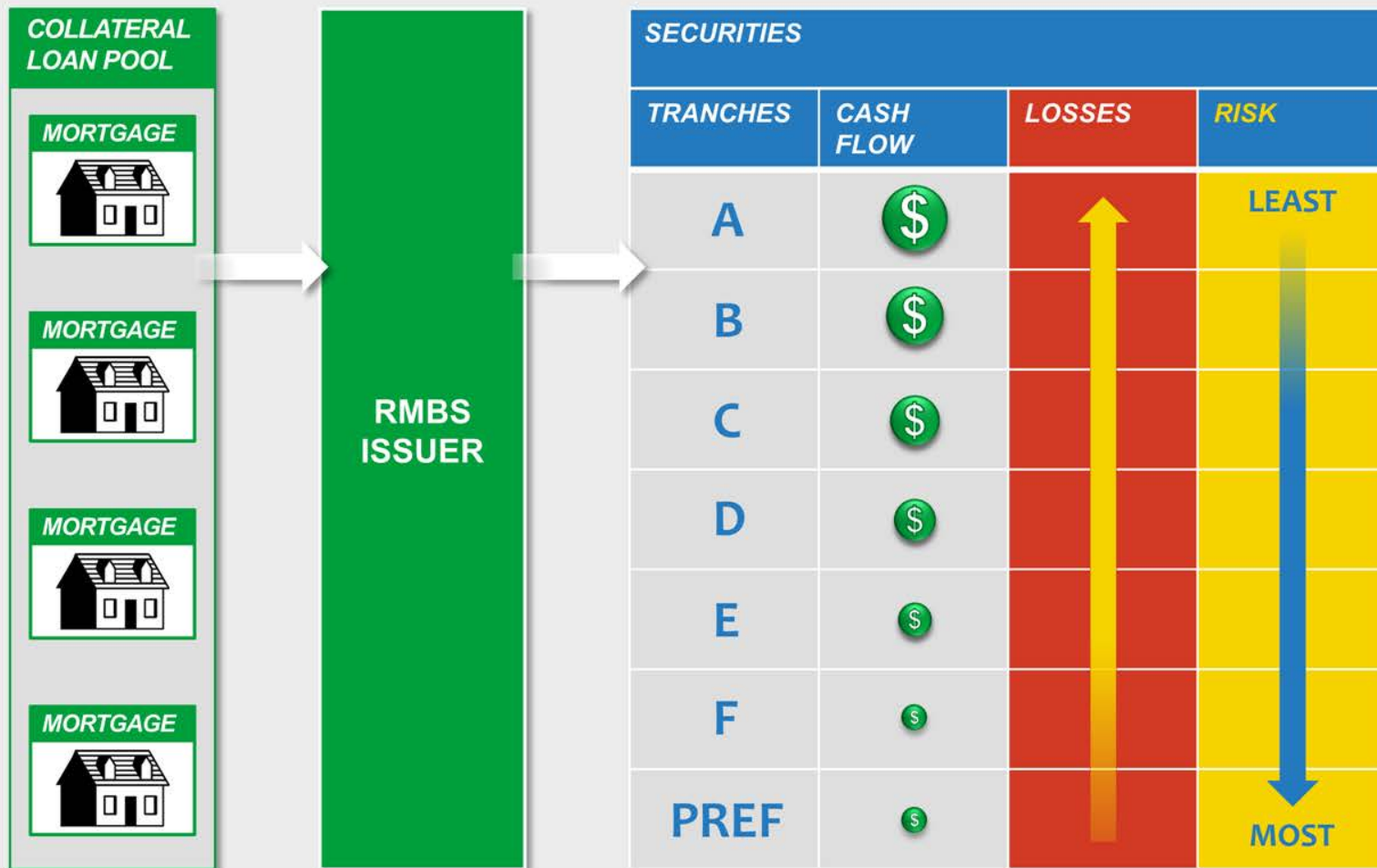
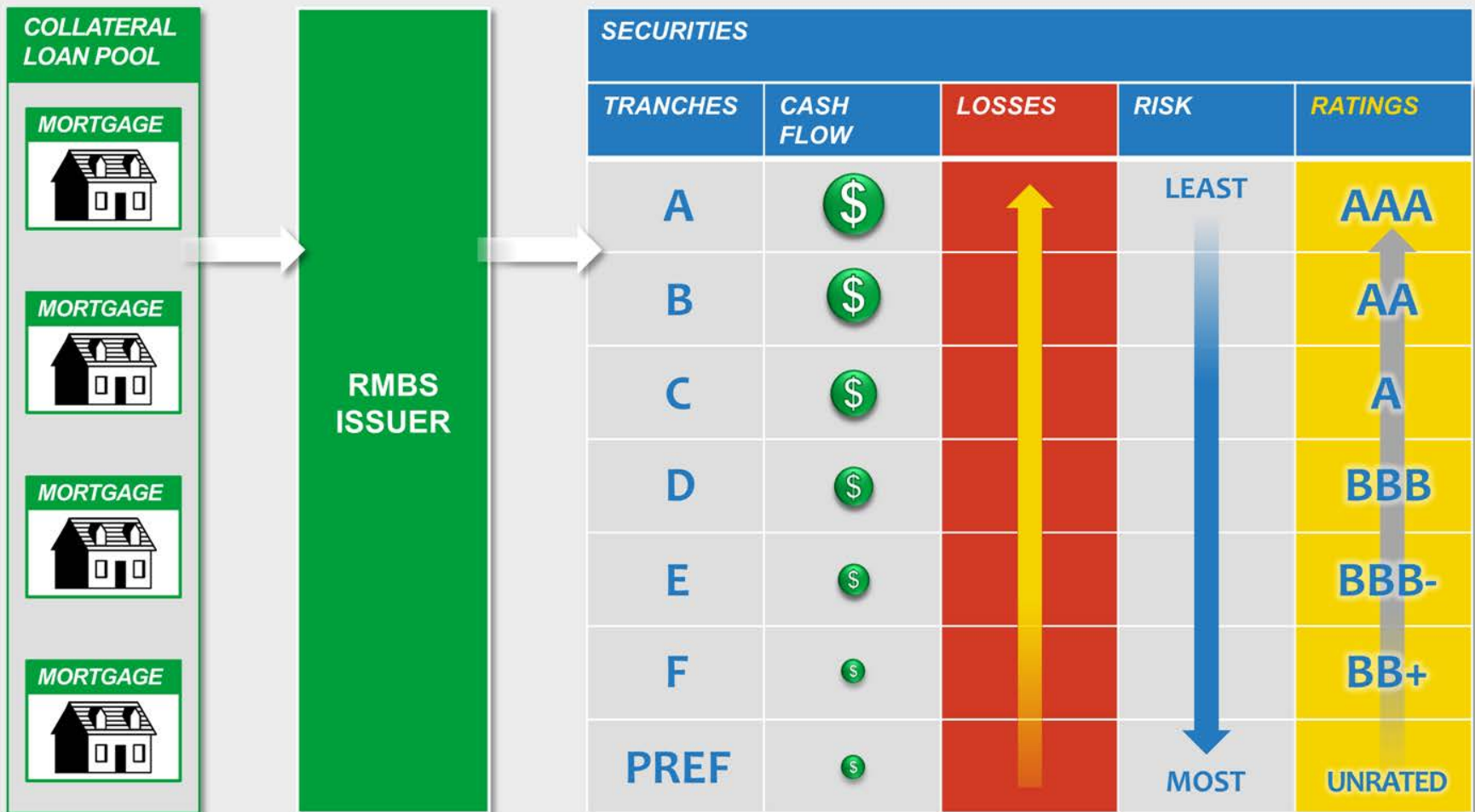


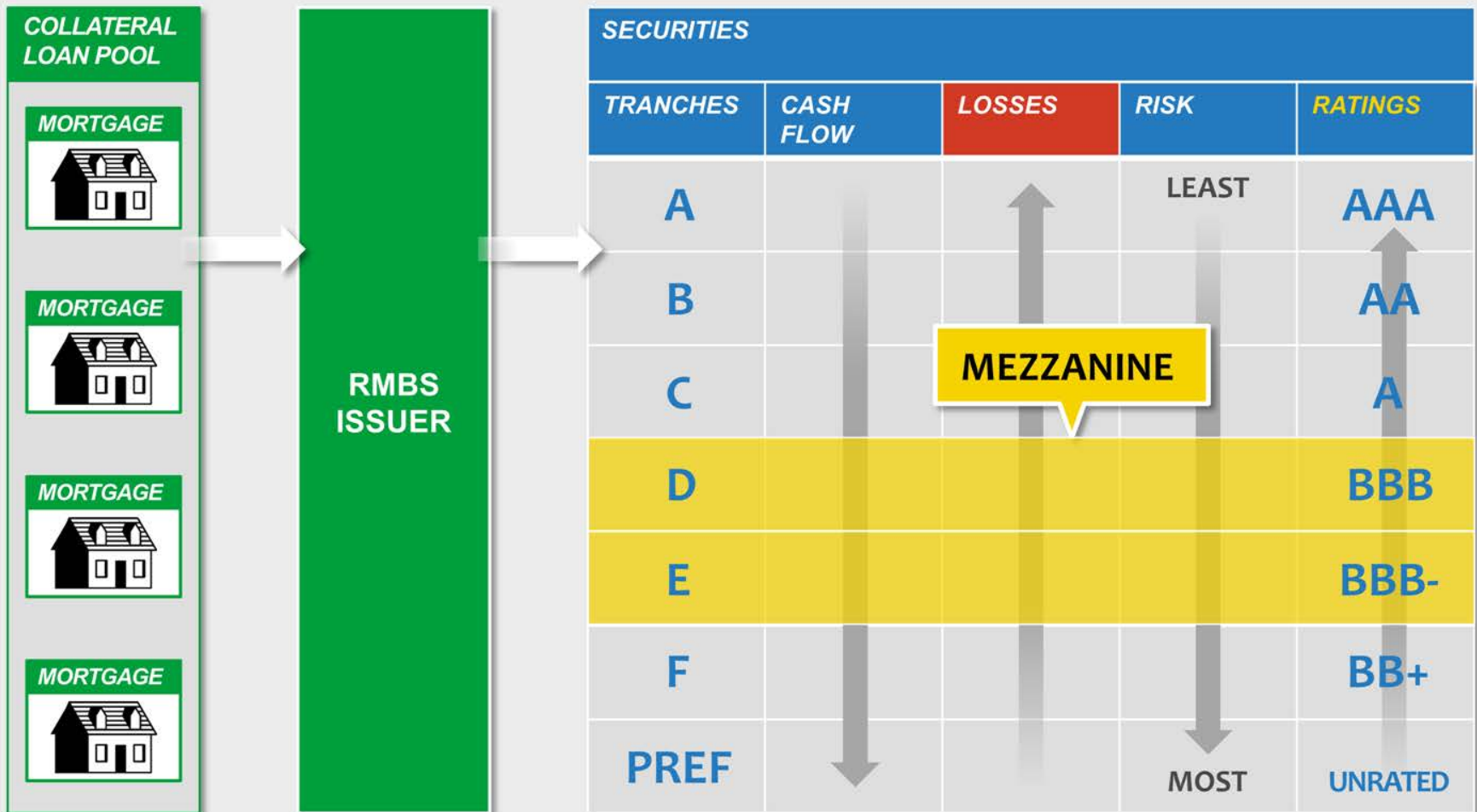
## Structure of an RMBS (Residential Mortgage Backed Security)



