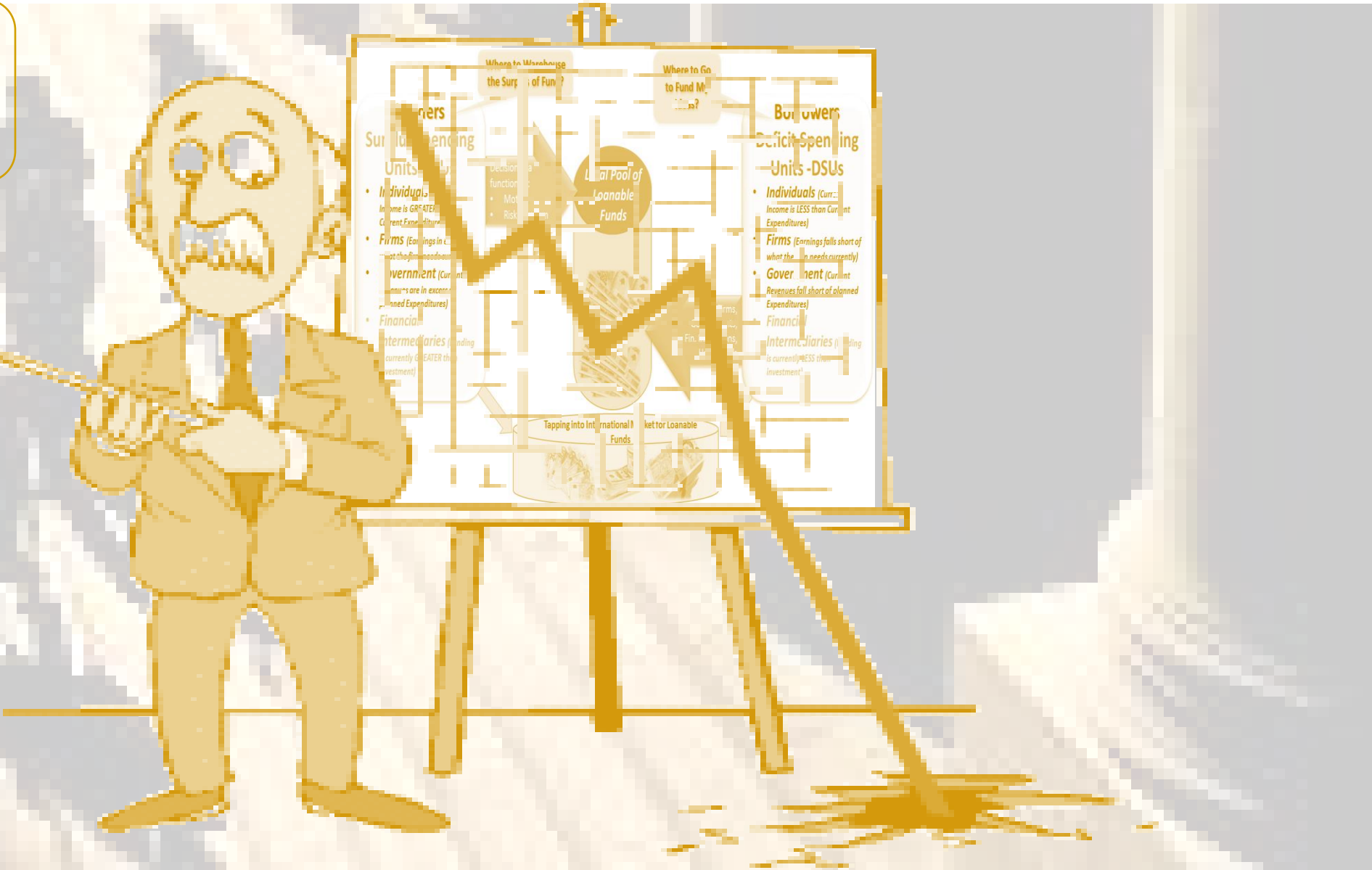
World Reserve Currency is no longer pegged to Gold

- Unregulated, Offshore, Off-Balance Sheet, OTC Securitization and Swaps Explodes.
- Shadow Banking fully emerges with protracted, historically low interest rates.
- Interest Rate and Currency Swaps grow by Trillions monthly.

Volatile Changes in Industrial Production!



The Economics of Channeling & Intermediation



Channeling ...

Where to Warehouse the Surplus of Fund?

Where to Go to Fund My Ideas?

Lenders

Surplus Spending Units -SSUs

- **Individuals** (Current Income is **GREATER** than Current Expenditures)
- **Firms** (Earnings in excess of what the firm needs currently)
- **Government** (Current Revenues are in excess of planned Expenditures)
- **Financial Intermediaries** (Funding is currently **GREATER** than investment)

Decision is a function of:

- Motive
- Risk Aversion

Local Pool of Loanable Funds



Borrowers

Deficit Spending Units -DSUs

- **Individuals** (Current Income is **LESS** than Current Expenditures)
- **Firms** (Earnings falls short of what the firm needs currently)
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Firms, Governments, Fin. Institutions, Households

Tapping into International Market for Loanable Funds




The Economics ...

The Channeling of Funds Feeds and Fuels:

- ✓ Household Consumption
- ✓ Gross Private Domestic Investments
- ✓ Government Expenditures
- ✓ Exports and Imports.

it Benefits the REAL ECONOMY (Real GDP).

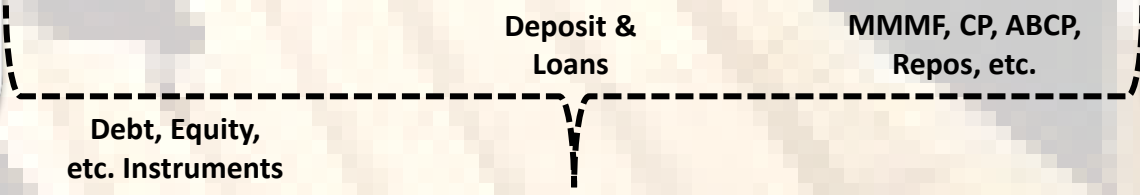


Lenders Surplus Spending Units -SSUs

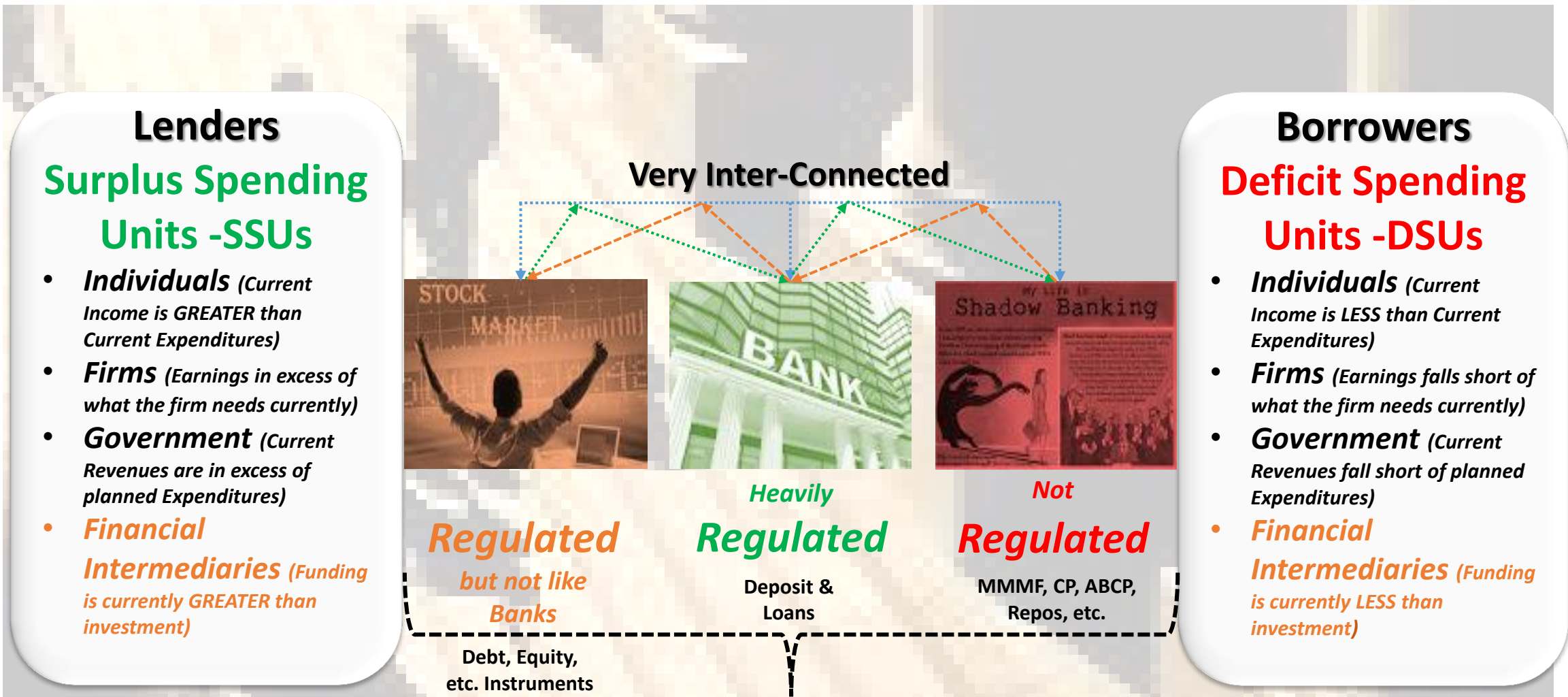
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Regulated or Not ...



