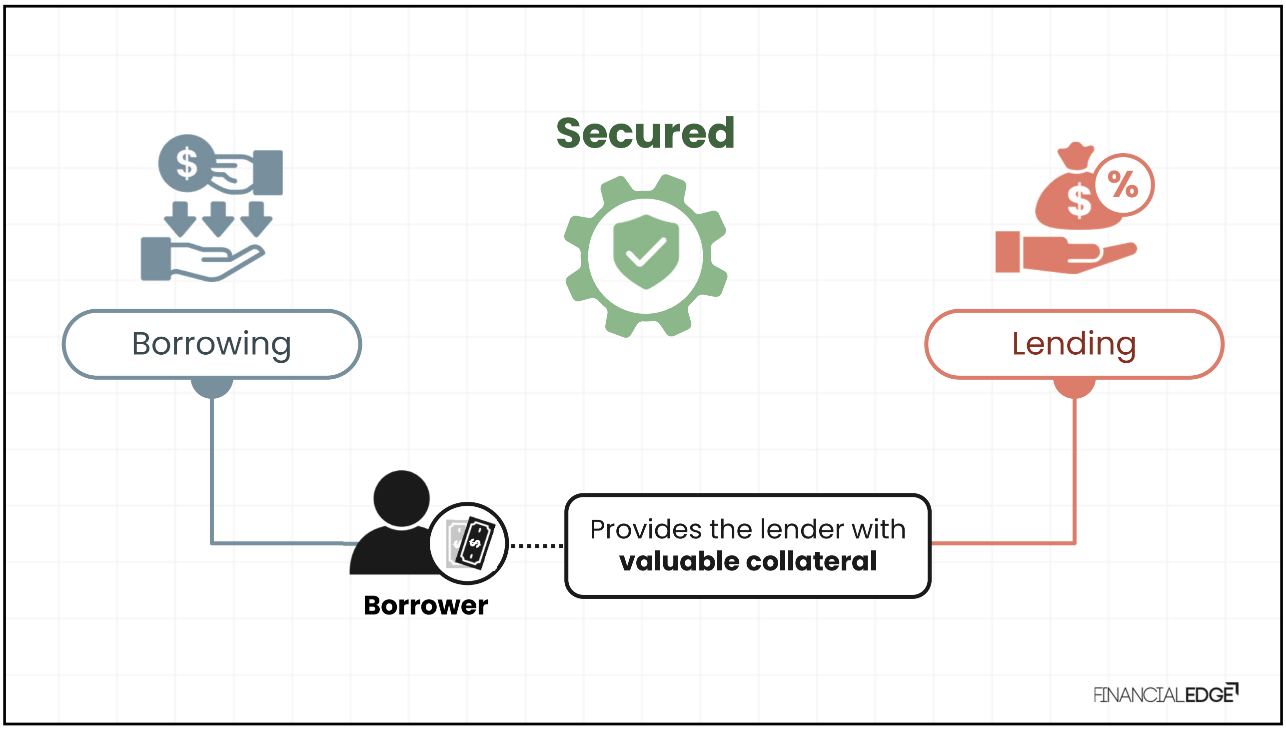
Repos

Repo


Secured
Borrowing
Lending
Borrower
Provides the lender with
valuable collateral