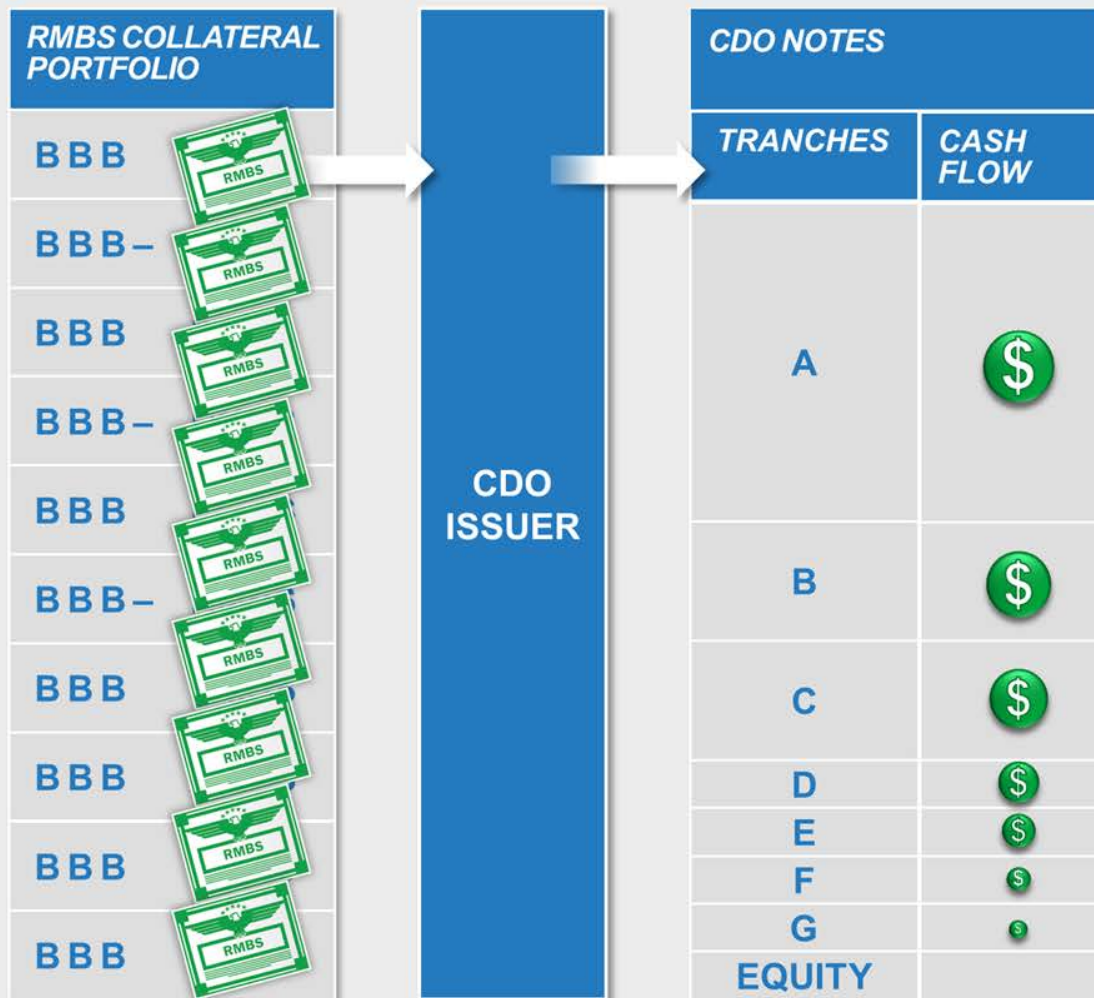
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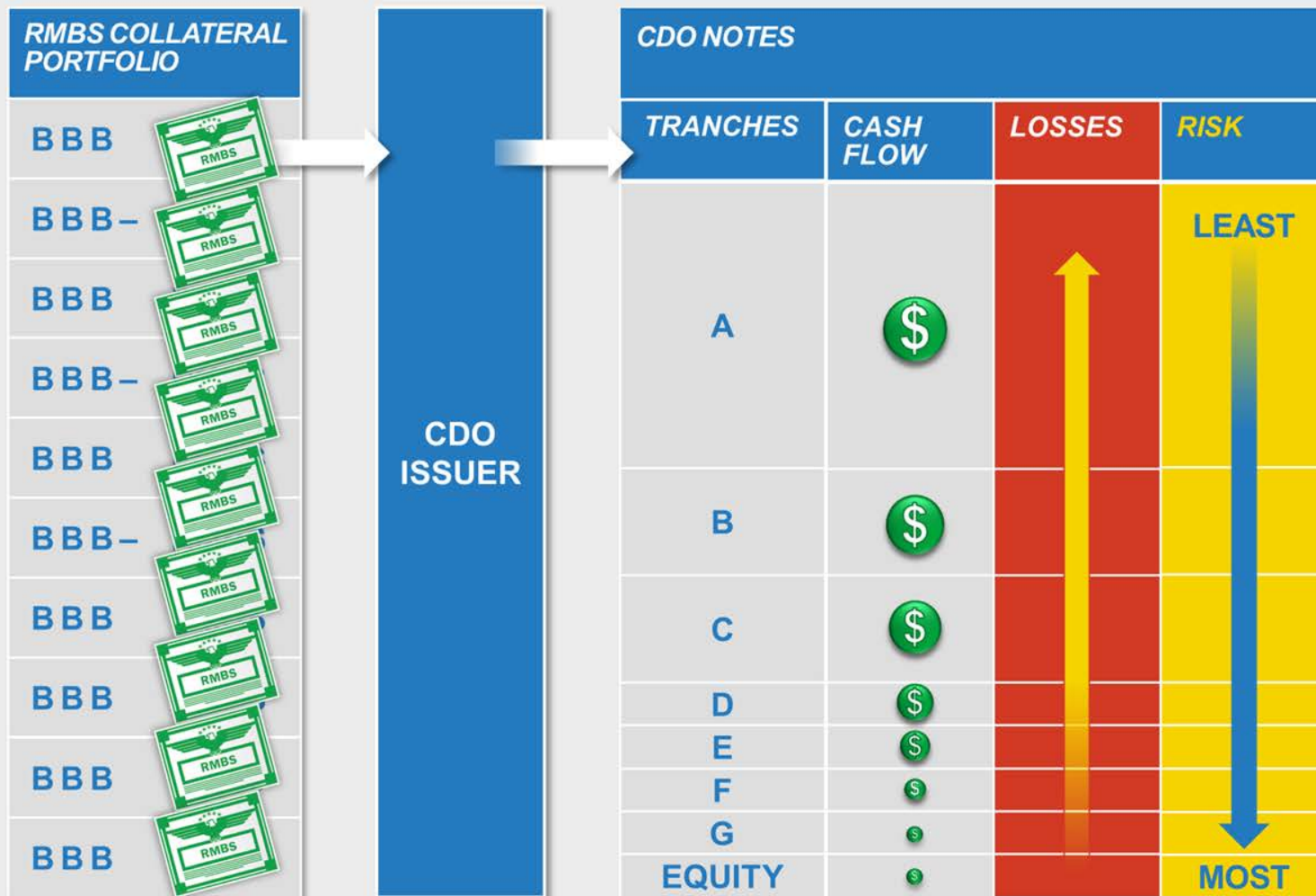
# Structure of an RMBS (Residential Mortgage Backed Security)



## Structure of a Mezzanine CDO

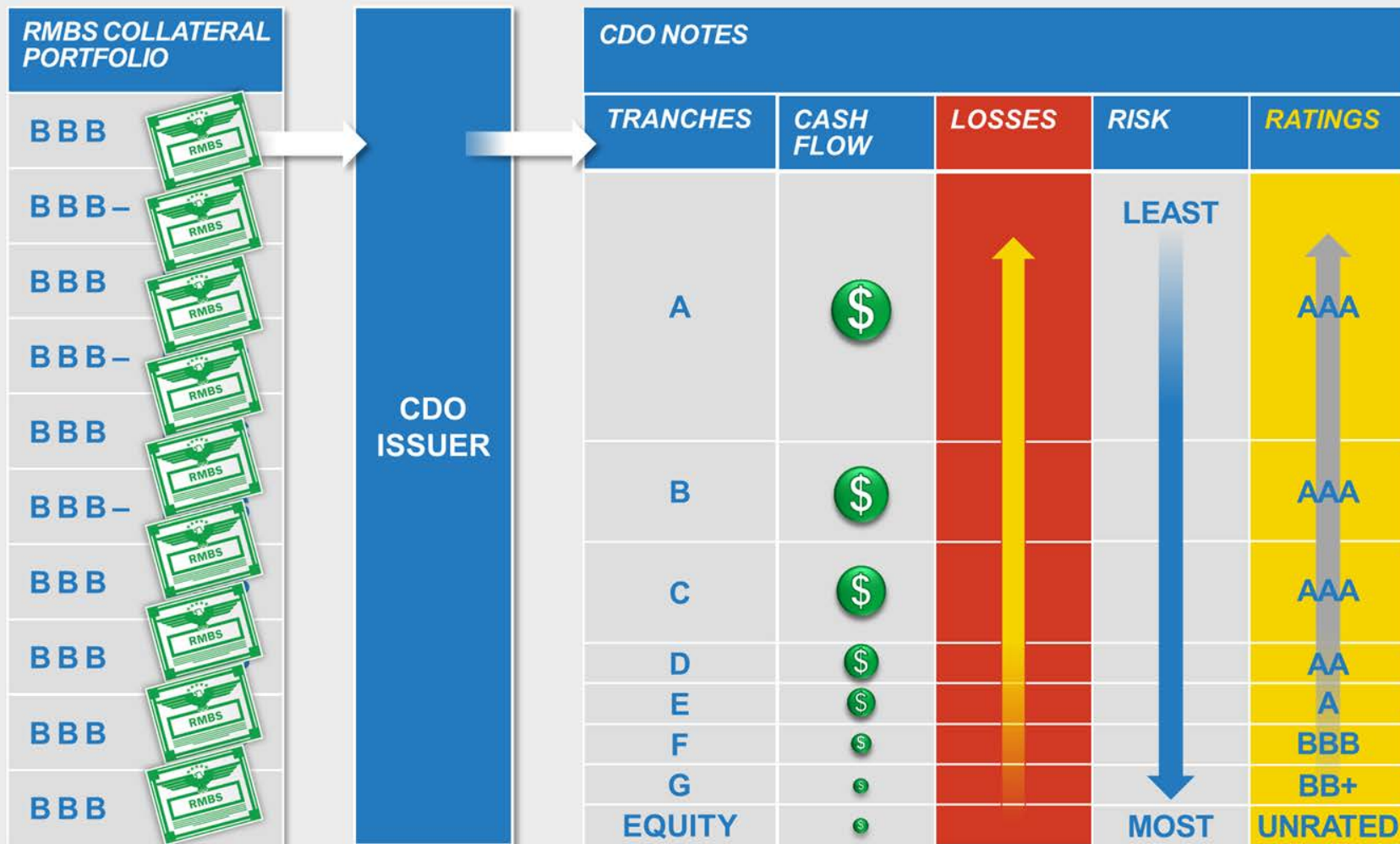


# Structure of a Mezzanine CDO





# Structure of a Mezzanine CDO



# How a Typical Managed Cash CDO Is Built

## Structuring Bank (and Collateral Manager in a managed CDO)

determine the criteria  
for CDO collateral.

### "THE STREET"

Bank of  
America



Merrill



Citigroup



JP Morgan



Morgan  
Stanley



### STRUCTURING BANK



WAREHOUSE

### CDO

COLLATERAL PORTFOLIO

COLLATERAL  
MANAGER

# How a Typical Managed Cash CDO Is Built

In a **managed CDO**, **Collateral Manager** goes out to the market to find the best quality assets, at the best price, that meets the collateral eligibility criteria.

The collateral selected during the **“ramp-up” period** is held in a **“warehouse”** on the **Structuring Bank’s** balance sheet.

## “THE STREET”

Bank of America



Merrill



Citigroup



JP Morgan



Morgan Stanley



## STRUCTURING BANK



WAREHOUSE

## CDO

COLLATERAL PORTFOLIO

COLLATERAL  
MANAGER





## How a Typical Managed Cash CDO Is Built

Once all the collateral is acquired, **Structuring Bank** sells the contents of the warehouse to the CDO at closing.

The RMBS certificates become the CDO collateral.

### "THE STREET"

Bank of America



Merrill

Citigroup

JP Morgan



Morgan Stanley

### STRUCTURING BANK



WAREHOUSE

### CDO

#### COLLATERAL PORTFOLIO



COLLATERAL  
MANAGER

# How a Typical Unmanaged Cash CDO Is Built

In an **unmanaged CDO**, **Structuring Bank** goes out to the market to find the best quality assets, at the best price, that meets the collateral eligibility criteria.

The collateral selected during the **“ramp-up” period** is held in a **“warehouse”** on the **Structuring Bank’s** balance sheet.

## “THE STREET”

Bank of America



Merrill



Citigroup



JP Morgan



Morgan Stanley



## STRUCTURING BANK



WAREHOUSE

## CDO

COLLATERAL PORTFOLIO

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### "THE STREET"

Bank of America



Merrill

Citigroup

JP Morgan



Morgan Stanley

### STRUCTURING BANK



WAREHOUSE

### CDO

#### COLLATERAL PORTFOLIO



# How a Typical Unmanaged Synthetic CDO Is Built

The collateral portfolio supporting a **synthetic CDO** is comprised of **Credit Default Swaps (CDS)**.

## REFERENCE RMBS



## "THE STREET"

Bank of America

Merrill

JP Morgan

Citigroup

Morgan Stanley

## STRUCTURING BANK



WAREHOUSE

## CDO

COLLATERAL  
PORTFOLIO

# How a Typical Unmanaged Synthetic CDO Is Built

In an unmanaged, synthetic CDO, the **Structuring Bank** analyzes the **Reference RMBS** to see if it wants to include a particular asset in the portfolio.

## REFERENCE RMBS



## "THE STREET"

Bank of America

Merrill

JP Morgan

Citigroup

Morgan Stanley

## STRUCTURING BANK



WAREHOUSE

## CDO

COLLATERAL  
PORTFOLIO



# How a Typical Unmanaged Synthetic CDO Is Built

The **Structuring Bank** goes out to the market ("The Street") to **sell credit protection on the Reference RMBS** at the best possible price to a willing counterparty.

Once entered into, the **CDS is placed into the warehouse** for the CDO.