Regulation in this context indicate to: Presence of Lender of Last Resort; Legal Reserve; Deposit Insurance; Capital Adequacy; etc.

Intermediation or Not?

Lenders

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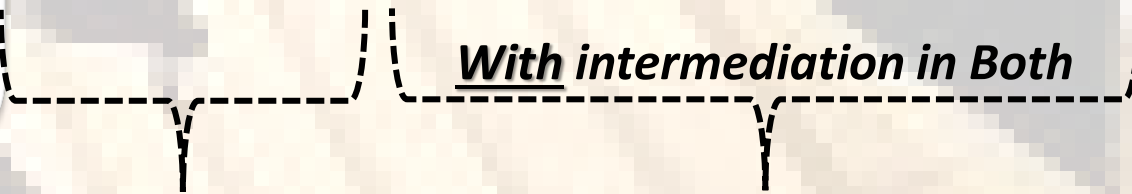


Shadow Banking
Replicates
"Intermediation" in
the Banking Model
But . . .

Borrowers

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Without
Intermediation

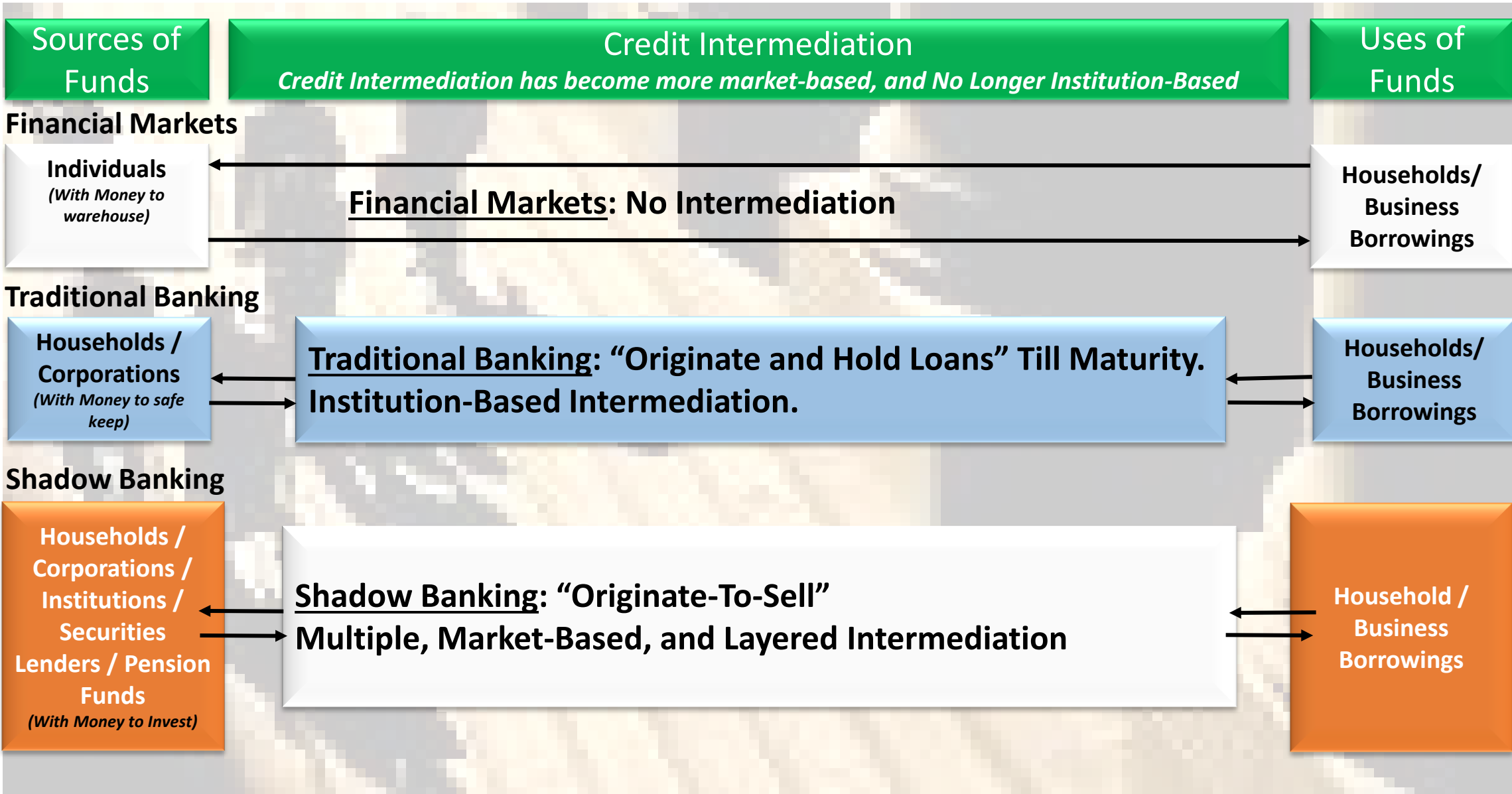
With intermediation in Both

Three Critical Intermediations Activities Are Undertaken.

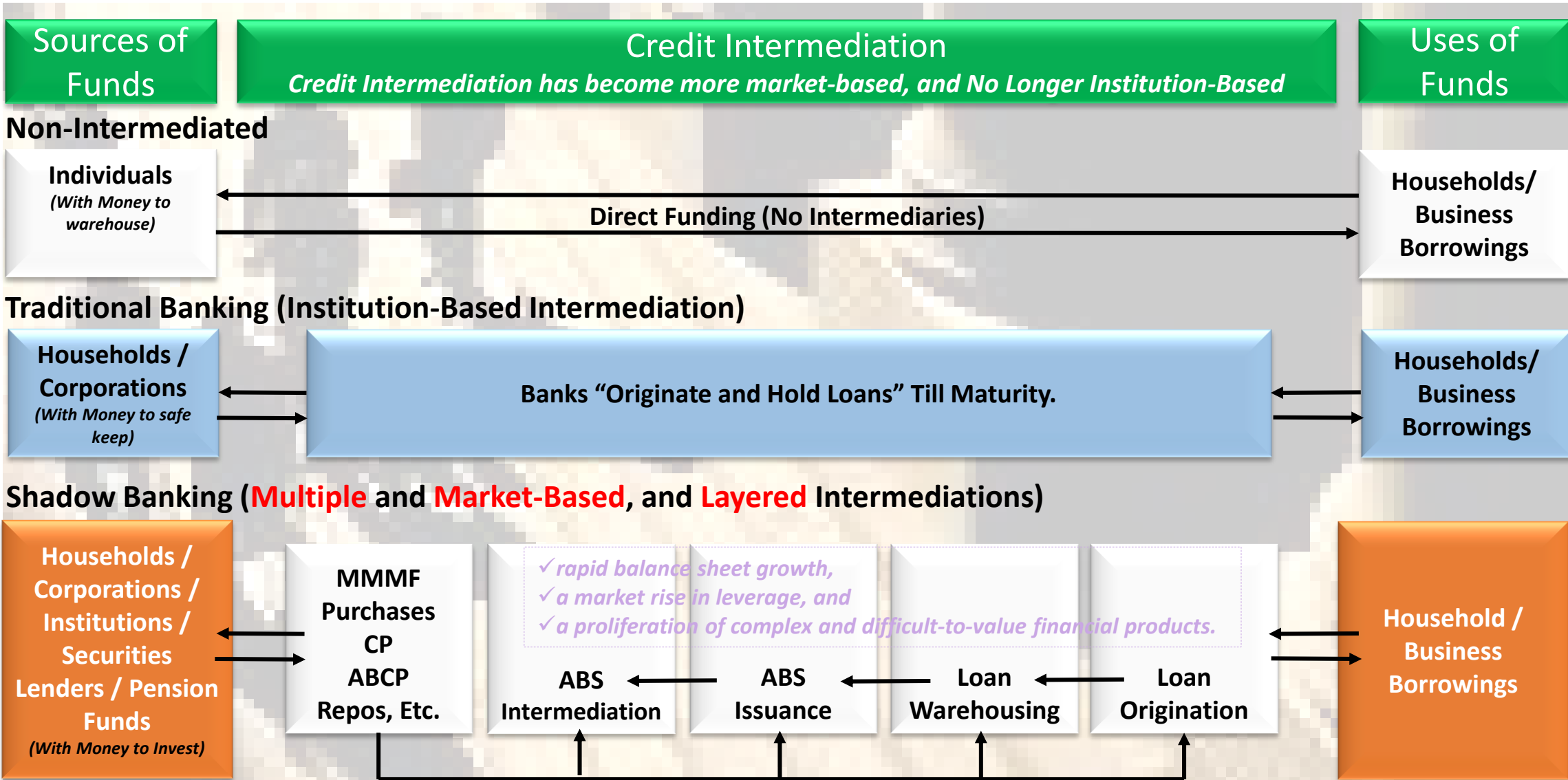
- Maturity Transformation.** The use of short-term sources of funds (e.g., Deposits) to fund long-term loans. Traditional deposits are a bank's liabilities, collected in the form of savings and checking accounts (pooled or decomposed) and redistributed as loans to consumers and businesses (i.e., part of assets). . . . *The risk associated with this Maturity Transformation is totally assumed by the Bank.*
- Liquidity Transformation.** A Bank's assets are less liquid than its liabilities – The liabilities (i.e., Depositors' Money) that fund the long-term assets are available on demand at any time. However, Banks extends loans in the amount in excess of what is required under the Legal Reserve System – i.e., Creating Money. ... *In the case of massive withdrawals by depositors, the Bank runs the risk of insolvency.*
- Credit Transformation.** While any individual loan carries risk specific to that transaction, a bank diffuses its overall risk exposure by lending to a large number of borrowers. Despite this diversification, the riskiness of a Bank's assets usually exceeds that of its liabilities. *Taking on this Credit Risk is typically how banks earn a return above the cost of their liabilities, a concept know as Net Interest Margin.*