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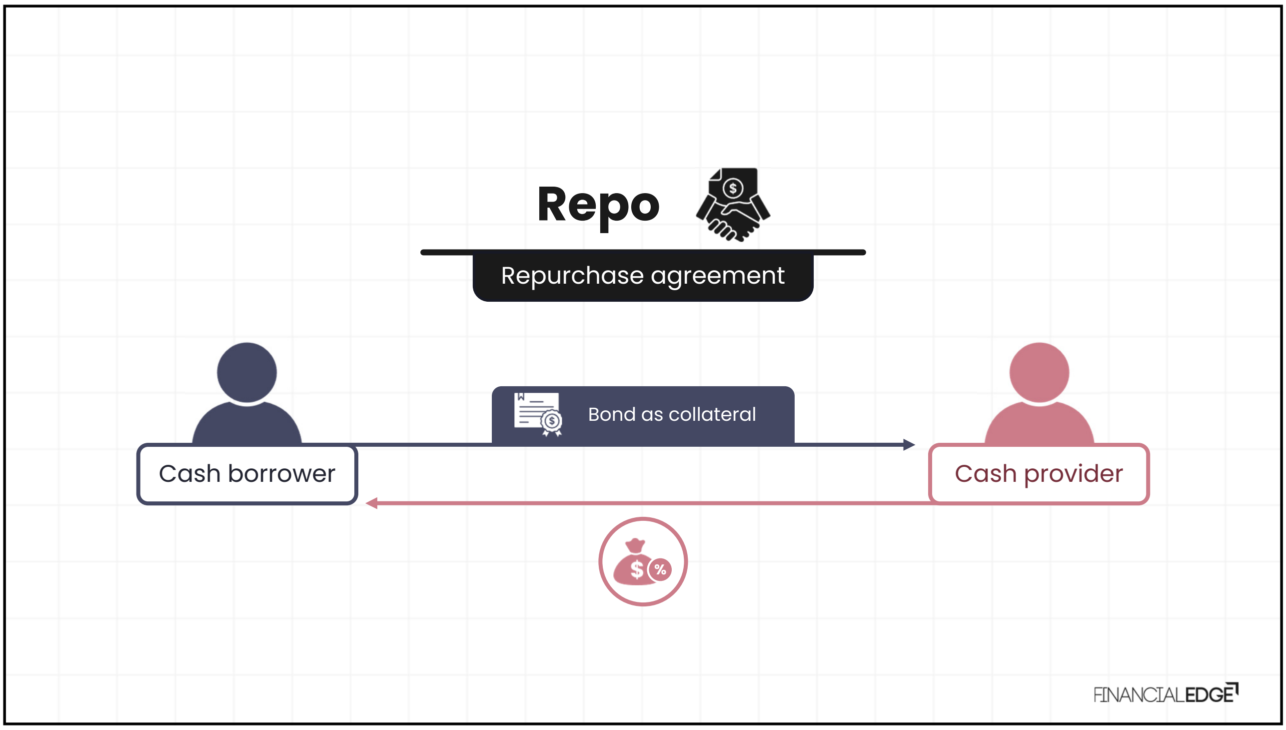
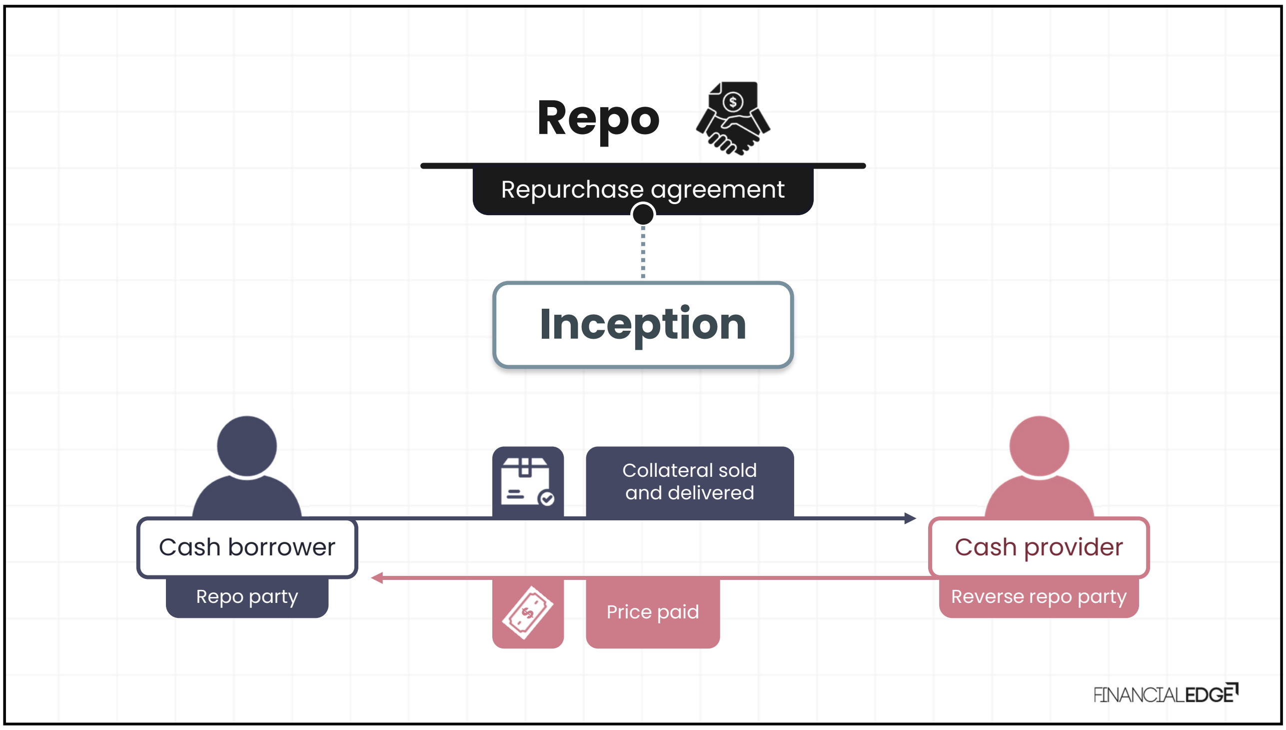
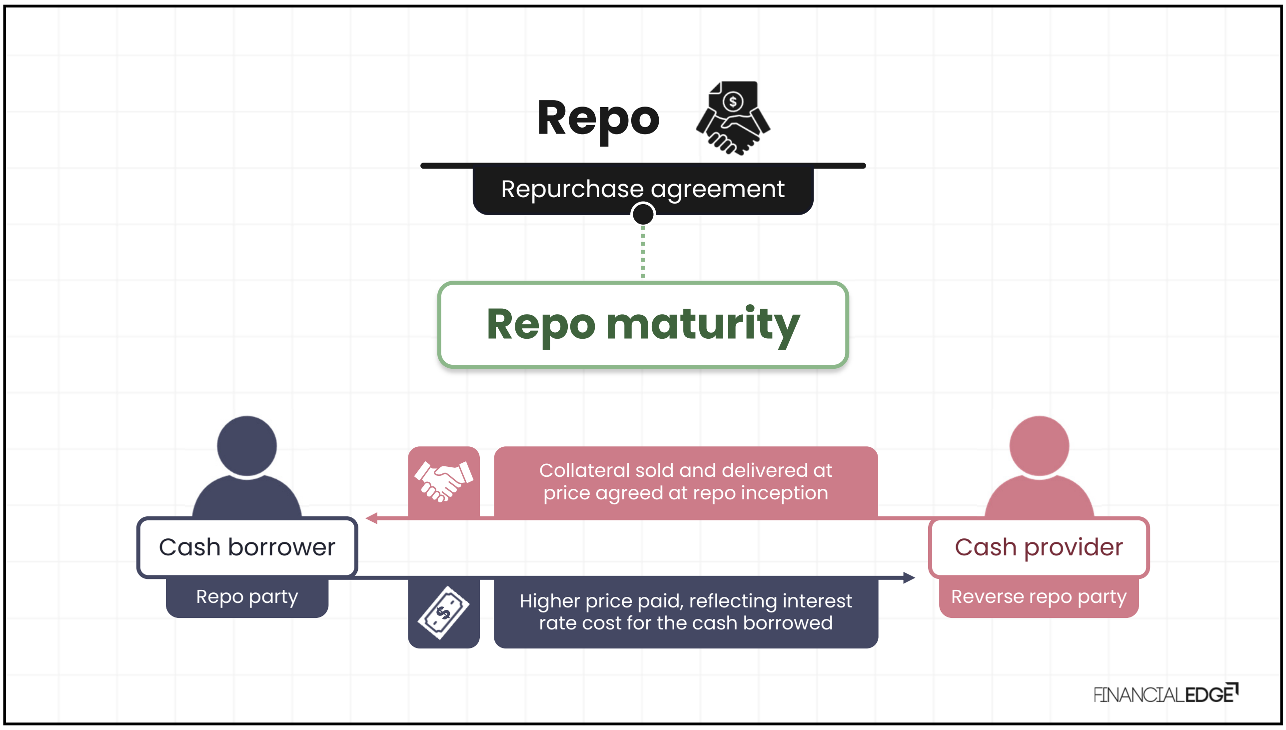