## REFERENCE RMBS



## "THE STREET"

Bank of America

BID  
\$150

Merrill

JP Morgan

BID  
\$200

Citigroup

BID  
\$300

Morgan Stanley

## STRUCTURING BANK



WAREHOUSE



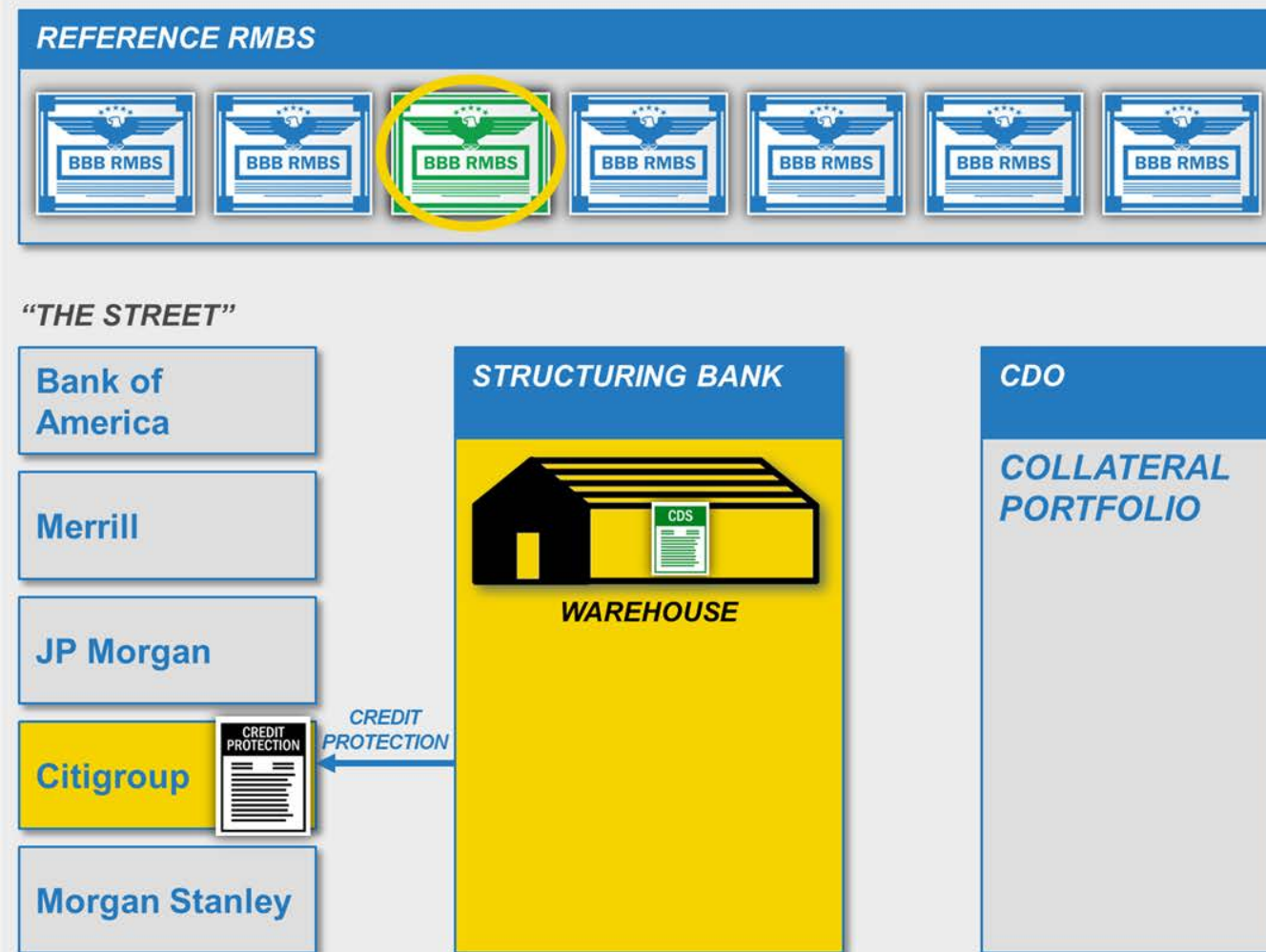
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COLLATERAL  
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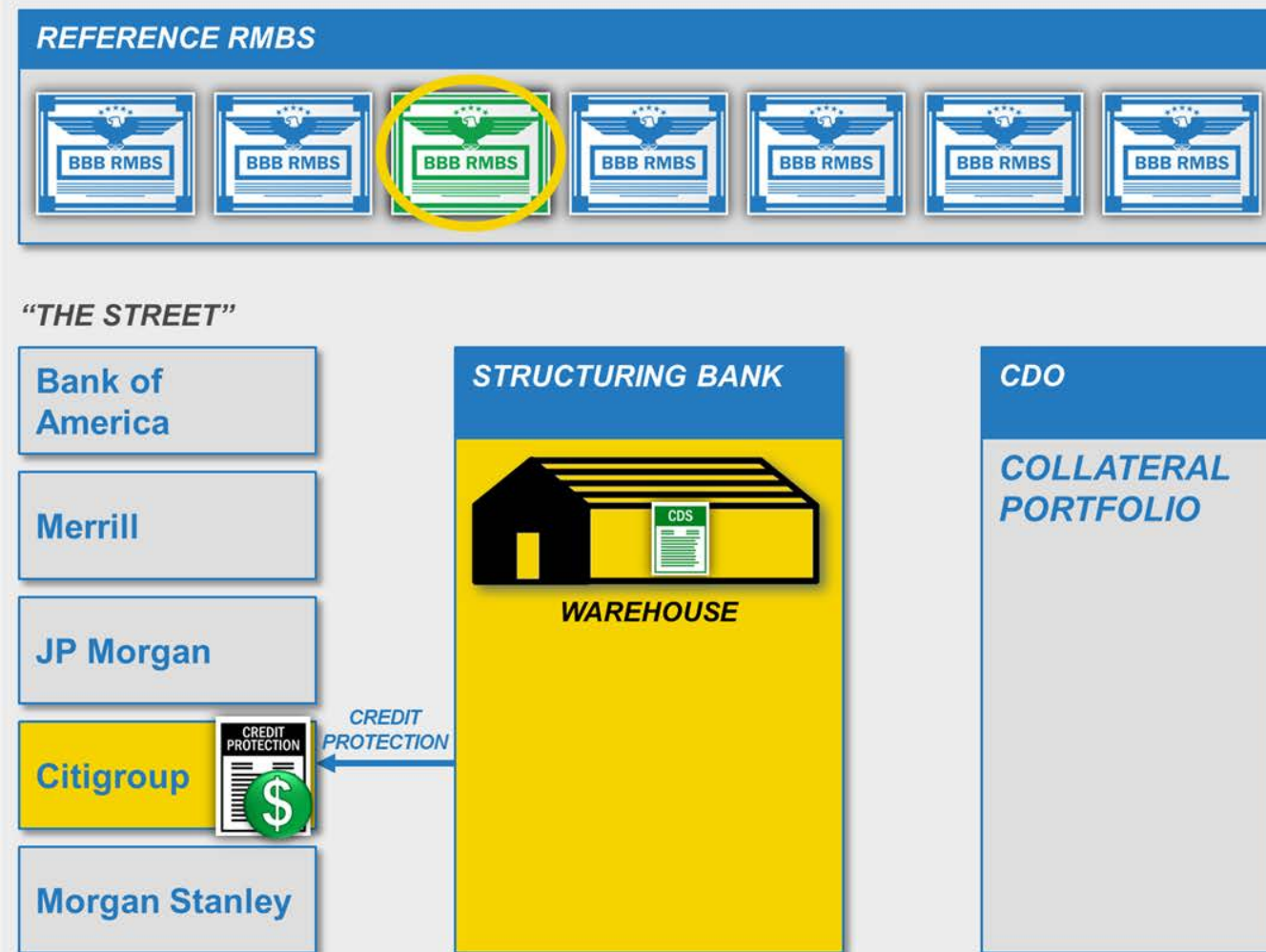
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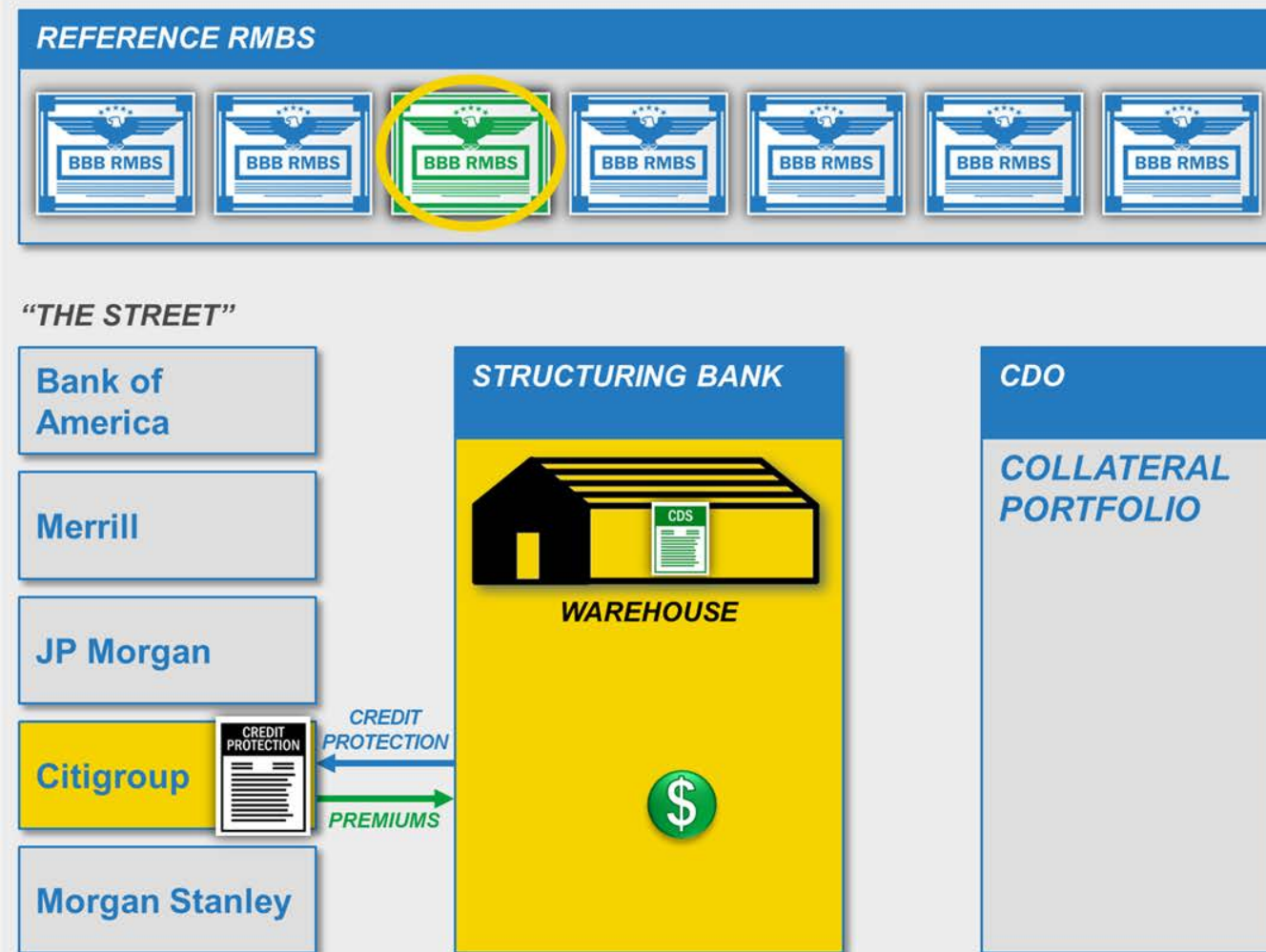
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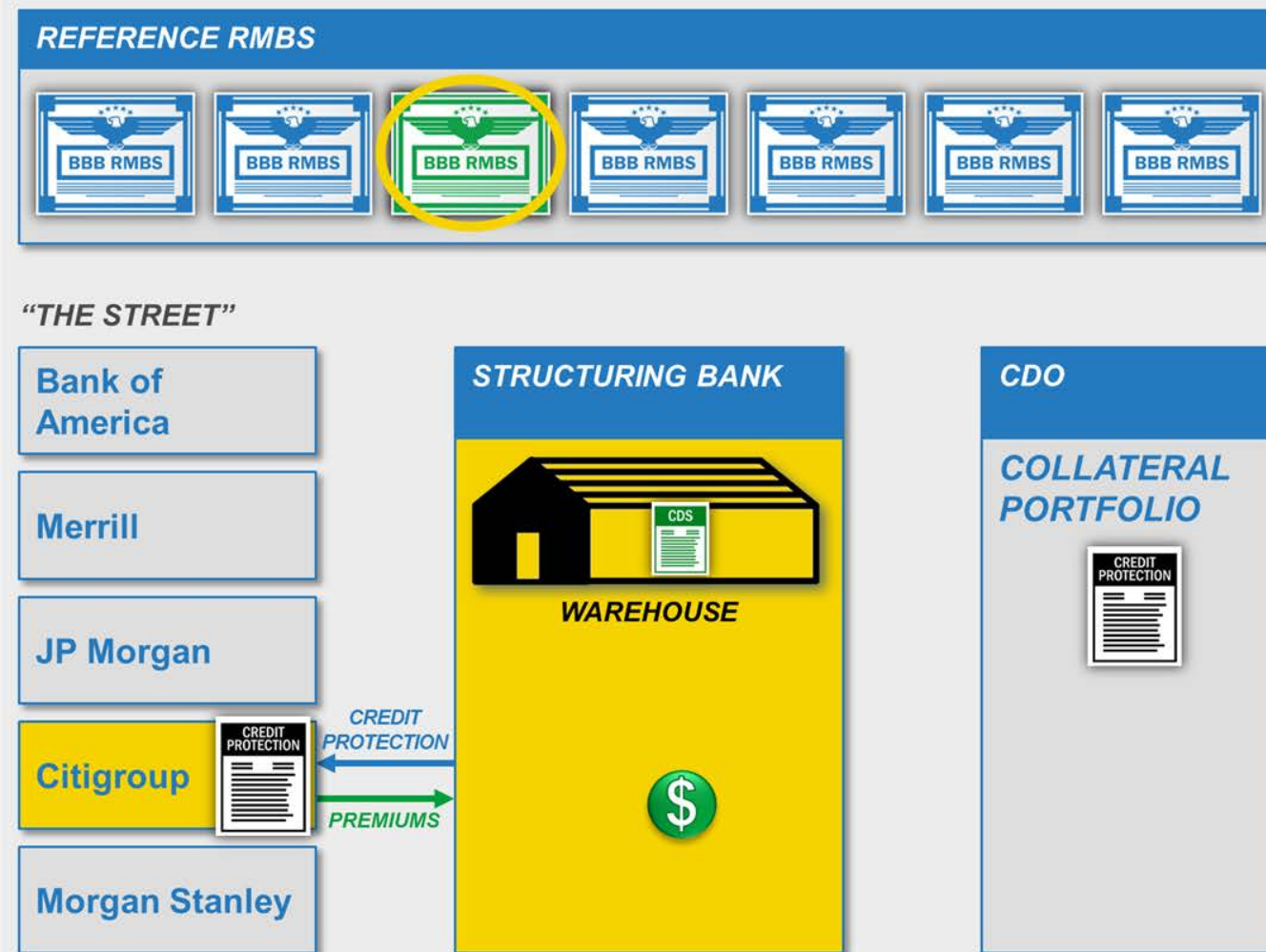


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The Structuring Bank **cannot simply transfer** the CDS to the CDO (because it is a contract).