In the Regulated Banking Landscape, "Deposit Insurance" mitigated Credit Risk of bank depositors, and the "Lender of Last Resort" addressed liquidity needs that can arise from bank loans that have longer maturity and less liquidity relative to liabilities.

Channels of Financial Intermediations



Channels of Financial Intermediations



Note: MMF is Money Market Mutual Fund, CP is Commercial Papers, ABCP is Asset-Backed CP, Repos is Repurchase Agreements, and ABS is Asset-Backed Securities.

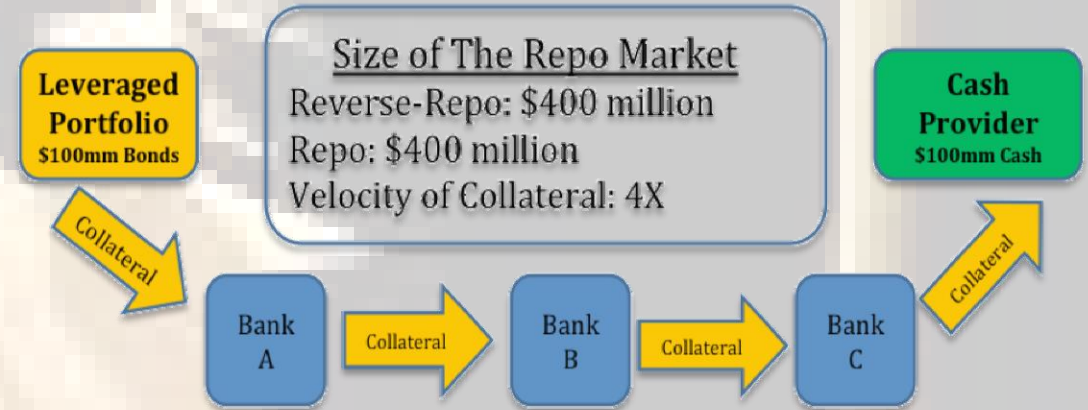


Just Like Money Creation... Collateral Intermediation Function.

The Potential For Excess Leverage through Securities Financing Transactions (SFT):

- The temporary transfer of securities by a lender to a borrower on a collateralized basis.....
- Then these securities can be used to raise more fund.....
- Then funds can, in turn, be used to buy more securities.....
- Where these securities can be used as a collateral to raise more funds ... The higher the value of the collateral gets, the more fund can be raised (i.e., **Pro Cyclicity**)
- Etc.....

The Stock of Collateral and its velocity (the intensity with which it is re-used) are both fundamental to understanding the financial plumbing in the Shadow Banking World.



The Velocity of Collateral

The better is the economic outlook, the more fund can be raised, the higher the velocity of collateral, ...

Intermediation is expanding into Un-Regulated Territories!

- The Shadow Banking System **De-Constructs** the familiar Credit Intermediation process of Deposit-Funded, Hold-To-Maturity lending by traditional banks into a more Complex, Wholesale-Funded, Securitization-Based Intermediation Chain.
- Shadow Banking functionally is similar to traditional banking maturity, liquidity, and credit transformation – BUT the financial flows occur in an Un-Regulated Landscape, and in Multiple steps rather than within one institution's balance sheet.

At each step in the process of “Shadow Intermediation,”

- The true quality of the underlying collateral is further obscured.
- As more links are added to the chain, more loans are included (i.e., layered intermediation).
- The end buyer holds a very “small slice” of a very large number of loans. In theory, this diversifies risk because any single loan going bad will have little effect on the total pool's value.
- However, this also complicates the evaluation of the quality of individual pieces, leaving investors to rely on aggregate data to assess the riskiness of assets.
- This Complexity leads to a decline in underwriting standards because the loan originator has little stake in the long-term performance of a loan that is quickly sold to be wholesaled, warehoused, and Repackaged in a Pool (e.g., Originate-To-Sell)

Deposits

Banks

Loans

Simple & Clear Traditional Banking

Lenders

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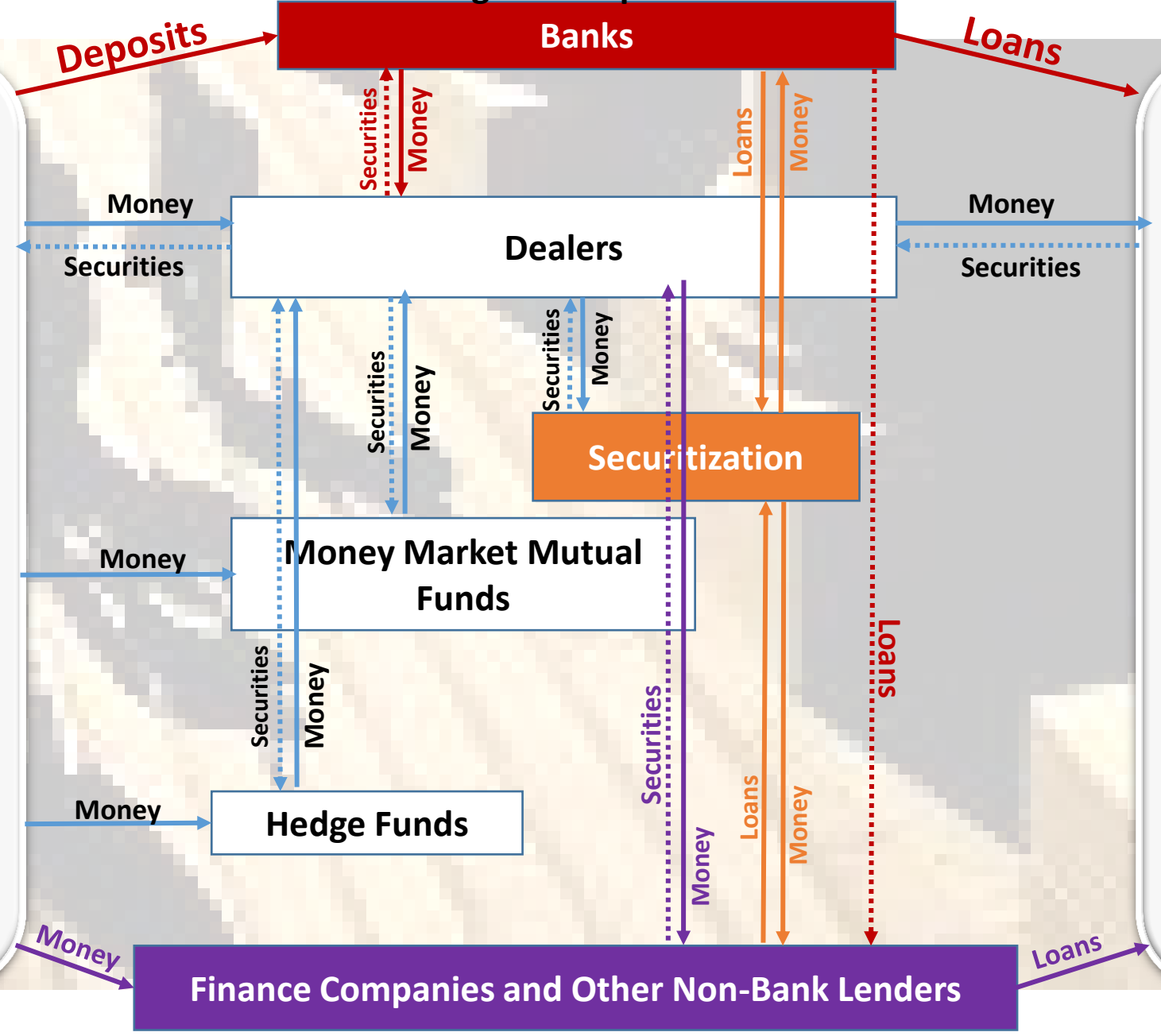
Shows the Flow of Funds from LENDERS to BORROWERS; not the reverse

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Shows the Flow of Funds from LENDERS to BORROWERS; not the reverse



Another Flavor of Complexity

Decompose & Redistribute: The Structure of a Simple Transaction has been Decomposed and the Risks has been Redistributed in a Complex, hard to assess manner.