Repo
Repurchase agreement
Bond as collateral
Cash borrower
Cash provider
FINANCIALEDGE


Repo
Repurchase agreement
Inception
Collateral sold and delivered
Cash borrower
Repo party
Cash provider
Reverse repo party
Price paid
FINANCIALEDGE


Repo
Repurchase agreement
Repo maturity
Collateral sold and delivered at price agreed at repo inception
Cash borrower
Repo party
Cash provider
Reverse repo party
Higher price paid, reflecting interest rate cost for the cash borrowed
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Repo maturity

Overnight repo

One business day

Term repo

More than one day

Typically higher repo rate

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Repo and Reverse Repo Usage

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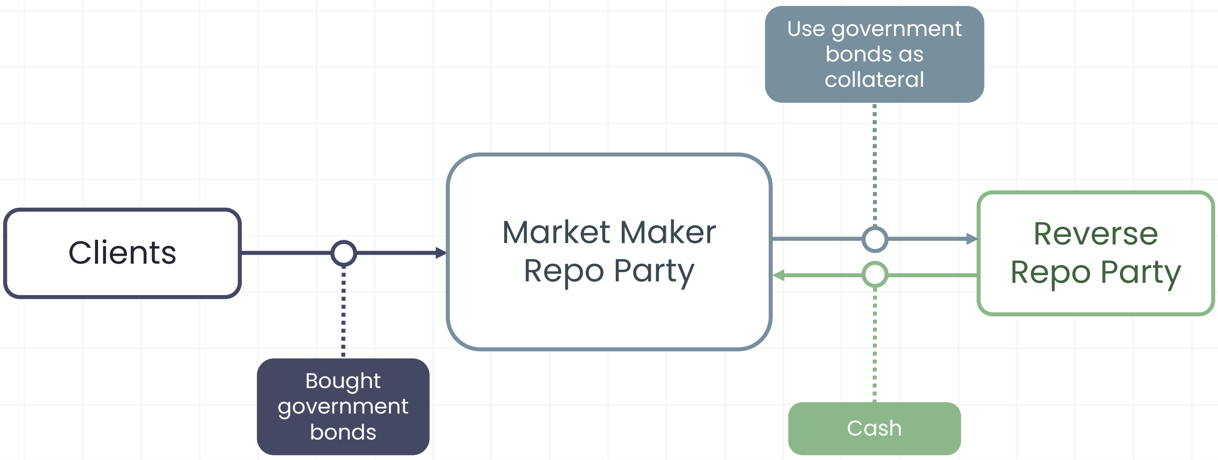
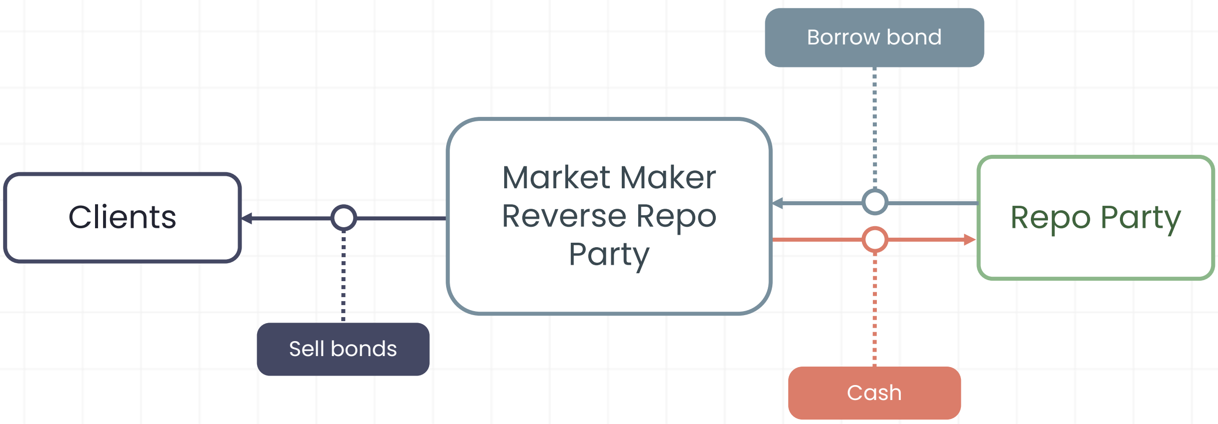
Why are Repos so Important?