Instead, the Structuring Bank **buys credit protection from the CDO** on the same Reference RMBS on which it **sold credit protection to the Street**.

The Structuring Bank thus ends up as an **intermediary** between the Street and CDO.



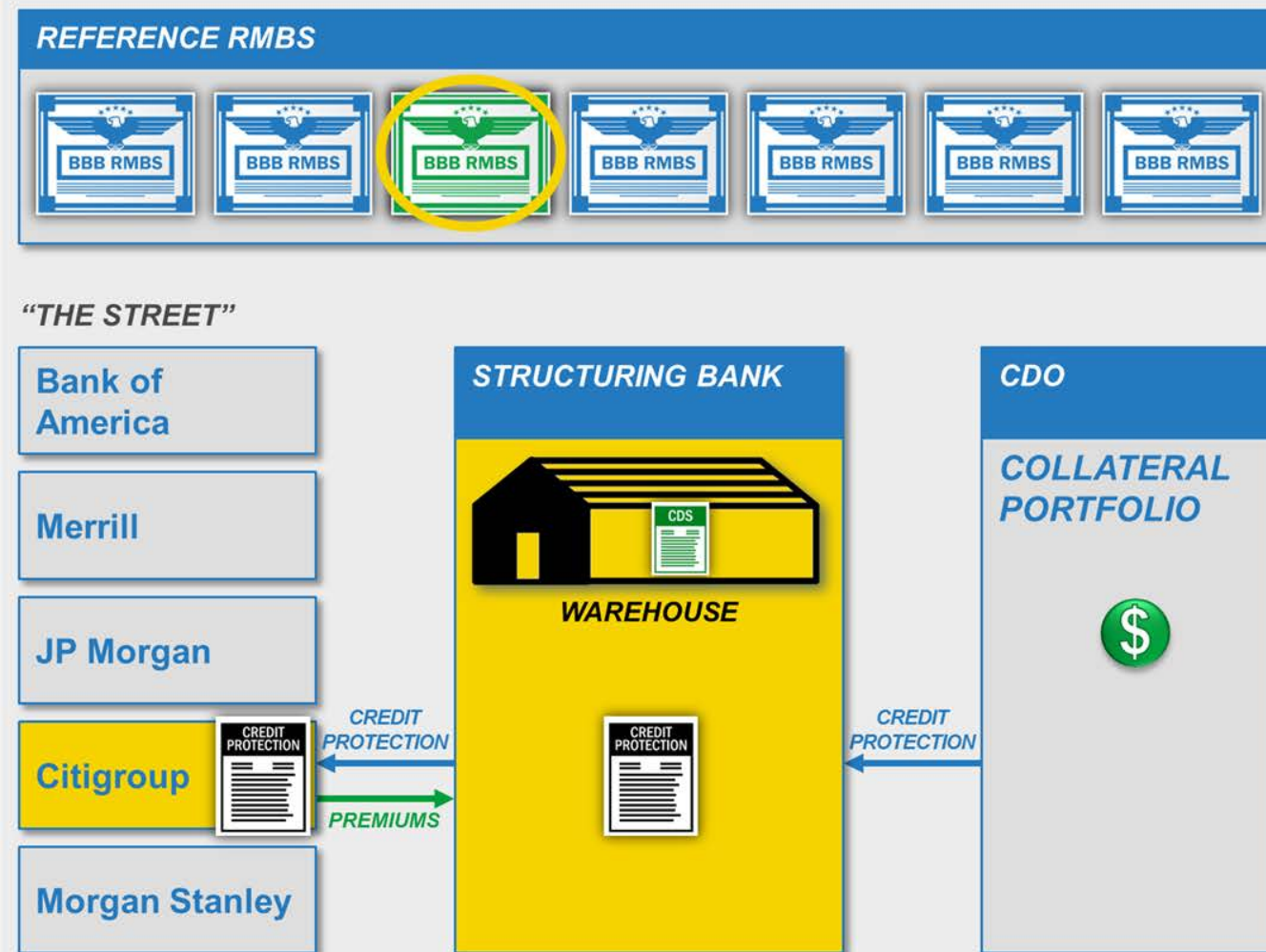


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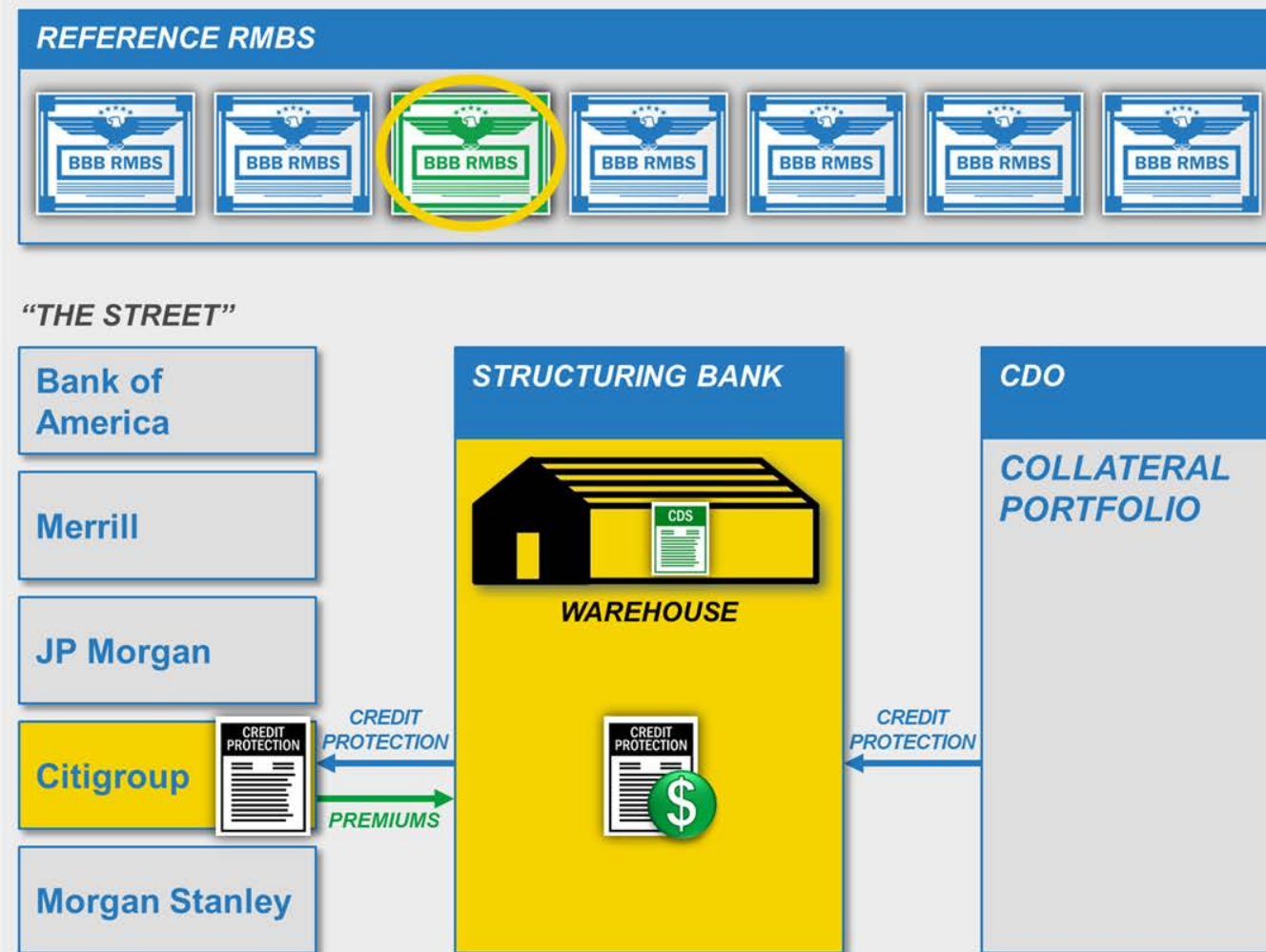


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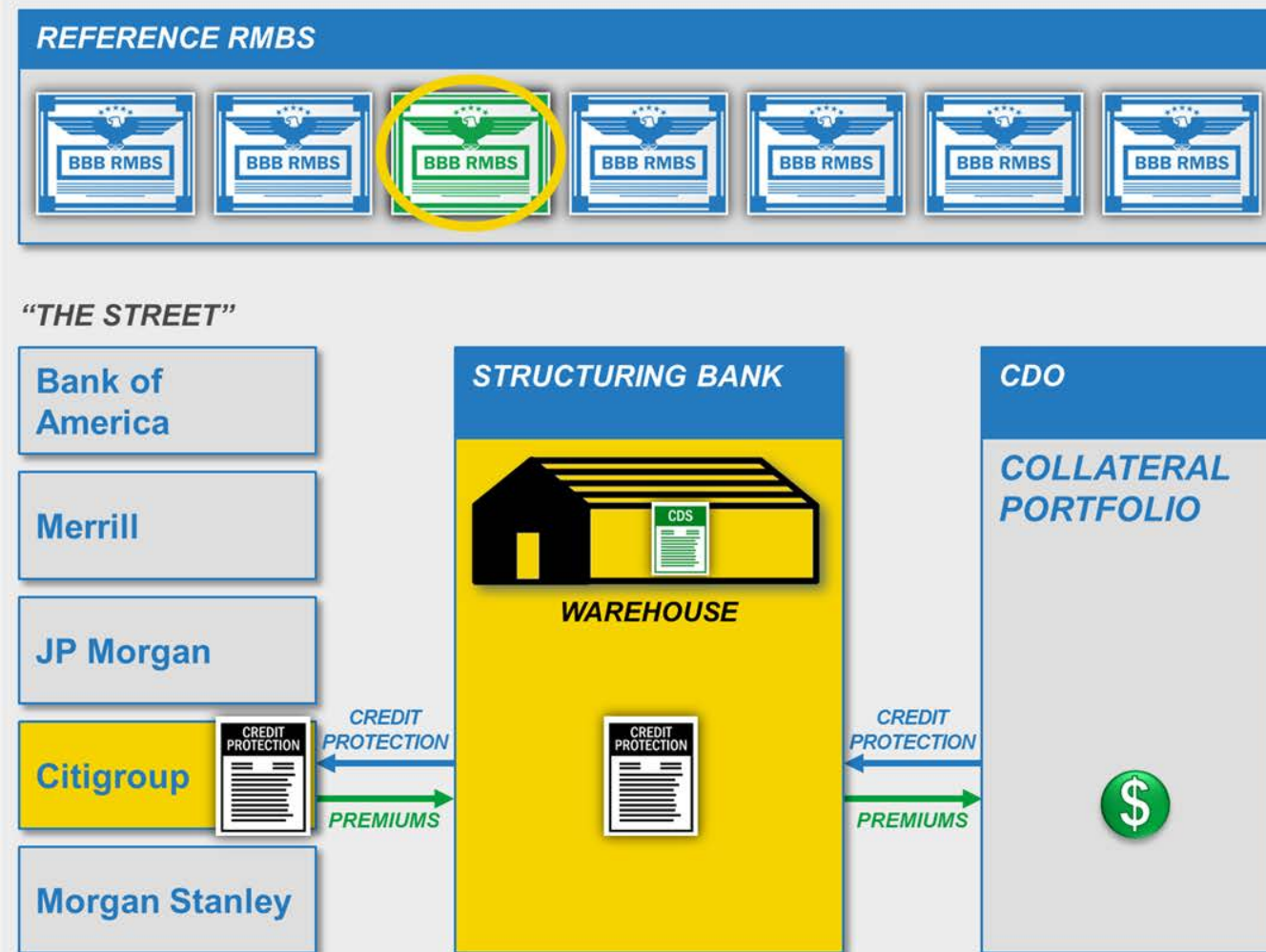