A Long Term Corporate Bond could actually be sold to three separate 'Market Participants', of varying degrees of Risk Aversion, and using three distinct financial instruments:

- One would supply the money for the bond
- One would bear the interest rate risk
- One would bear the risk of default

These two would not have to put up any capital for the bond, though they might have to post some sort of collateral

By doing so, they're lowering the price of Corporate Credit

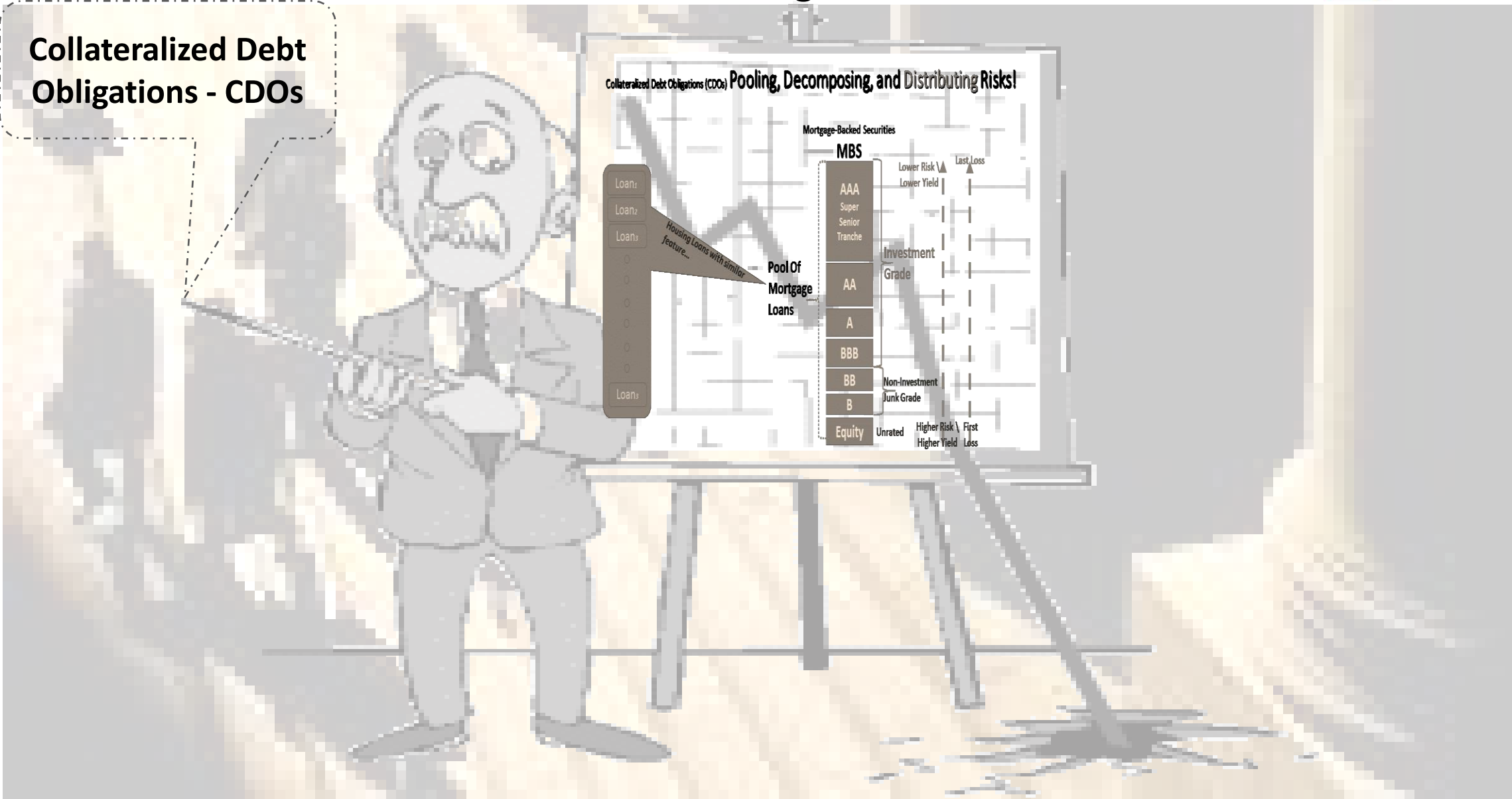
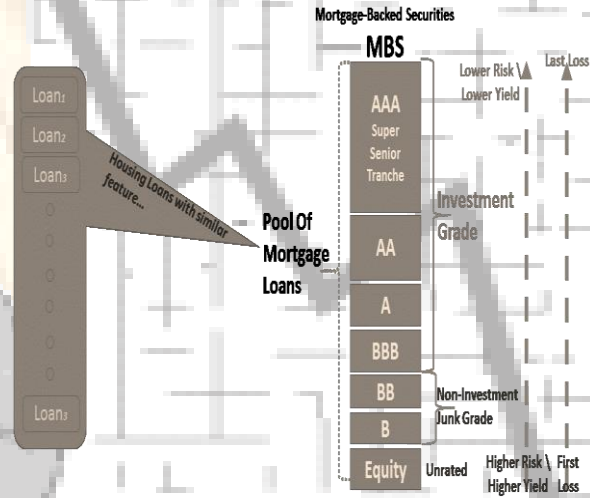
Credit Default Swaps which is sold separately

Interest Rate Swaps which is sold separately



Collateralized Debt Obligations - CDOs

Collateralized Debt Obligations (CDOs) Pooling, Decomposing, and Distributing Risks!



1. The Collateralized Debt Obligations - CDOs

- CDOs are a special type of derivatives. Like its name implies, a derivative are any kind of financial product that derives its value from another underlying asset (Housing Loan, Car Loan, Credit Card, ...)
- CDOs turn individual loans into a portfolio in which a default by any single borrower is unlikely to have an enormous impact on the portfolio as a whole.
- By aggregating many different mortgages together into a CDO, investors can own a small percentage of many different mortgages, and therefore the CDOs losses as a result of borrowers defaulting on their obligations usually represent the statistical averages in the market as a whole.
- Typically, a pool of debt is divided into three tranches, each of which is a separate CDO. Each Tranche will have different maturity, interest rates and default risk. This allows the CDO creator to sell to multiple investors with different degrees of risk preference.
- This time of growth in CDOs is the era of “Quant Jocks”: Statistical experts whose job is to write computer programs that would model the value of the bundle of loans that made up a CDO.

2. The Collateralized Debt Obligations - CDOs

Banks sold CDOs to investors for three distinct reasons:

- The funds banks received gave them more cash to make new loans.
- It moved the loan's risk of defaulting from the Bank to the Investor.
- CDOs gave banks new and more profitable product to sell, which boosted share prices and Managers' Bonuses.