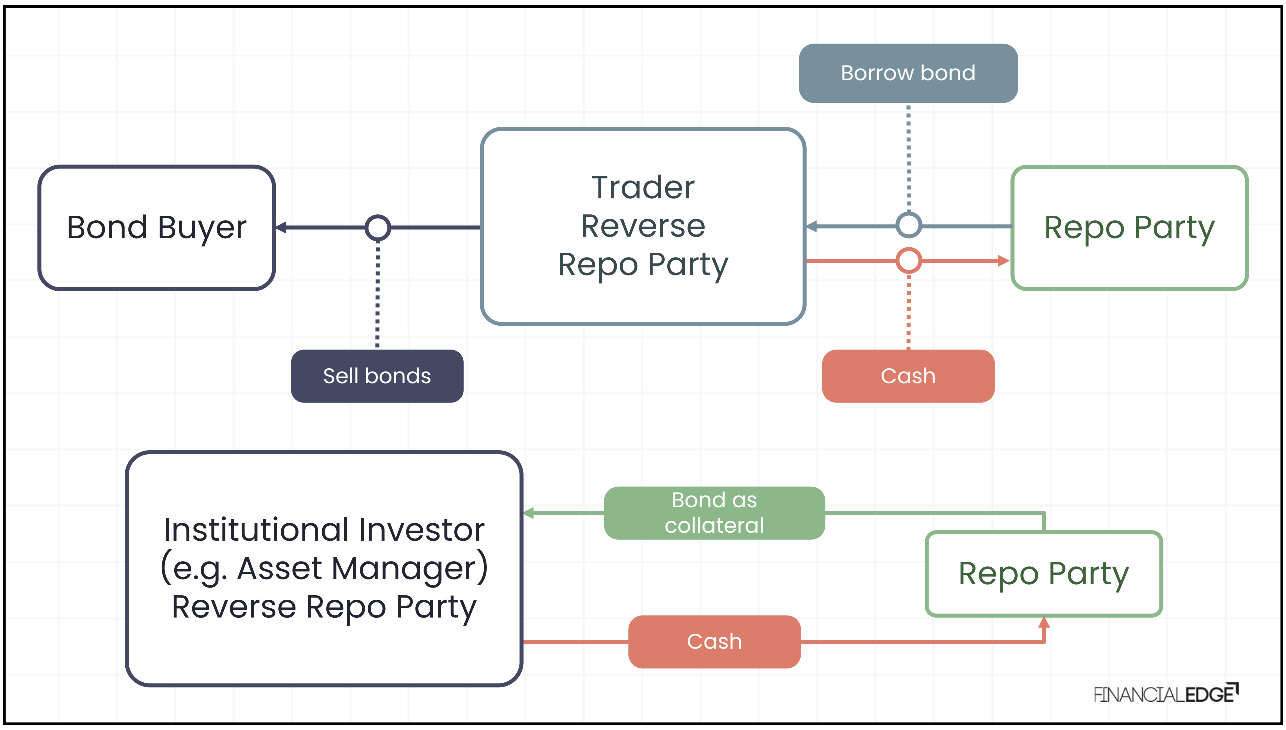
Repos provide market participants with access to low-cost, secured financing to purchase securities