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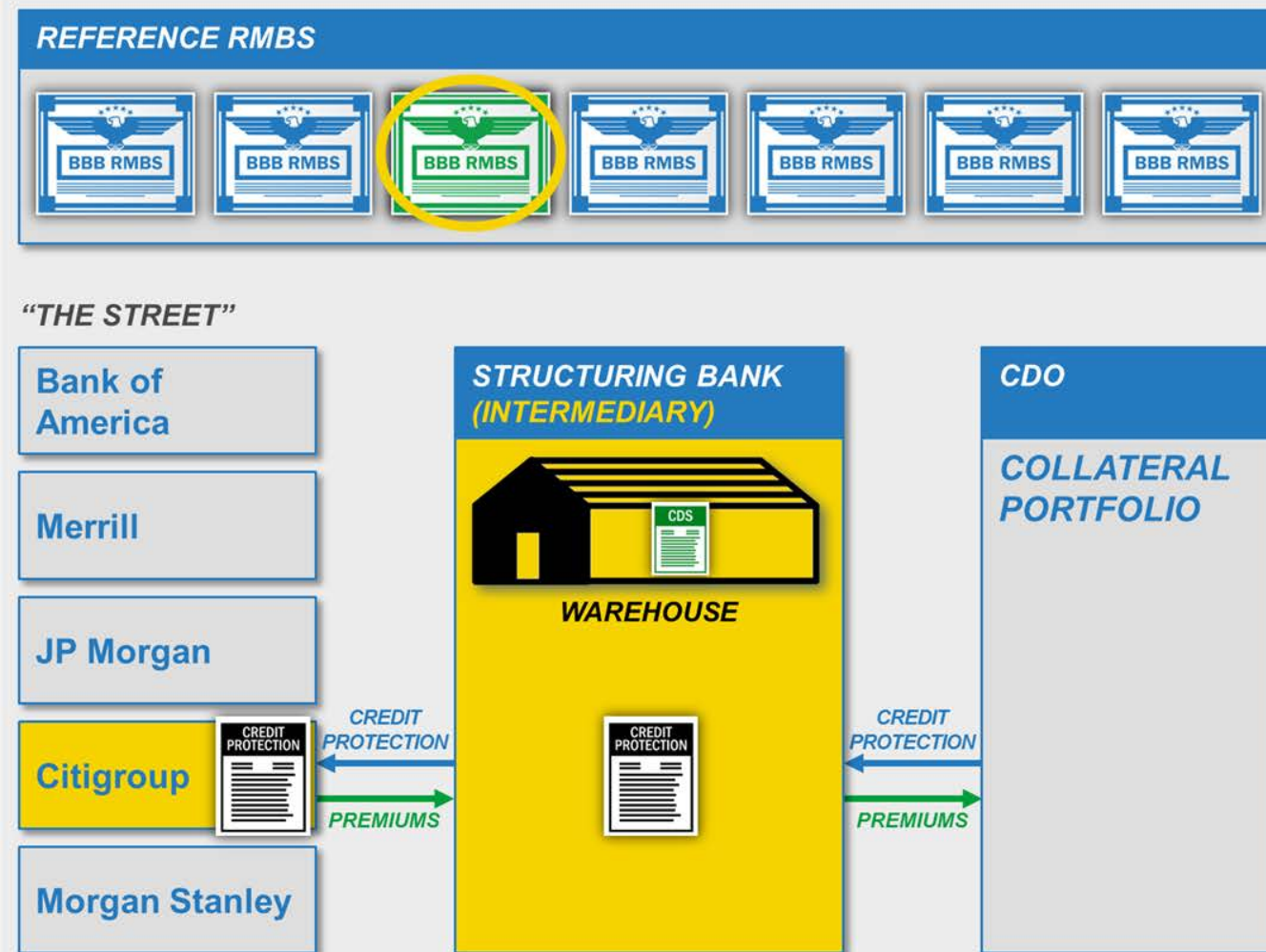


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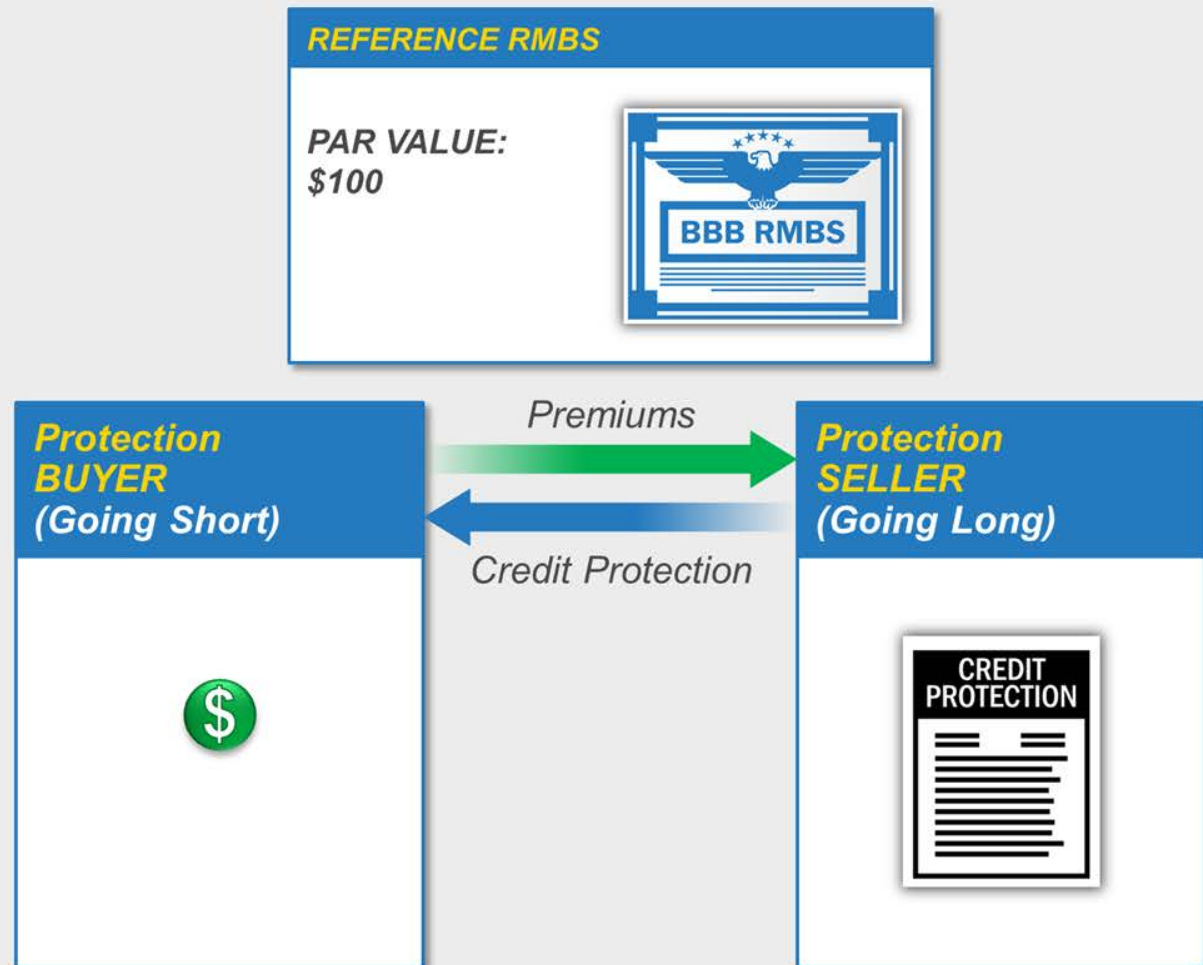


## Credit Default Swap (CDS) on RMBS

A CDS is like the **purchase (or sale) of financial insurance** on the creditworthiness of the **Reference RMBS**.

Protection Buyer **does not actually** own the Reference RMBS.

**Protection Seller** takes on the **credit risk** of an asset in exchange for the **payment of a premium by the Protection Buyer**.