More Liquidity to fund more loans

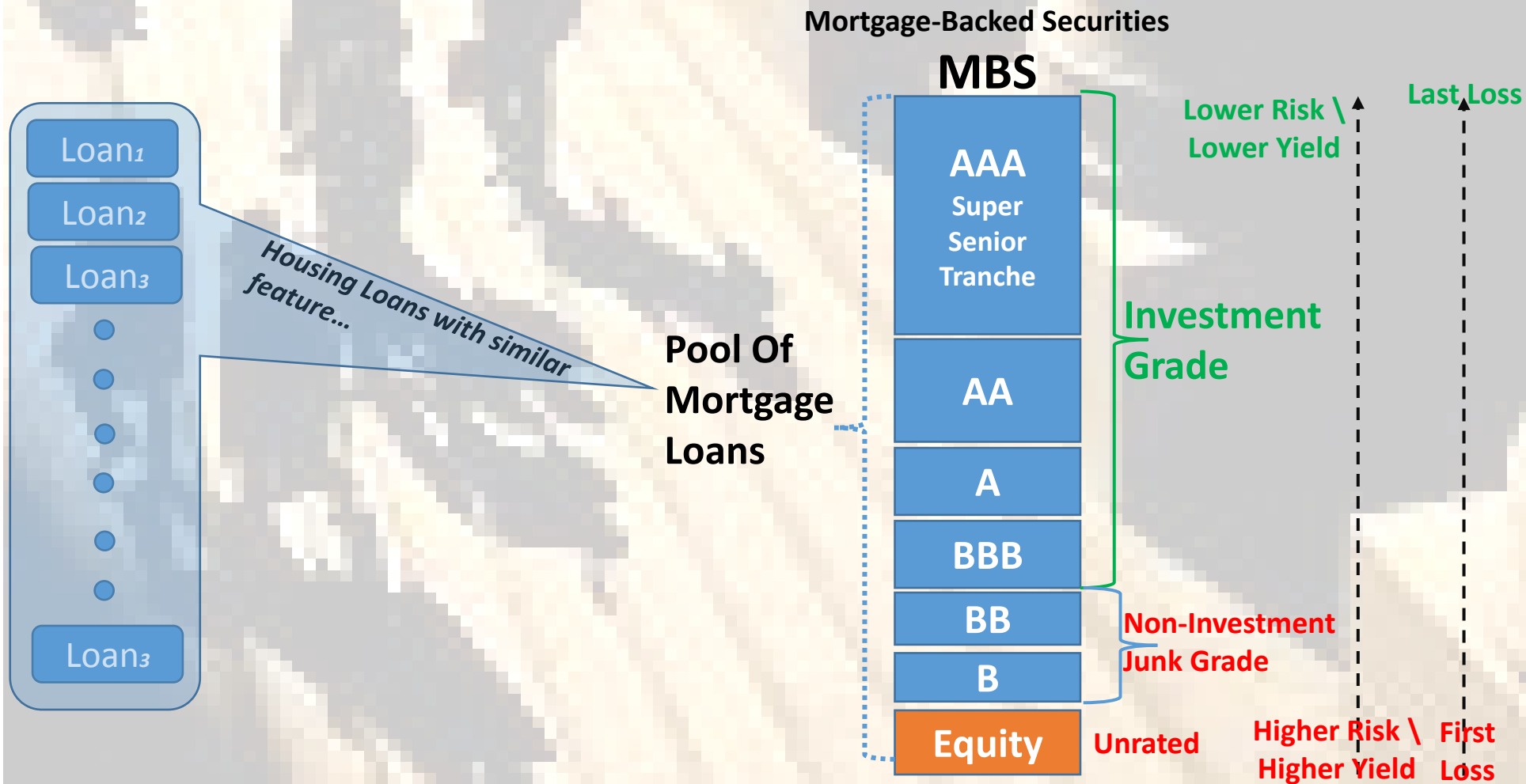
Freed Up Capital

Economic Booster

- **MAXIMIZE PROFIT** subject to:
RISK Constraints
REGULATORY Constraints

	<i>Uses of Funds</i>	<i>Sources of Funds</i>
+	• Reserves	• All Types of Deposits
-	• Loans	• Borrowings
	• Securities	• Other Sources
	• Other Investments	• Equity Capital
	• Fixed Assets	• ...
	• ...	• ...
+	... and Off-Balance Sheet ...	

Collateralized Debt Obligations (CDOs) Pooling, Decomposing, and **Distributing** Risks!



Re-Distribute Risk!

or CDOs

MBS	MBS	MBS	MBS
AAA Super Senior Tranche	AAA Super Senior Tranche	AAA Super Senior Tranche	AAA Super Senior Tranche
AA	AA	AA	AA
A	A	A	A
BBB	BBB	BBB	BBB
BB	BB	BB	BB
B	B	B	B
Unrated	Unrated	Unrated	Unrated

Debt
Collateralized Mortgage Obligations

CMO

AAA Super Senior Tranche
AA
A
BBB
BB
B
Unrated

Investment Grade

a significant portion of which garners an investment-grade rating.

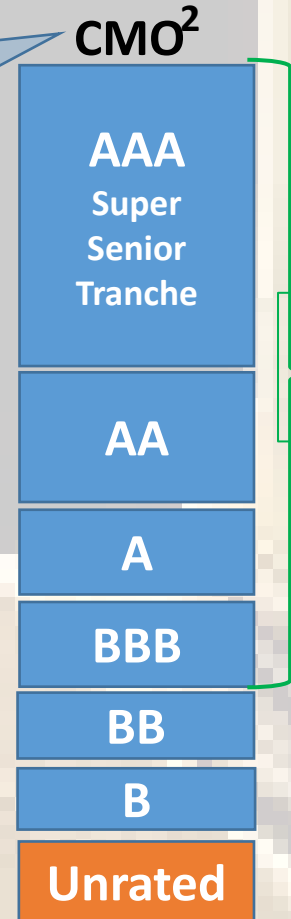
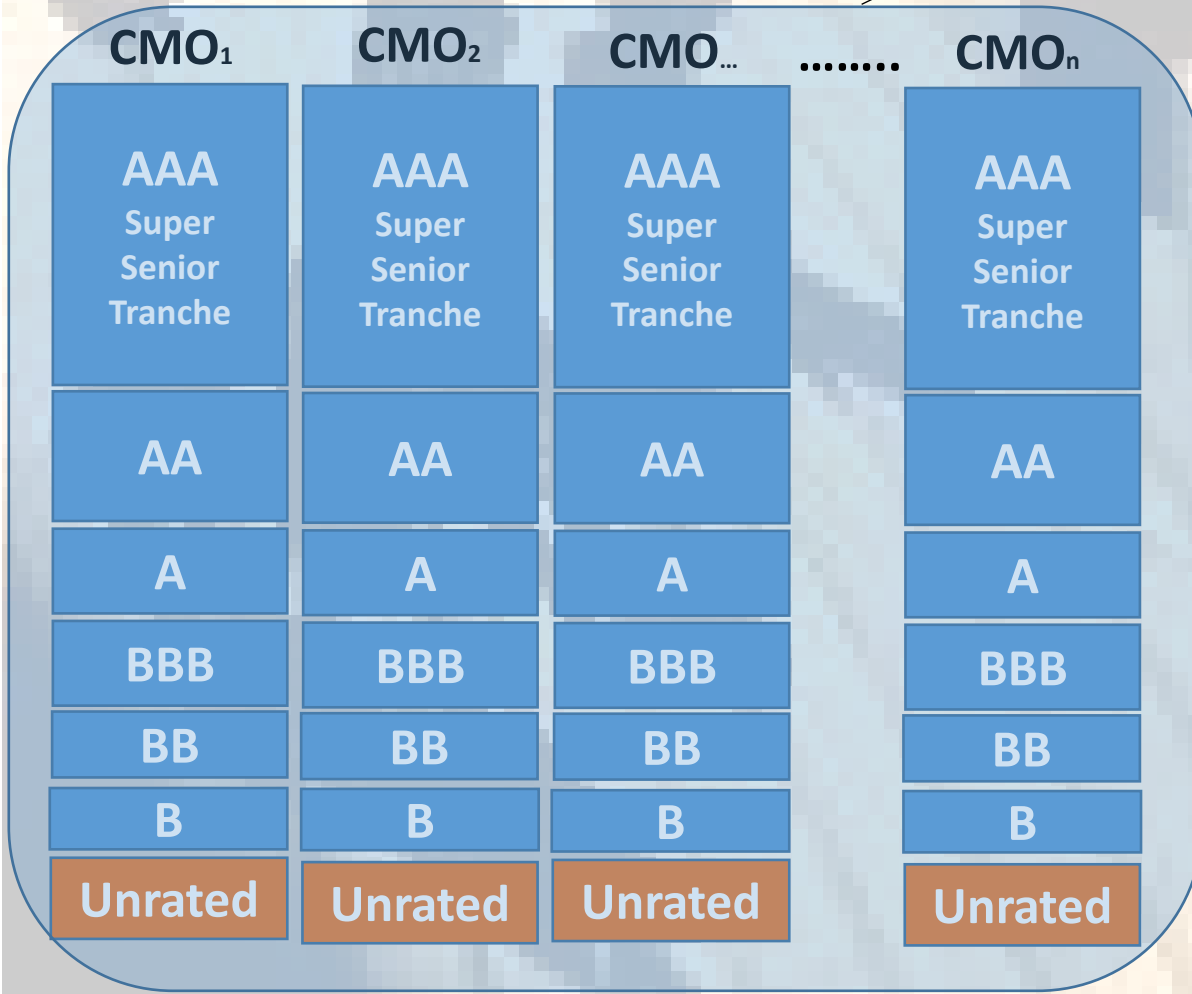
This depicts the process by which MBS pieces with lower credit quality (including some non-investment-grade tranches) are "Recycled" to create a CMO, ...