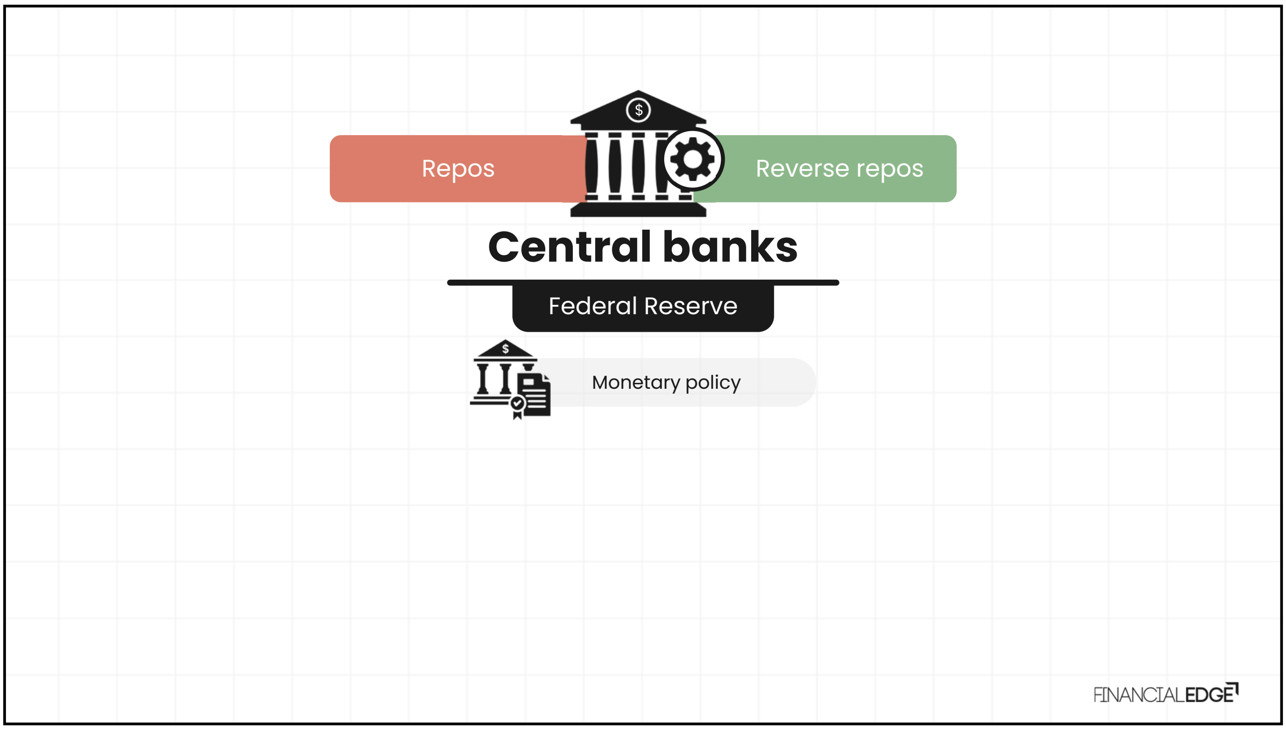


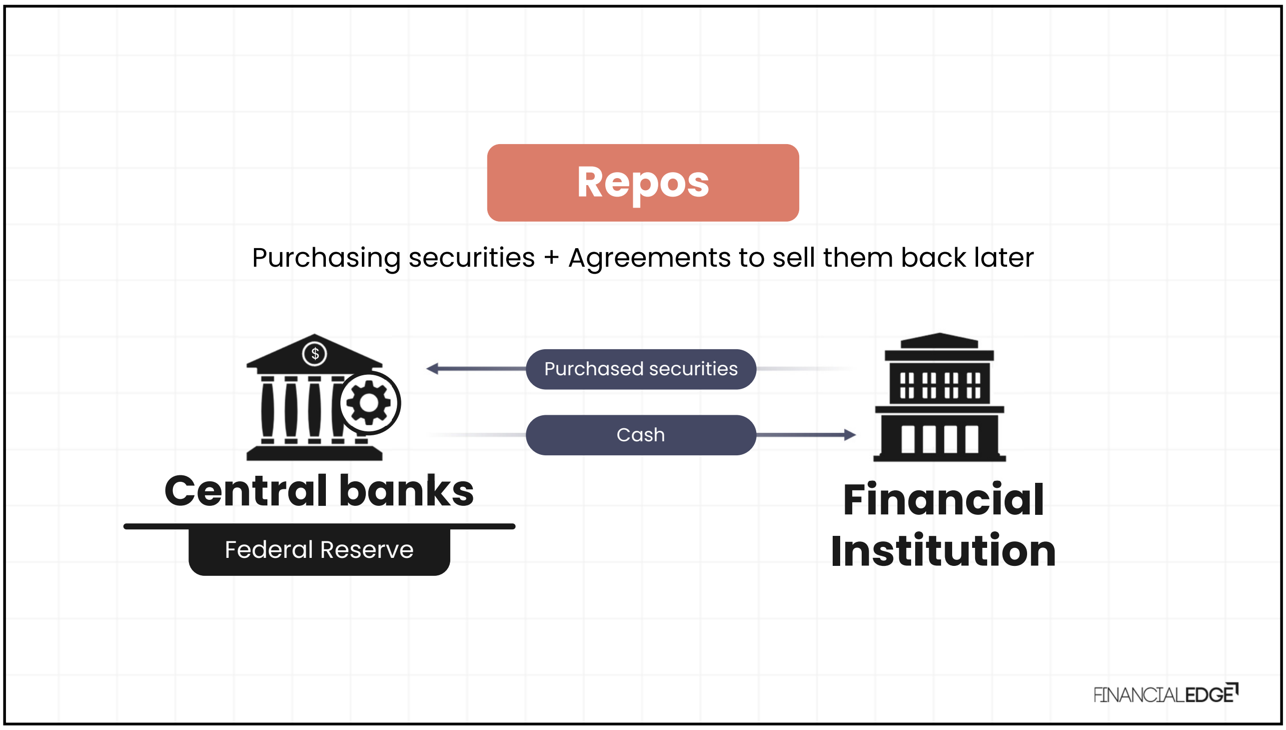
Why are Repos so Important?