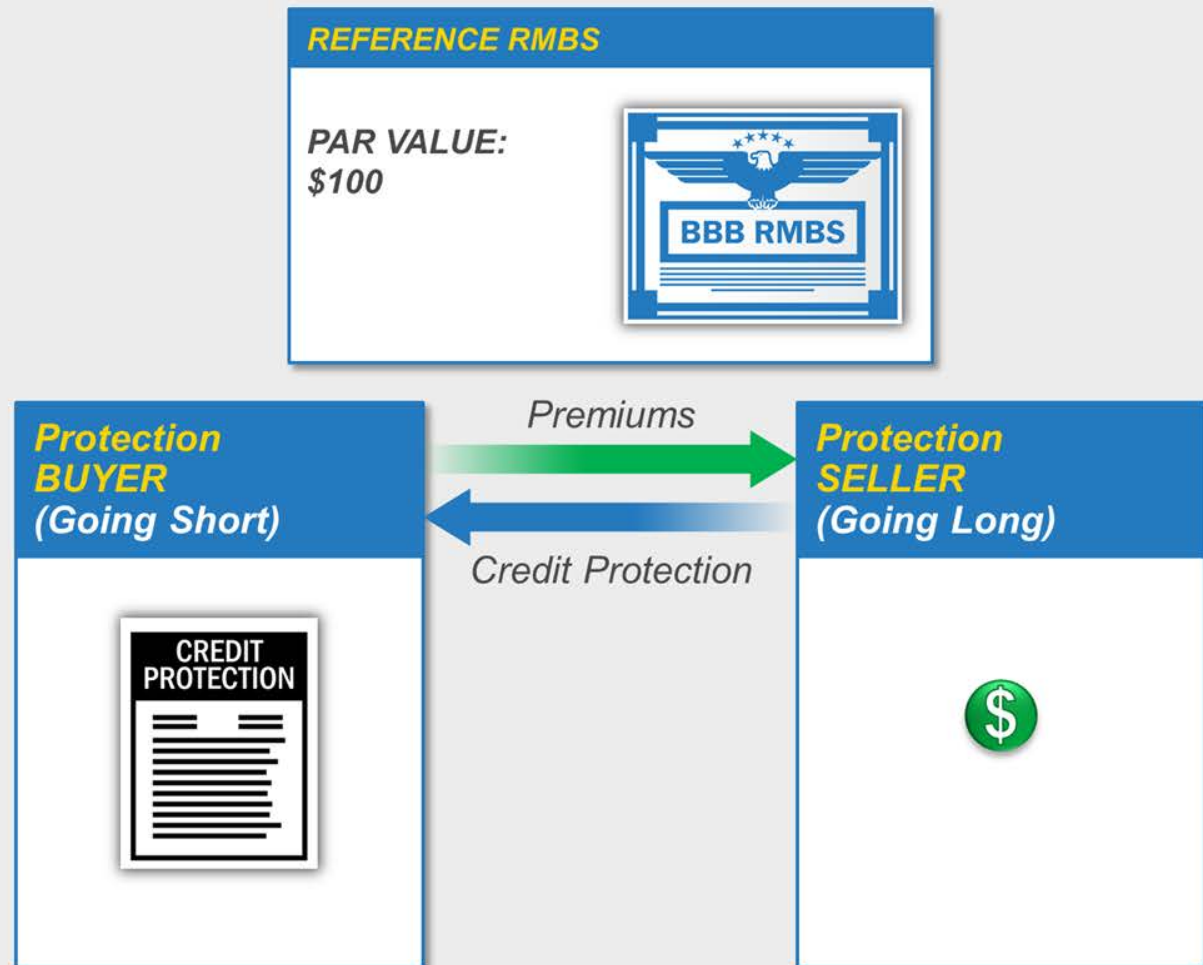


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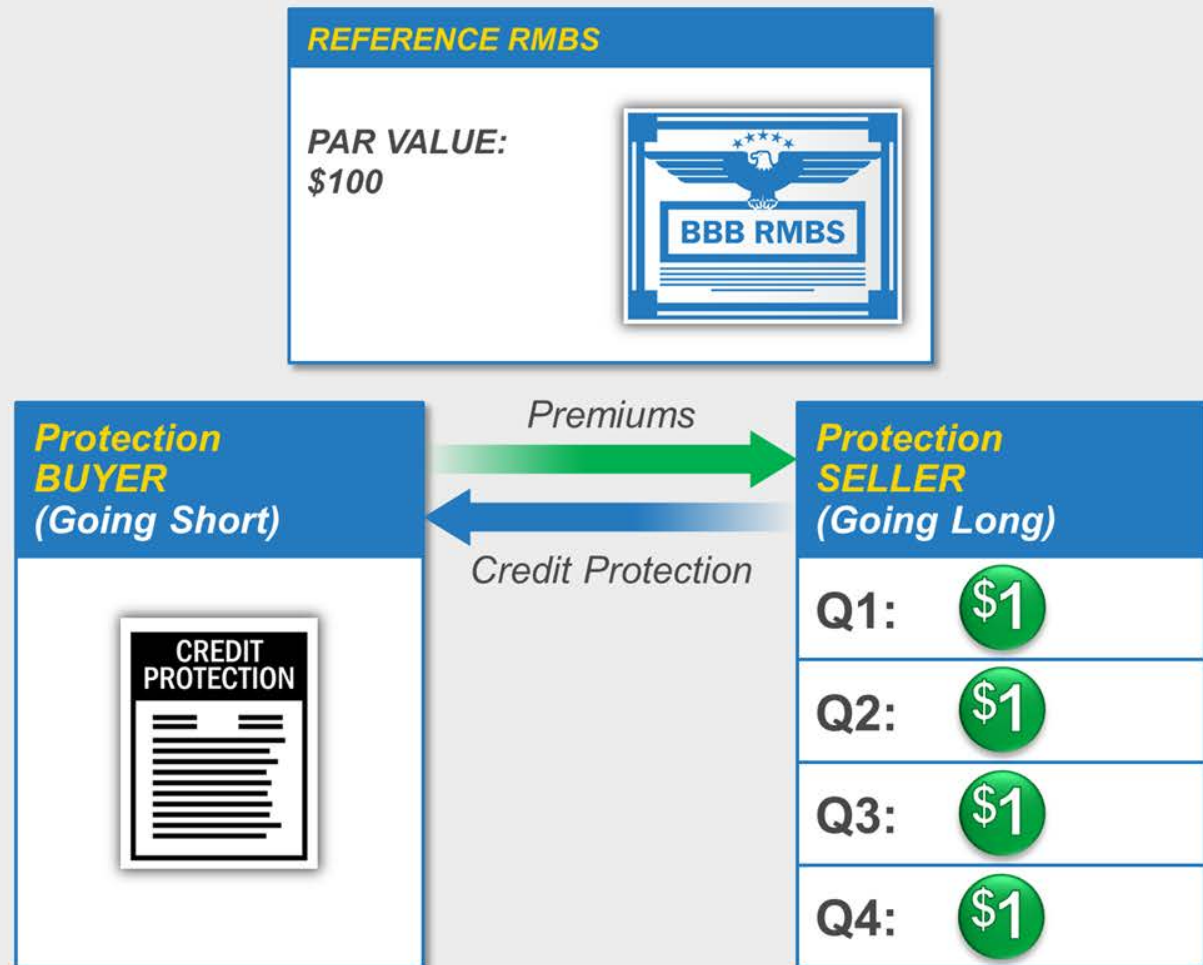
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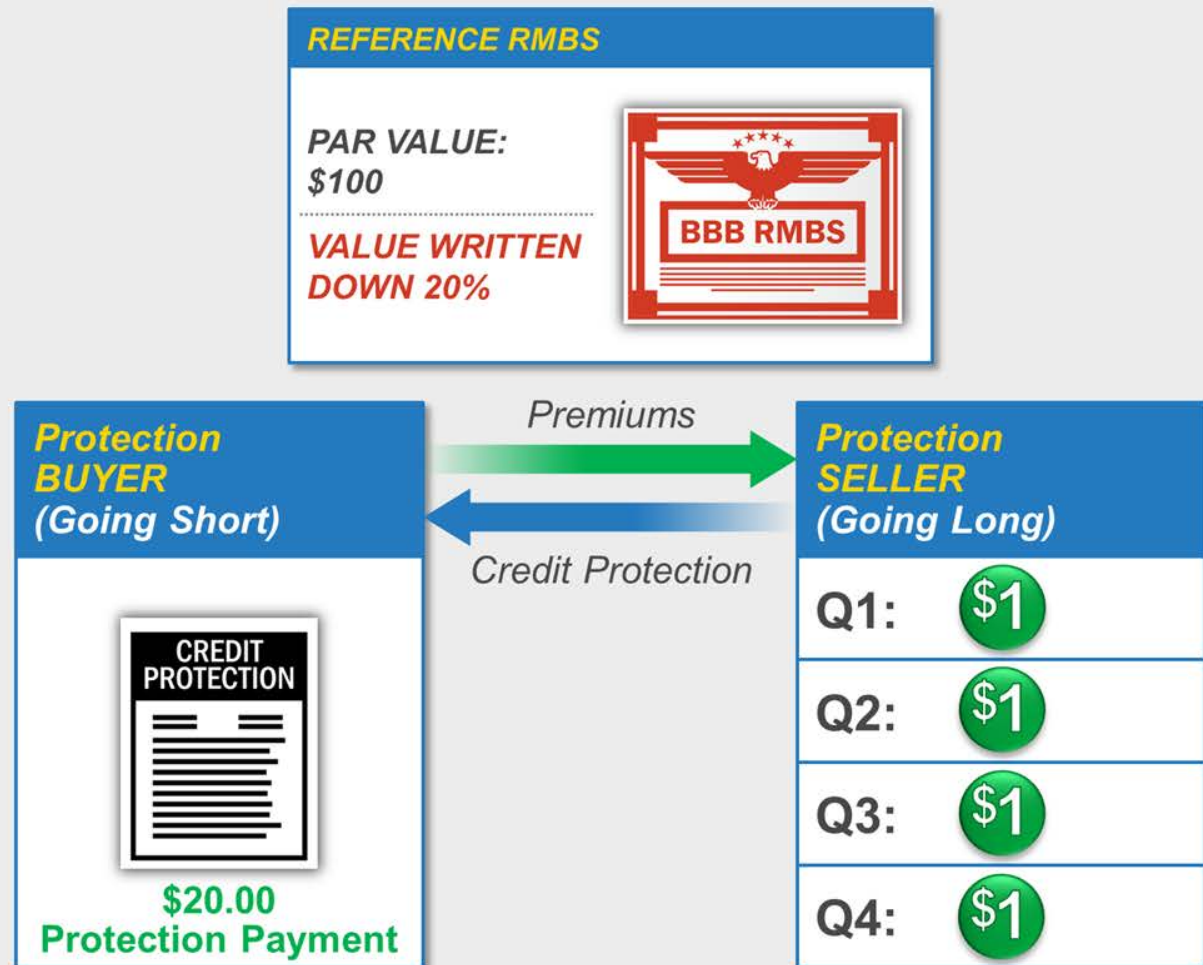
The value of the CDS is dependent on the **performance of the Reference RMBS**.

As long as the Reference RMBS performs well, the **Protection Seller will receive regular, fixed premium payments** from the Protection Buyer that **approximate the interest payments** it would have received if he actually owned the RMBS.



## Credit Default Swap (CDS) on RMBS

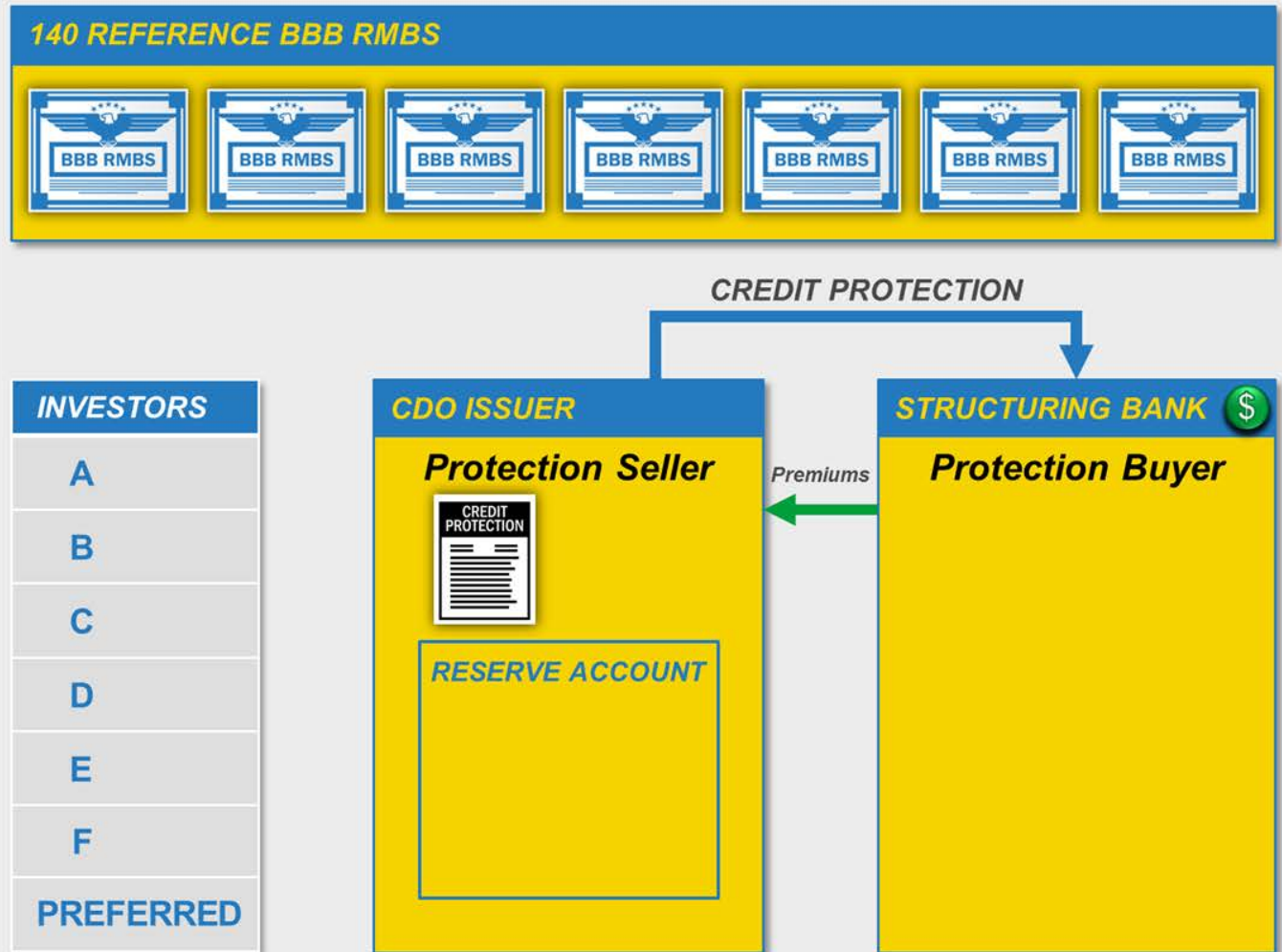
If the **Reference RMBS** performs **poorly** enough to trigger certain specified events, the Protection Seller will be required to make a **protection payment** to the Protection Buyer that **approximates the decline in value of the Reference RMBS**.



# Synthetic CDO Transaction

**CDO Issuer (Protection Seller)** sells credit protection on the **Reference RMBS portfolio** to Structuring Bank (Protection Buyer).

**Structuring Bank makes periodic premium payments** to CDO Issuer that **approximate interest payments** CDO would earn if it actually owned the RMBS.