This process can be repeated to create more structured credit products.

Re-Re-Distribute Risk!

or CDOs

Yet another layer whereby the "True Risk" is being camouflaged ...



Investment Grade

This depicts the process by which CMO pieces with lower credit quality (including some non-investment-grade tranches) are "Recycled" to create a . . .

Significant portion of which garners an investment-grade rating.

This process can be repeated to create more structured credit products.

CDOs Camouflaged Risk

About the Underlying Asset.

- Housing prices became unrelated to their actual value.
- People bought homes simply to sell them.
- The easy availability of debt meant people charged too much for the asset.

About the Banks.

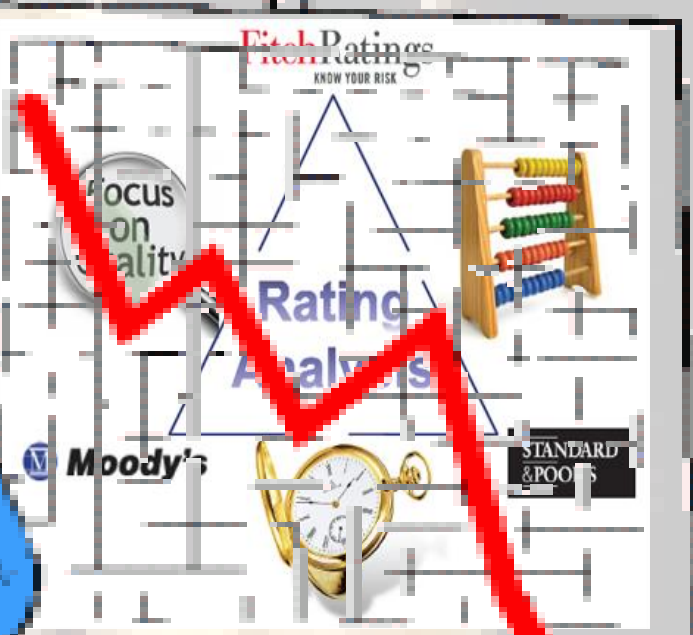
- CDOs allowed banks to avoid having to collect on them when they become due, since the loans are now owned by other investors.
- Less discipline in adhering to strict lending standards, so that many loans were made to borrowers who weren't credit worthy (ensuring disaster)

About the CDOs.

- CDOs became so complex that the buyers didn't really know the value of what they were buying.
- The sophisticated computer models based the CDOs value on the assumption that housing prices would continue to go up. When prices went down, the computers couldn't price the CDOs.
- The Opaqueness and the complexity of CDOs created a market panic: Overnight the market for CDOs disappeared!



The Rating Agencies' Pitfalls!




1. Induced Risk & Complexity ... but in the Shadow: Camouflaged By The Rating Agencies and Overlooked by The Regulators.

- Despite the good intentions, ratings agencies and regulators were significant contributors to the imbalances that culminated in financial crisis.
- The big three Rating Agencies' (S & P, Moody's, and Fitch) oligopoly prevailed –
 - ✓ Without their ratings, companies could not sell debt instruments.
 - ✓ An inherent conflict of interest arose; issuers paid the companies for ratings.
 - ✓ Many investors depended on those evaluations when purchasing debt in lieu of a more thorough due-diligence review.
 - ✓ Investors ran into further difficulties because the evaluations frequently lagged material market development.
- The Ratings Agencies were complicit in the growing complacency of investors leading up to the credit crisis.
 - ✓ Large structured-product deals involving complex securities were very profitable for ratings agencies.
 - ✓ Issuers had the ability to choose among potential raters, leading to “ratings shopping.”
 - ✓ The rating agencies shift from an Investor-Pay to an Issuer-Pay business model degraded the value of the evaluations provided because the agencies faced little risk from inaccurate ratings.



- Regulatory Arbitrage
- Reserve Requirements imposed a disadvantage on banks
- Compliance
- Technological Innovations
- Erosion of Banks' informational and transactions cost advantages
- Encouragement from the Regulator
- Financial Sector Productivity
- Appetite of Market Players for speculation
- Finance Know-How
- De-Banking became a plausible alternative.
- Etc



The Journey from
Traditional Banking to
Shadow Banking
was made possible By:



2. Induced Risk & Complexity ... but in the Shadow: Camouflaged By The Rating Agencies and Overlooked by The Regulators.

- **Because the Rating Agencies did not examine the underlying mortgages, they failed to see a shift in borrower behavior and mortgage terms.**
 - ✓ The emergence of speculative home purchases with 100% financing,
 - ✓ The emergence of low- and no-documentation loans

Meant that the environment was very different from the past, when homebuyers made significant down payments and lived in the houses they purchased.
- **The Rating Agencies' failings affected the Shadow Banking industry:**
 - ✓ Because many of these securitized products were rated AAA, assuming risk mitigation through diversification, they were perceived as the safest of the safe.
 - ✓ These investment-grade products garnered significantly more demand than would have otherwise been the case.
 - ✓ This sent broker-dealers into overdrive, producing more of these securities and fueling a flood of credit.
 - ✓ Robust credit supply, in turn, led to declining underwriting standards to meet broker-dealer demand.
 - ✓ The AAA ratings also allowed Shadow Banks to “lever up” because Repos counterparties required smaller discounts for higher-quality, investment-grade collateral.
 - ✓ Lax Regulatory oversight compounded the issue as securitized instruments spread globally. Banks and Shadow Banks became increasingly intertwined.
 - ✓ Regulations incentivized purchases of highly rated ABS by requiring banks to retain a smaller amount of capital in support of these assets.



Regulators & Regulations: Is it a Blessing or a Curse!



The Basel Accord: An Evolution or a Revolution!

Response Quality:
Reactive

1986

proposed

Basel I

1988 effective

Credit Risk

Debt Crisis

Response Quality:
Reactive

1993

proposed

Basel I^{1/2}

1996 effective

Credit Risk
Market Risk

Financial
Crisis

Consultative Paper (CP1) in Nov 18, 1999, and CP3 in July 2003

1999

proposed

Basel II

2007 effective

Credit Risk
Market Risk
Operational Risk

Financial
Innovations

In response to Financial Crisis which dawned on us in 2007: Sub-Prime Real Estate Lending

2009

proposed

Basel III

Kick Off in 2011

Credit Risk
Market Risk
Operational Risk
Capital Quality
Capital Buffers
Liquidity: LCR, NSFR

Back To
Financial Crisis

In response to the growth of Shadow Banking and its implications on Financial Stability

2015

Anticipated

Basel IV

Kick Off in 20__

Credit Risk
Market Risk
Operational Risk
Shadow Banking
Additional Buffers
(Primary response: increase capital requirements)

To Prevent Yet
Another Financial
Crisis



Response Quality: Pro-Active

ON The Banking Model: Regulators Induced a Very Demanding Model

- **MAXIMIZE PROFIT** subject to:
RISK Constraints
REGULATORY Constraints

<i>Uses of Funds</i>	<i>Sources of Funds</i>
<ul style="list-style-type: none"> • Reserves • Loans • Securities • Other Investments • Fixed Assets • . . . 	<ul style="list-style-type: none"> • All Types of Deposits • Borrowings • Other Sources • Equity Capital • . . .
. . . and Off-Balance Sheet . . .	

RISK . . .