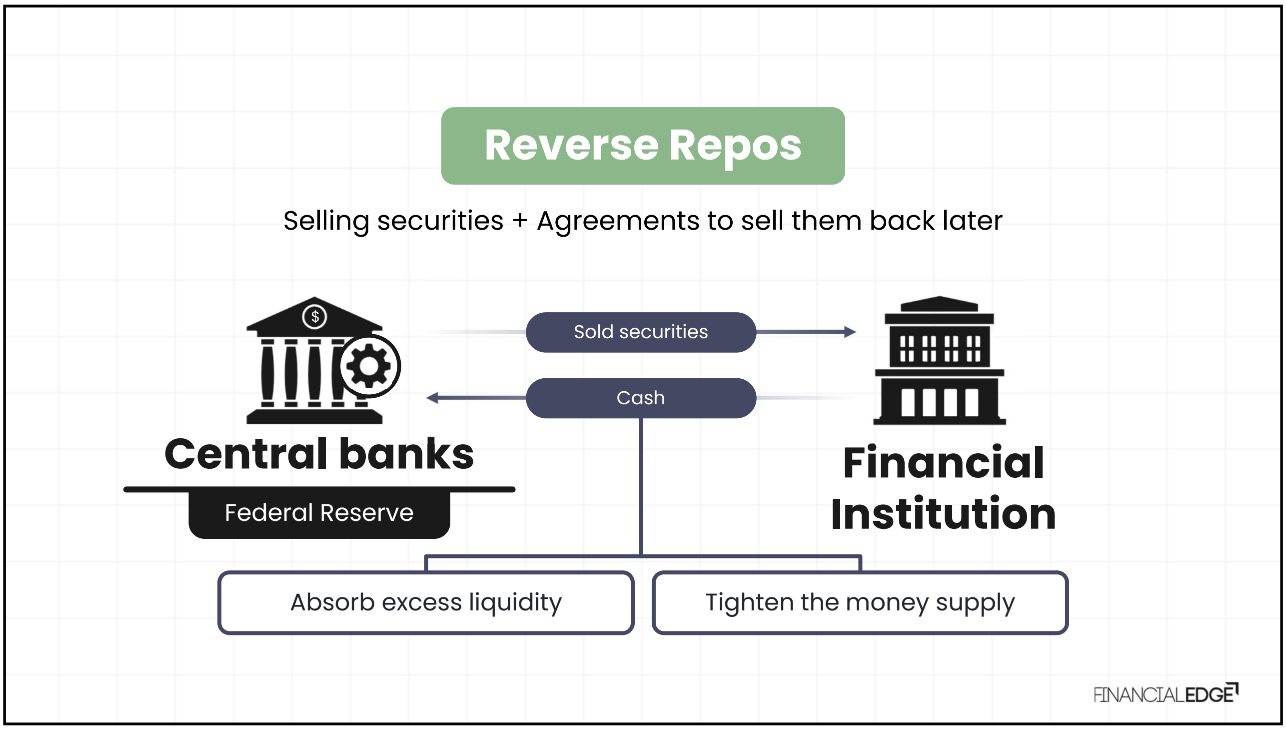
Repos provide market participants with access to low-cost, secured financing to purchase securities




Borrow bond
Bond Buyer
Trader
Reverse
Repo Party
Repo Party
Sell bonds
Cash
Institutional Investor
(e.g. Asset Manager)
Reverse Repo Party
Bond as
collateral
Repo Party
Cash
FINANCIALEDGE


Repos
Reverse repos
Central banks
Federal Reserve
Monetary policy
FINANCIALEDGE


Repos
Purchasing securities + Agreements to sell them back later
Purchased securities
Cash
Central banks
Federal Reserve
Financial Institution
FINANCIALEDGE


Reverse Repos
Selling securities + Agreements to sell them back later
Sold securities
Cash
Central banks
Federal Reserve
Financial Institution
Absorb excess liquidity
Tighten the money supply
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SOFR