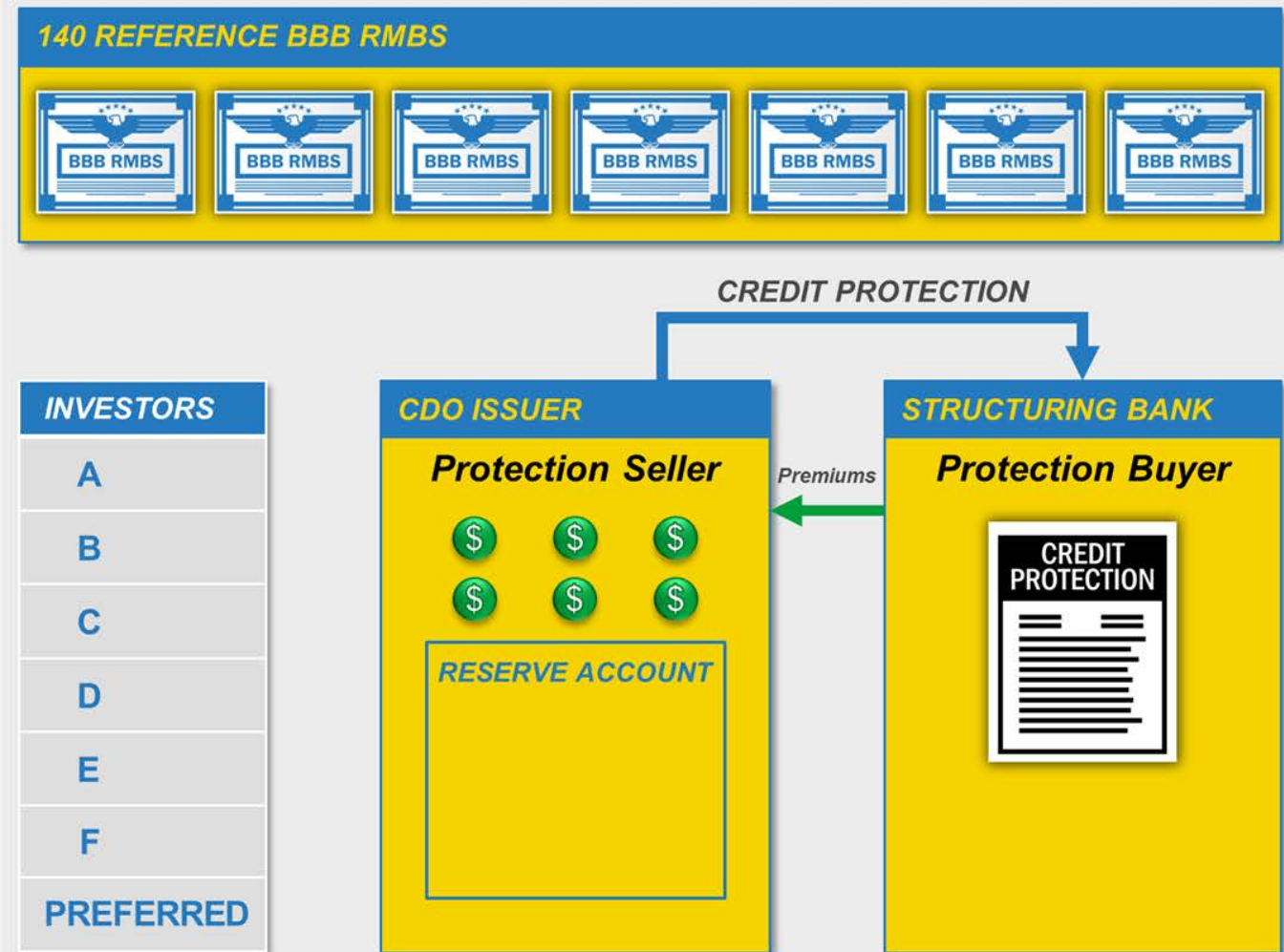




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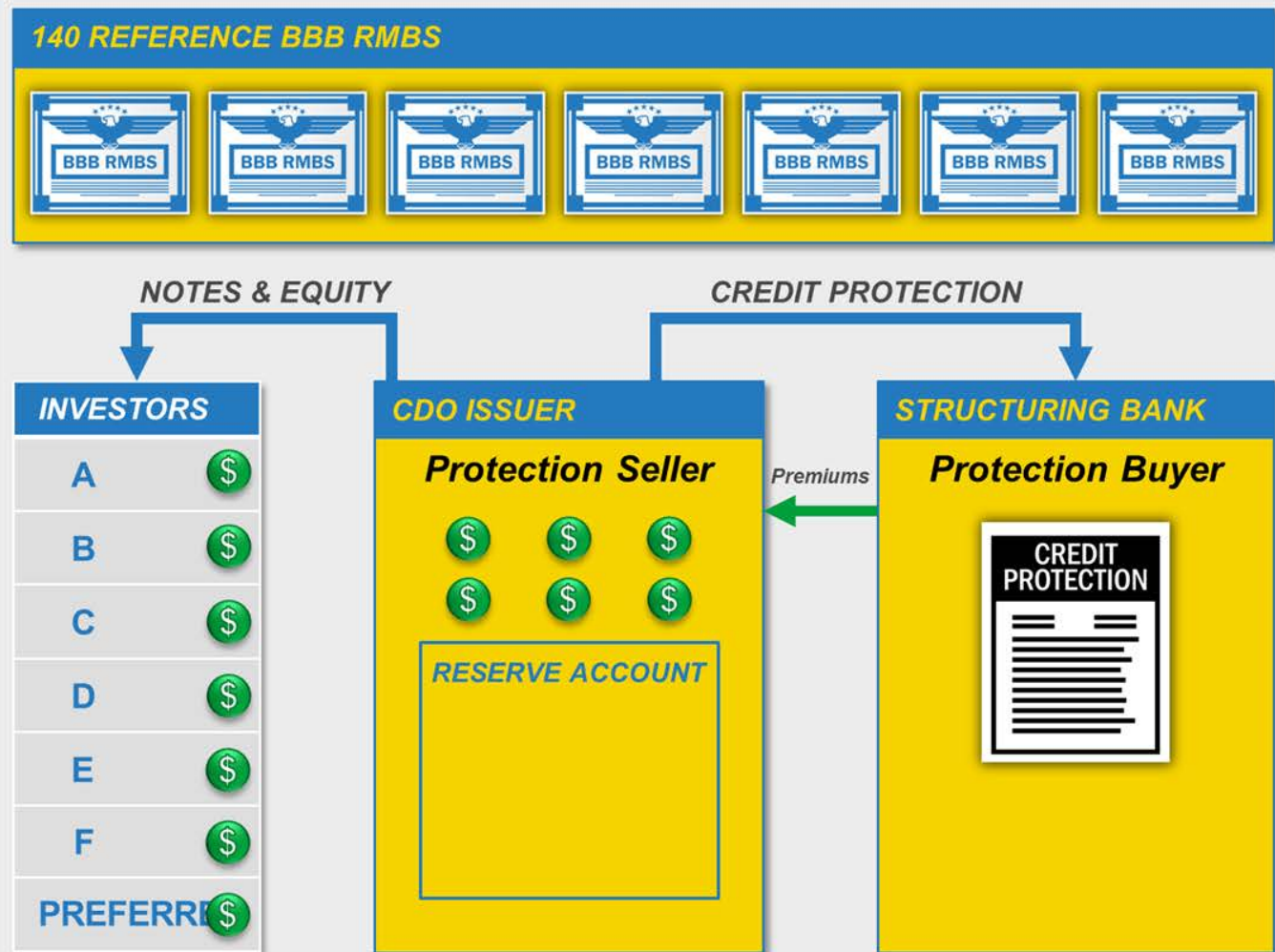




# Synthetic CDO Transaction

The CDO Issuer sells Notes and Equity to Investors.

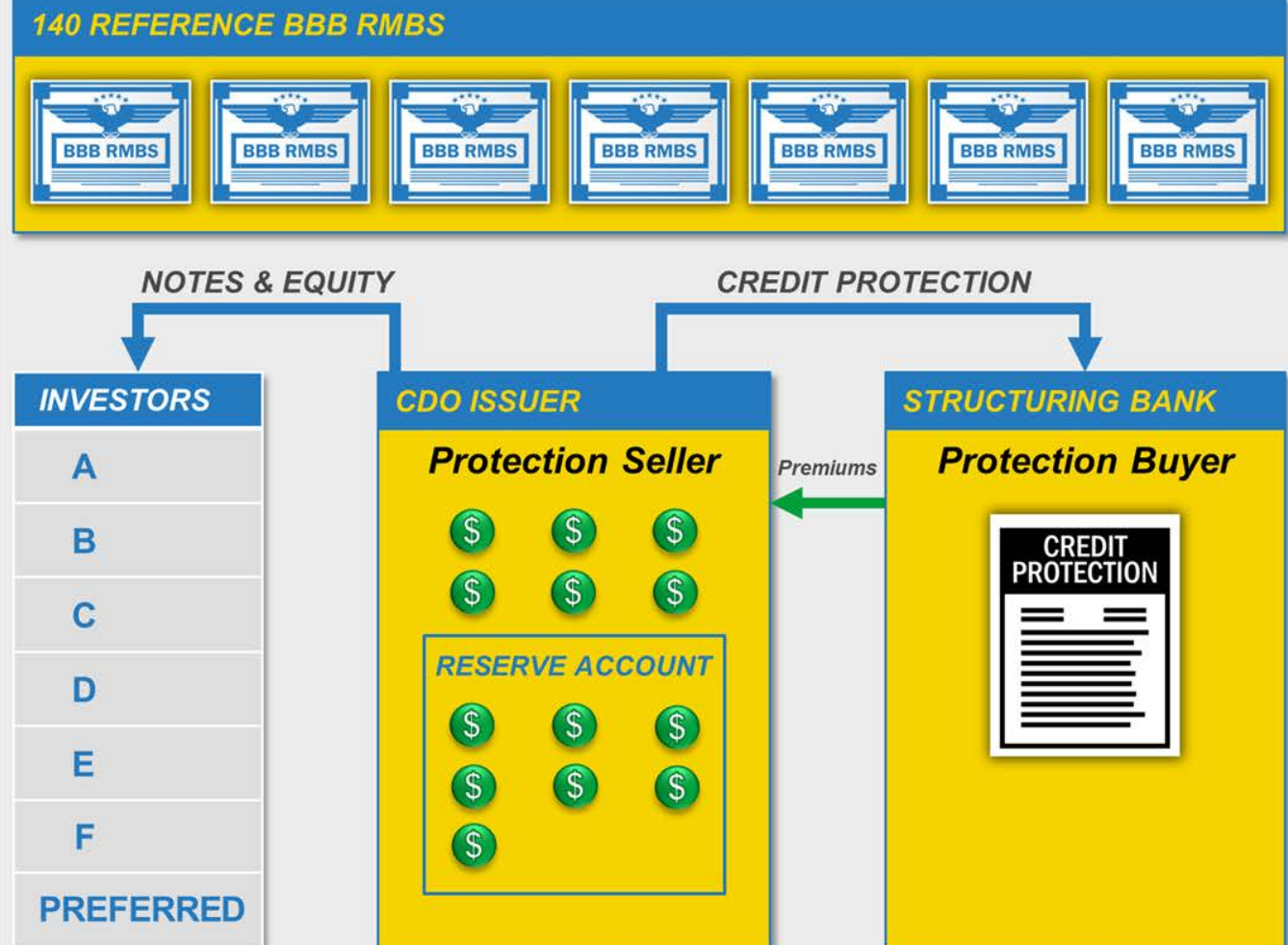
Proceeds from sales are deposited in the Reserve Account.



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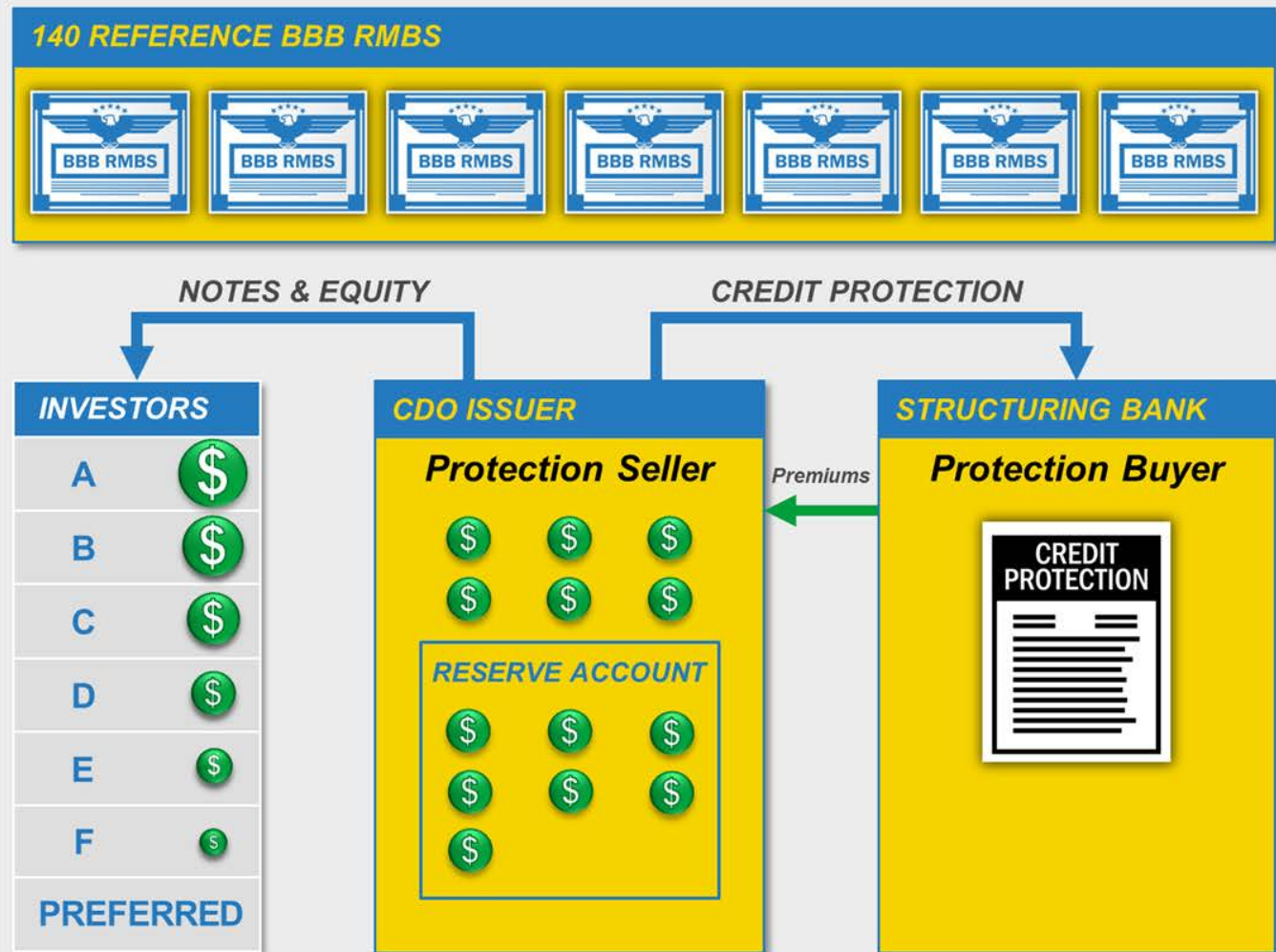
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# Synthetic CDO Transaction

The CDO uses premium payments to pay investors principal and interest.