- Default
- Liquidity
- Maturity
- Other Types of Risks

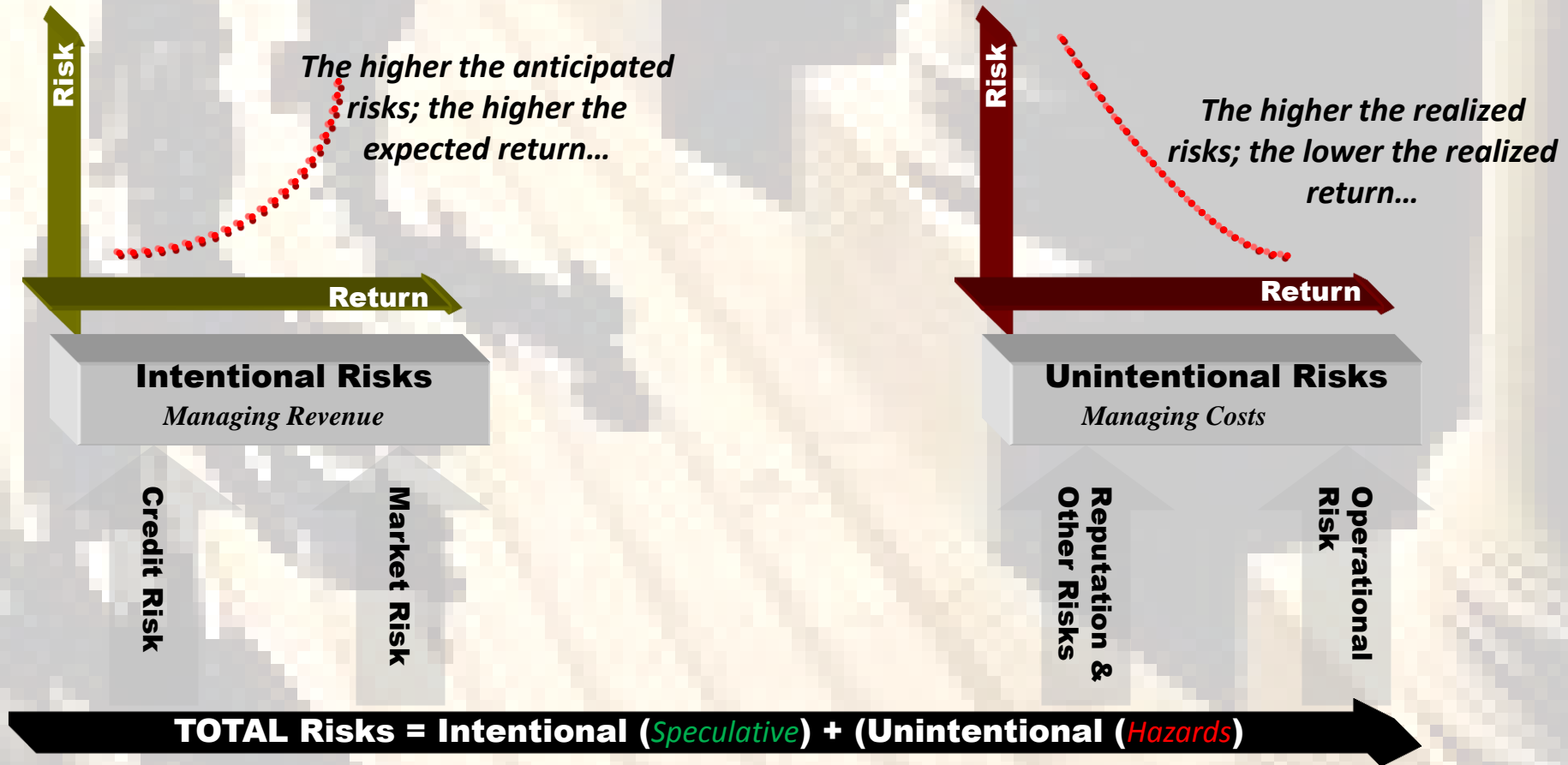
Management For both regulated and unregulated financial institutions

REGULATORY . . .

- Basel I
- Basel II
- Basel III
- Other Types of Regulations
- Sanctions Rules
- FATCA Requirements
- AML, Etc.

Compliance . . . only for regulated with an additional cost of Compliance

ON Risks: Multi-dimensional and much more ... !



The Risk reality in both regulated and unregulated Financial Institutions

ON Compliance: Shifted from a Regulatory Obligation to a Legal Obligation

Regulator Obligation:

Issues of non-compliance are handled inside closed doors at the Central Bank.

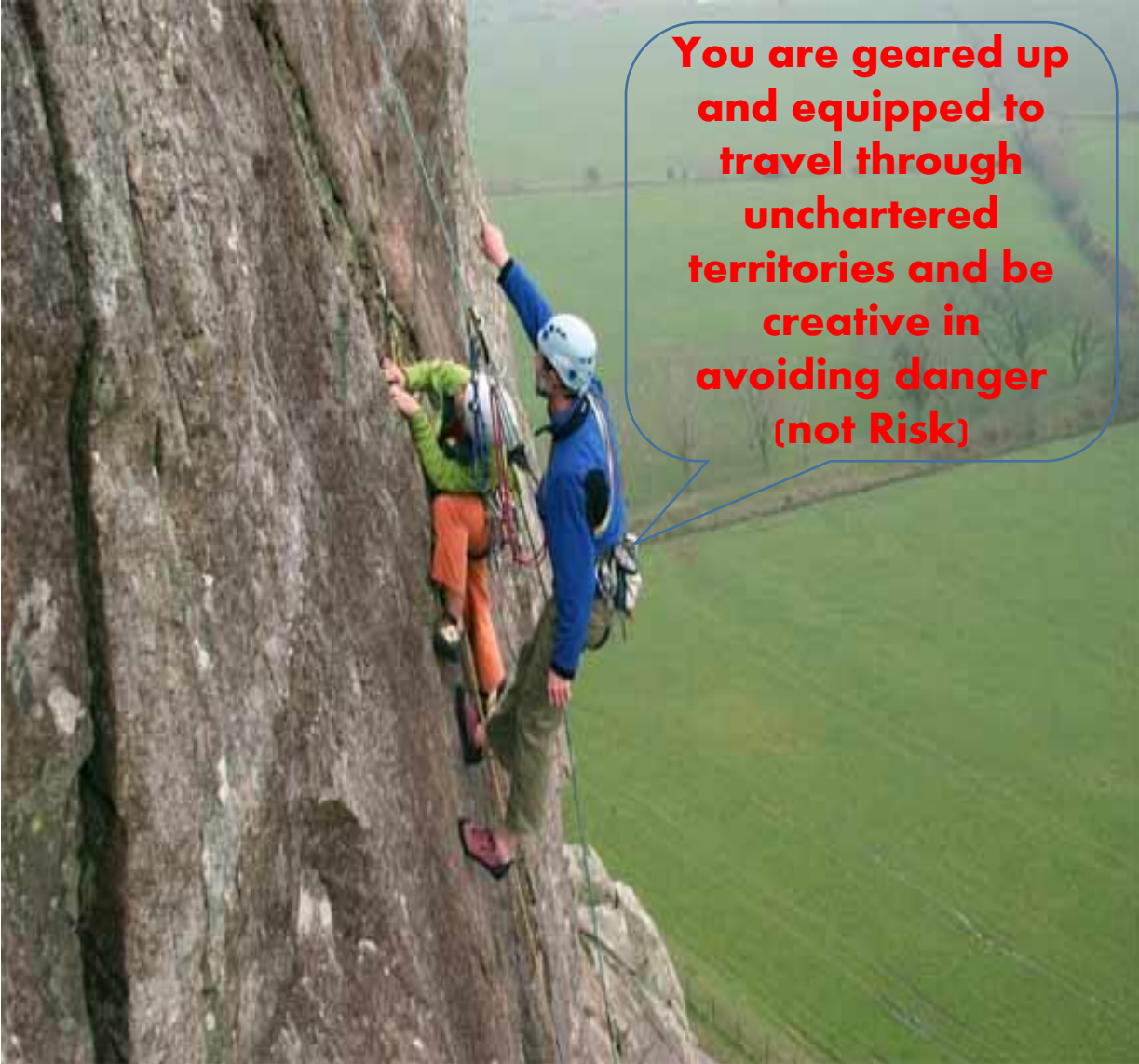
Legal Obligation:

- The Public at Large has the Right to Know! Where its impact on the Financial Institution's Reputation and Performance is often severe. Profitability suffers, and it triggers immediate additional expenses for Damage Control.