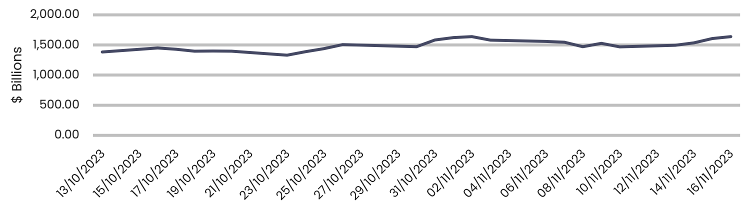
Secured overnight financing rate

Cost of **borrowing cash overnight**

US Treasury securities

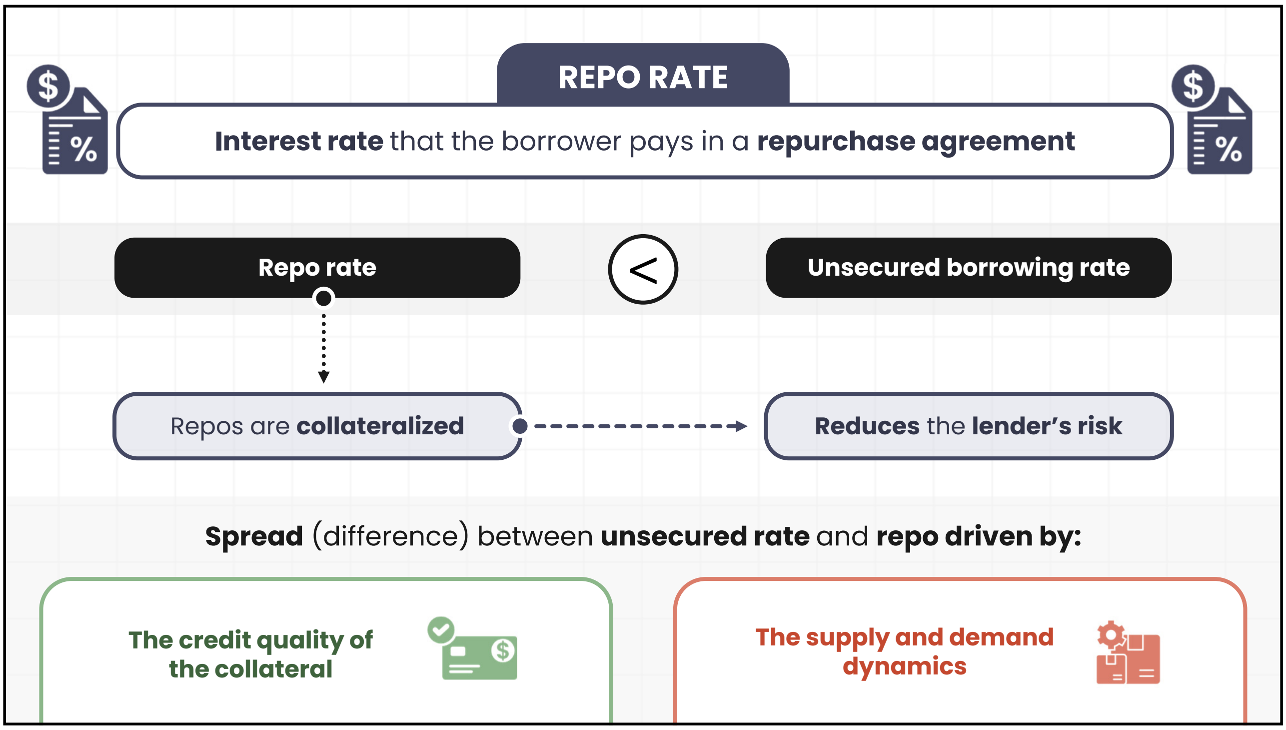
$1.3 trillion - $1.6 trillion | Per day

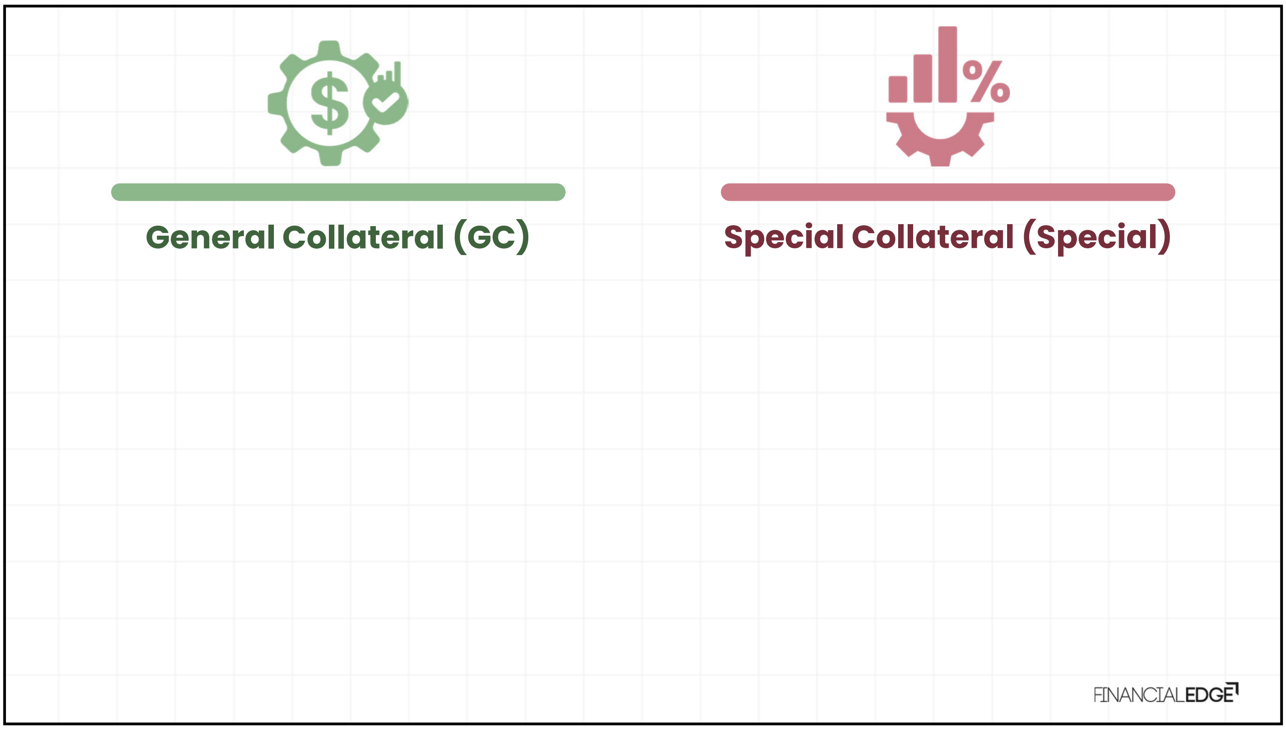
Daily USD Secured overnight financing rate (SOFR) volume