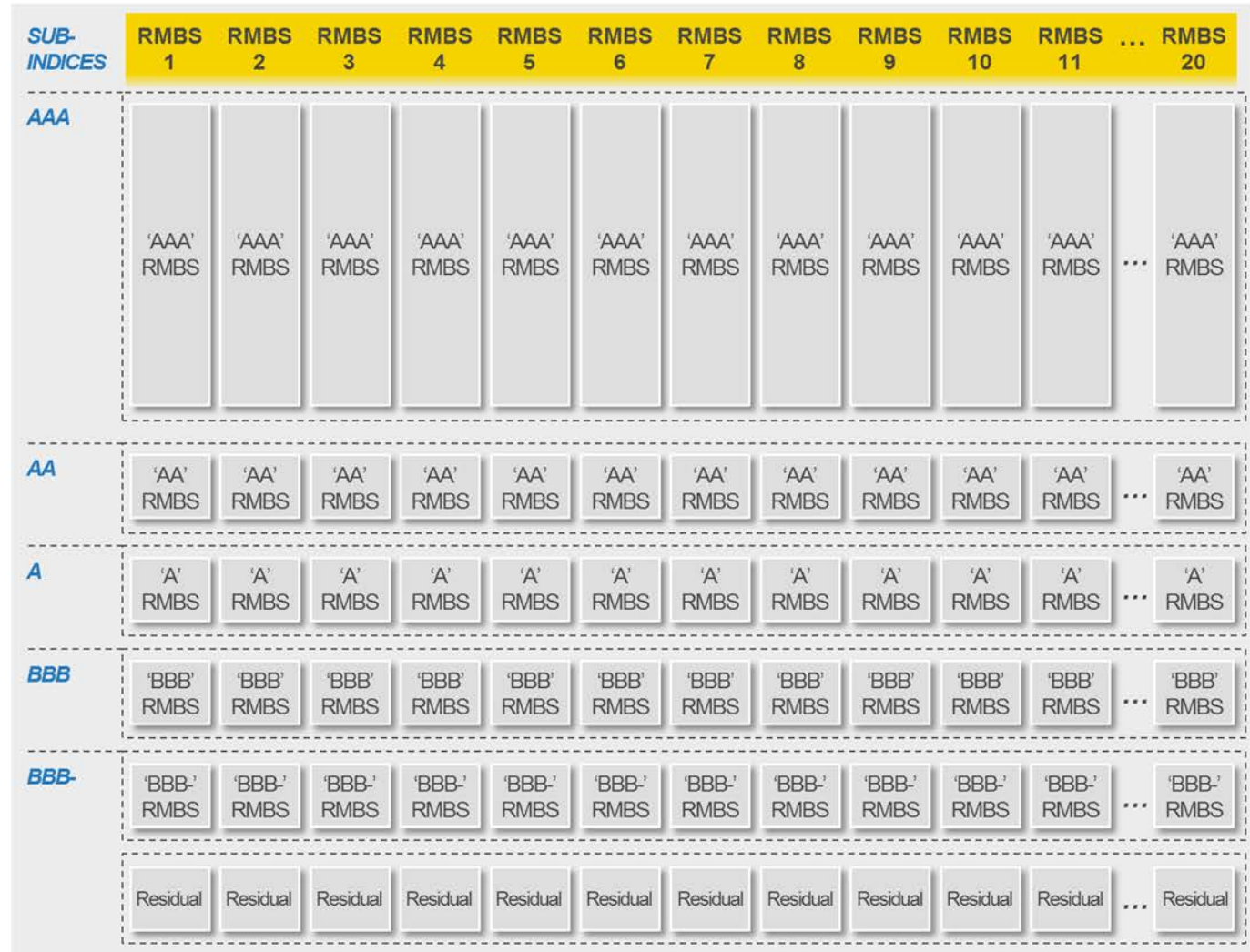
Cash flows from highest rated tranches to lowest rated tranches.



# ABX Index Structure

FEBRUARY 13, 2015 EXPERT REPORT OF JEFFREY HARRIS: DIAGRAM 2

The ABX Index tracks the price of credit default protection on a basket of **20 subprime RMBS**.

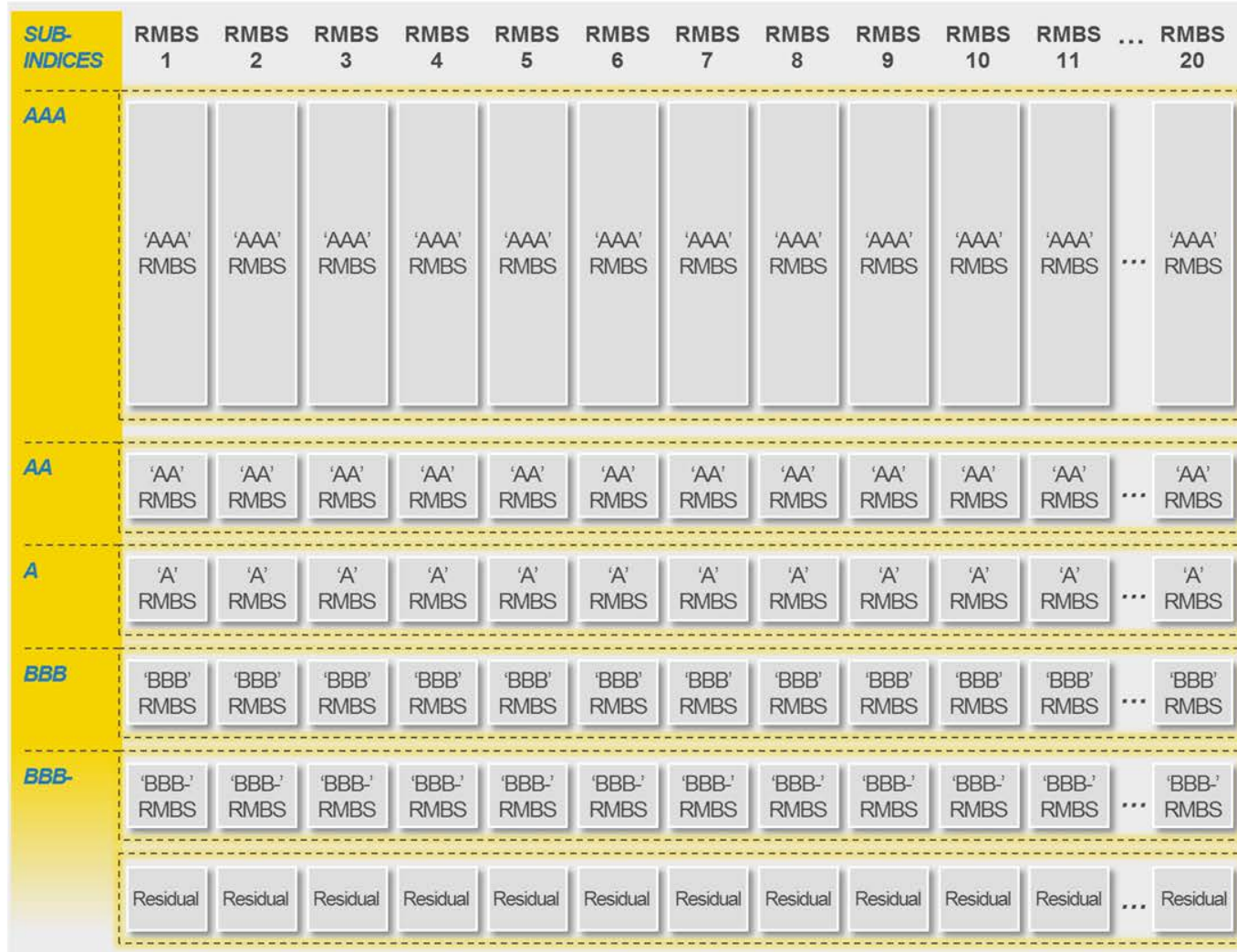




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FEBRUARY 13, 2015 EXPERT REPORT OF JEFFREY HARRIS: DIAGRAM 2

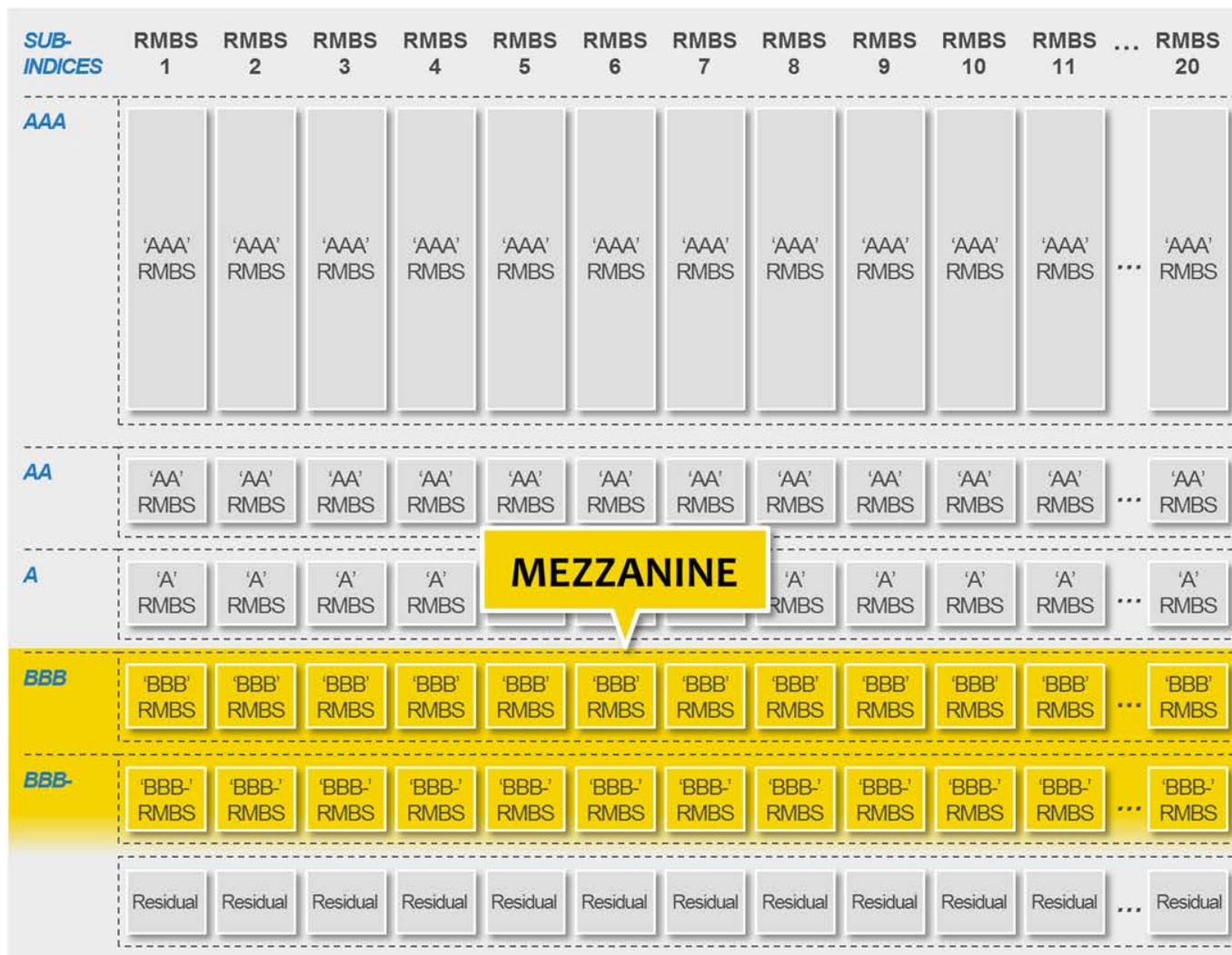
The ABX Index, like the basket of subprime RMBS it referenced, was **tranch**ed into different **sub-indices** based on credit rating.



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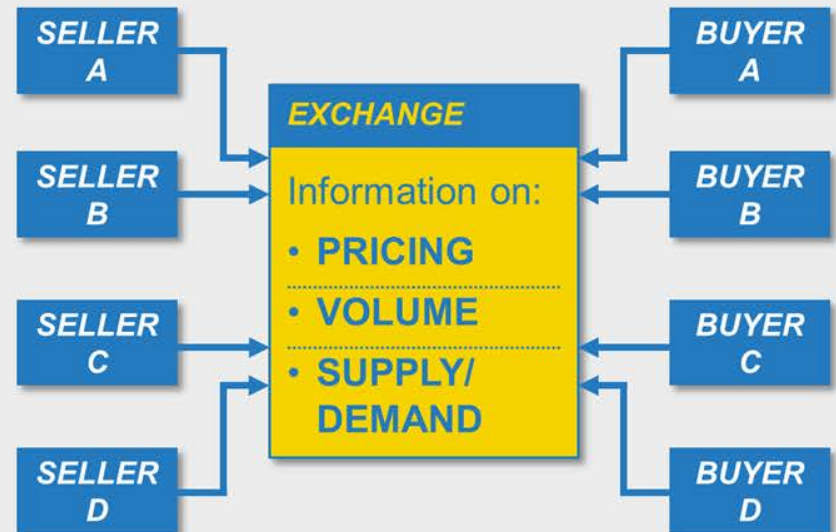
## Market Transparency

### Exchange Market vs. Over-the-Counter (OTC) Market

#### EXCHANGE MARKET

Uses a **centralized trading mechanism** to match bids and offers and allocate trades.

Trade information is available to **ALL** market participants.





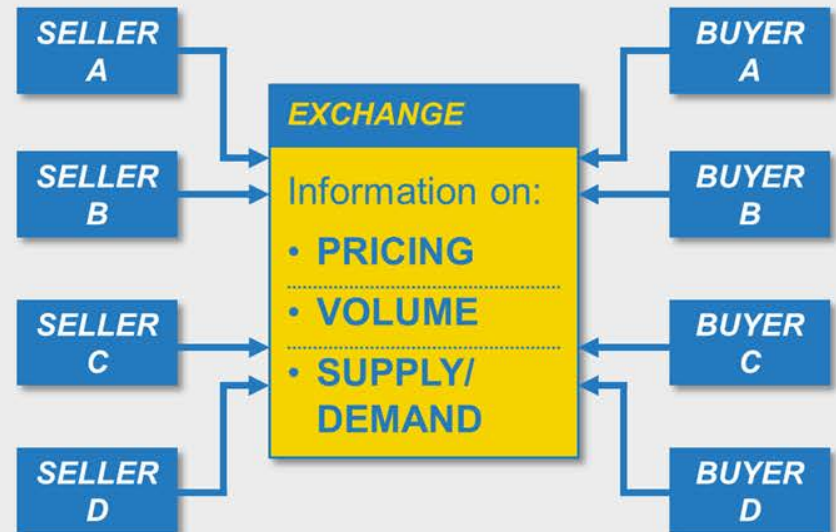
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#### OVER-THE-COUNTER (OTC) MARKET

**"Market Makers"** take on the role of the exchange.

Buyers and Sellers **negotiate terms in private.**

Each market participant has **limited knowledge** of trades to which they are not a party.





# Role of Market Maker in an OTC Market