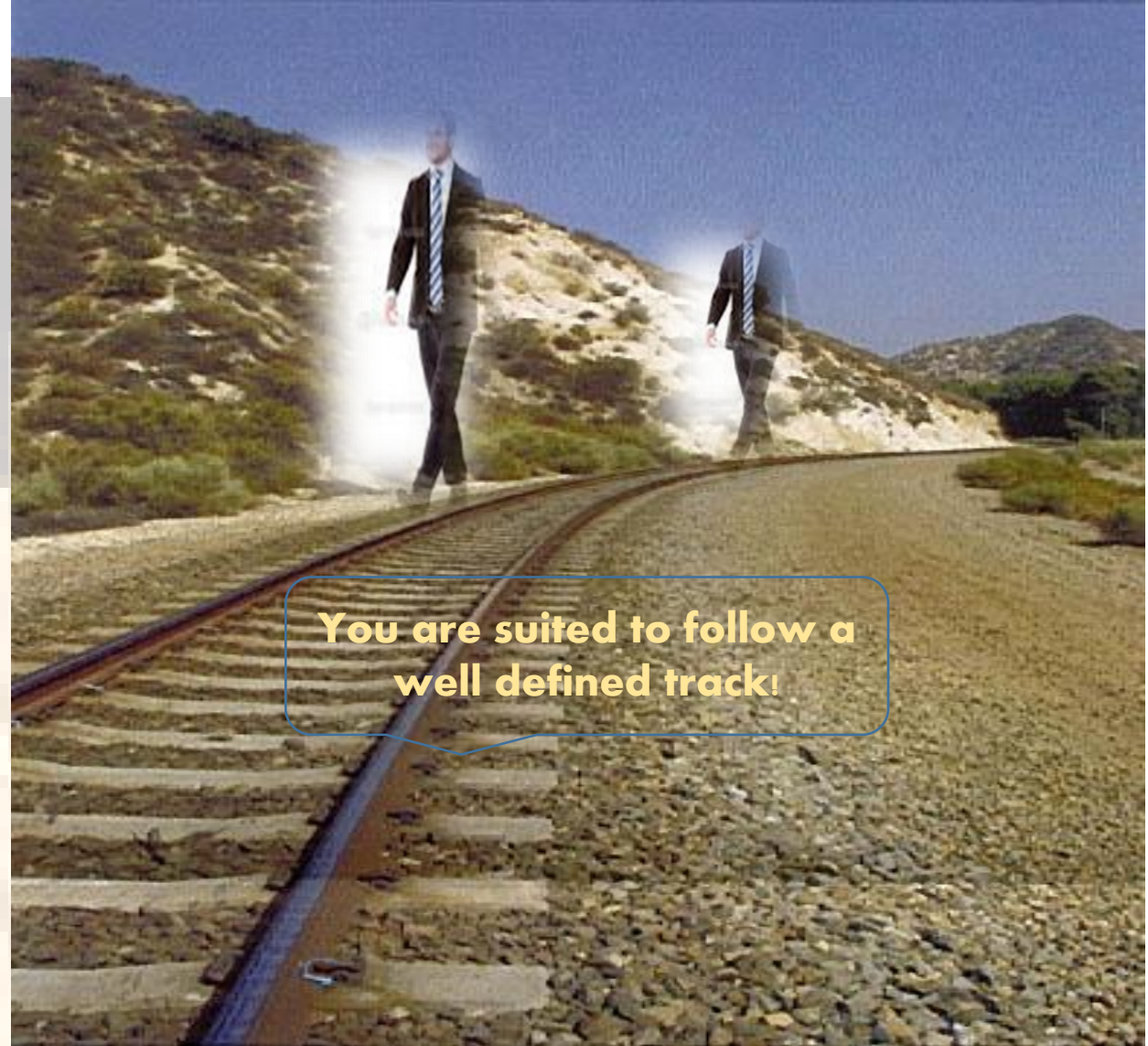


»»»» De-Risking

De-Risking would have the effect of driving the development of alternative financial markets and payment mechanism – i.e., Shadow Banking.



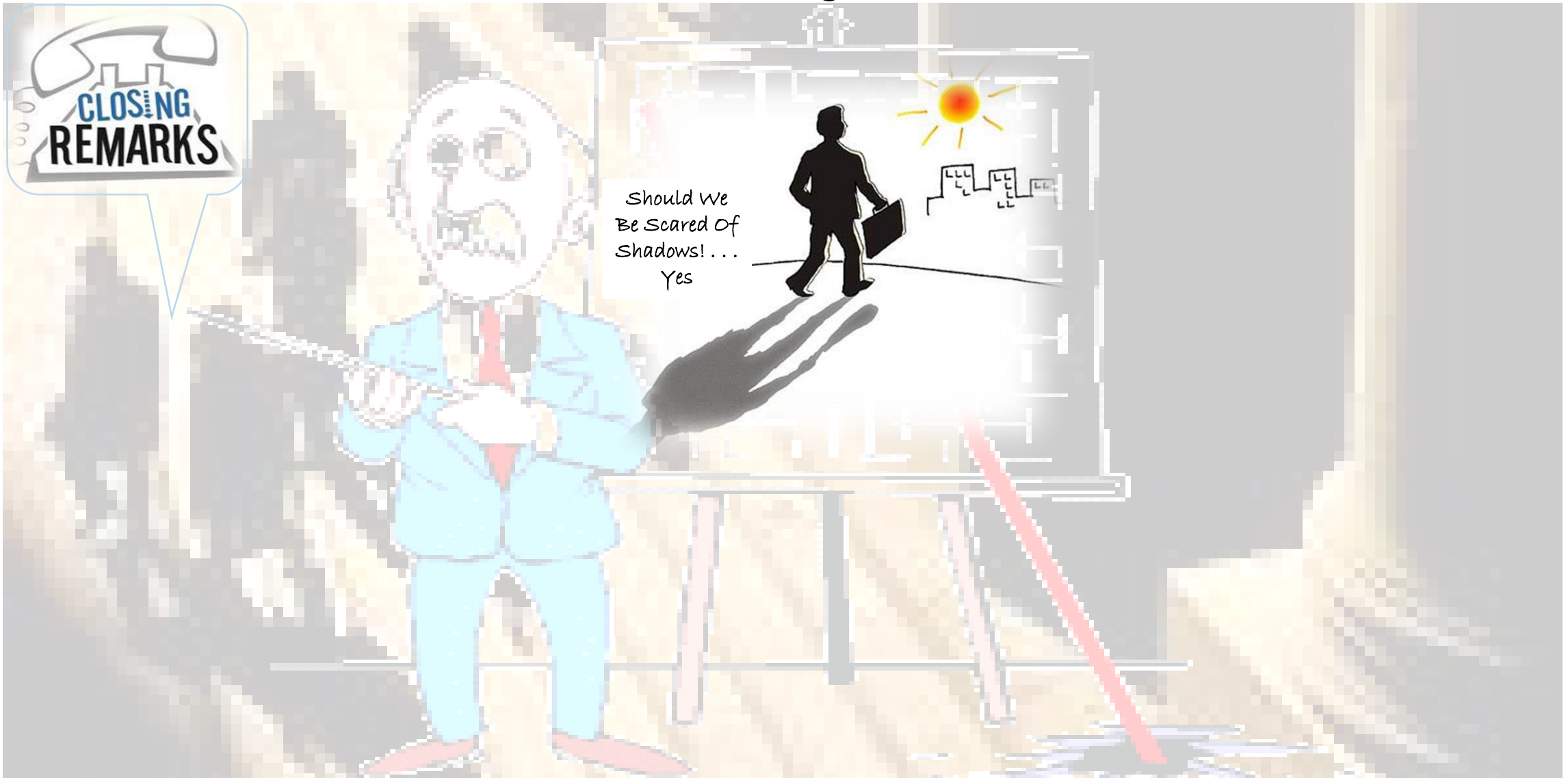
You are geared up and equipped to travel through uncharted territories and be creative in avoiding danger (not Risk)



You are suited to follow a well defined track!

Risk Risk Management is a Decision & a Choice.

Compliance is a Task ←



The Challenge for the Regulator is to be flexible and to allow innovation to occur, and to adopt standards and regulations to deal with threats and dangers but not at the expense of killing innovation.

1. The Potential Future of Shadow Banking

The Long-run equilibrium share of Shadow banking is

- **Negatively related to information costs, and**
- **Positively related to**
 - ✓ *the absolute burden of bank reserve requirements*
 - ✓ *the relative burden of capital requirements on commercial versus shadow bank credit.*
 - ✓ *The steps taken towards de-regulations*
 - ✓ *The extent of Financial Innovations*

Recent Financial crisis proved that Shadow Banking is Procyclical and vulnerable to Liquidity shocks.

2. The Potential Future of Shadow Banking

- Shadow Banking is likely to remain suppressed due to current regulatory climate (e.g., DFA); however, future financial innovations might create “New Shadows”.
- Regulatory arbitrage may occur on a Country-to-Country basis.
- Traditional Banks may consider funding alternatives as new regulations place constraints on Shadow Banking.
- Under New Regulatory Regimes, Banks will likely need to consider how exposed their counterparties are to the Shadow Banking System.
- More attention must be put in understanding of the linkages between the Shadow Banking and Traditional Banking Systems.
- The Complexity of financial innovations must push us to pay close more attention to financial activities regardless of institution... Focus on Bank Deposit Substitutes (Alternatives to traditional funding).

3. The Potential Future of Shadow Banking

- **Regulatory Arbitrage can never be eliminated fully because of the Diversity of Regulators & Regulations, and the Creativity & Resourcefulness of Banks.**
- **The increasing Complexity of the Financial Landscape makes it impossible to effectively regulate the Shadow Banking System.**
- **If Banks can bypass Capital Regulation in an opaque shadow banking sector, it may be optimal to relax capital requirements so that liquidity dries up in the shadow banking system.**
- **Tightened capital requirements may spur a surge in shadow banking activity that leads to an overall larger risk on the Money-Like Liabilities of the formal and shadow banking institutions.**
- **If the liquidity in the Shadow Banking System is needed for stability in the overall financial system, an institutionalized guarantees for buyers of securitized assets to sit alongside guarantees for retail depositors – An FDIC type regime for the Securitization Market.**





謝謝

Thank You