Source: New York Fed

The Repo Rate


REPO RATE
Interest rate that the borrower pays in a repurchase agreement
Repo rate
<
Unsecured borrowing rate
Repos are collateralized
Reduces the lender's risk
Spread (difference) between unsecured rate and repo driven by:
The credit quality of the collateral
The supply and demand dynamics


General Collateral (GC)
Special Collateral (Special)

General Collateral (GC)

Cash-driven transactions → Lender indifferent to bond used as collateral

So long as it meets:

Credit standards | **Liquidity standards**

Specific bond isn't as important as its **general quality**

Typically, **one repo rate** for **all** government **bonds** from the **same issuer**

This rate reflects the **general market demand** for **cash**

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Special Collateral (Special)

Specific bond is in **high demand** in repo market → Bond becomes **"special"**

- Scarcity
- Market conditions
- Other specific needs

The repo transaction is **security-driven**

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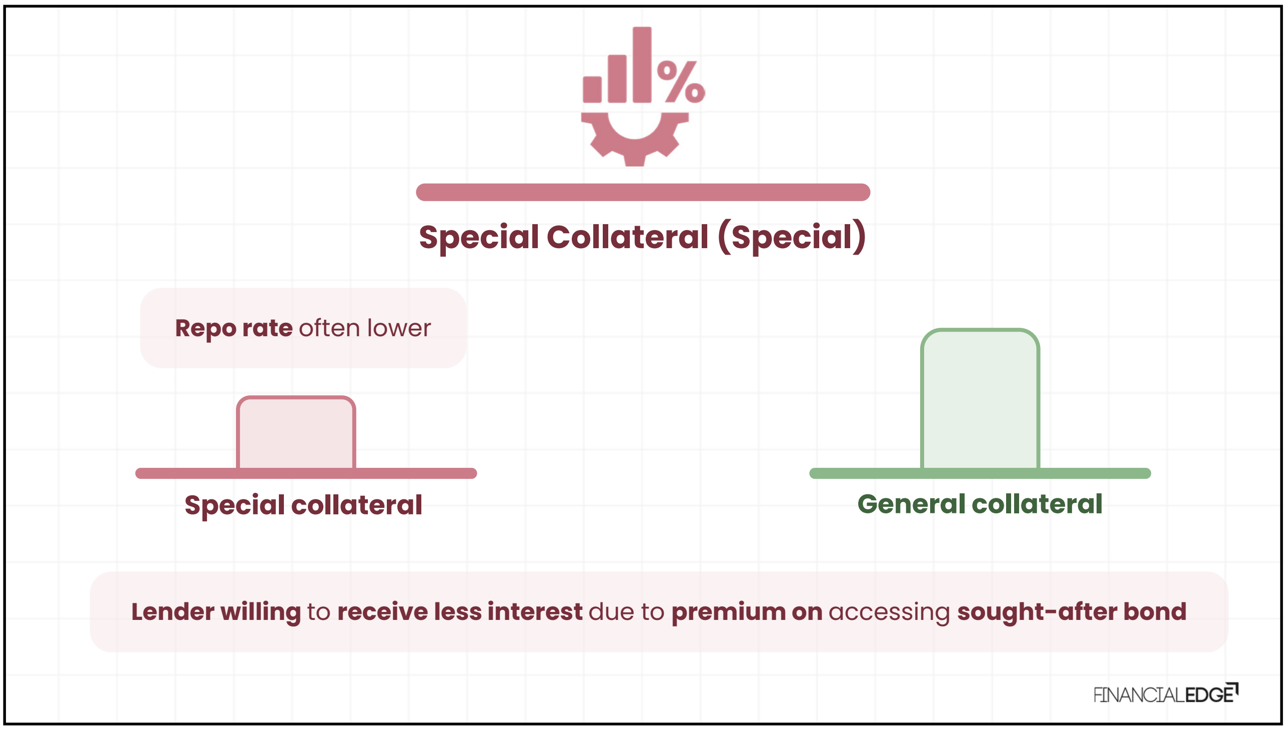
Special Collateral (Special)
Repo rate often lower
Special collateral
General collateral
Lender willing to receive less interest due to premium on accessing sought-after bond
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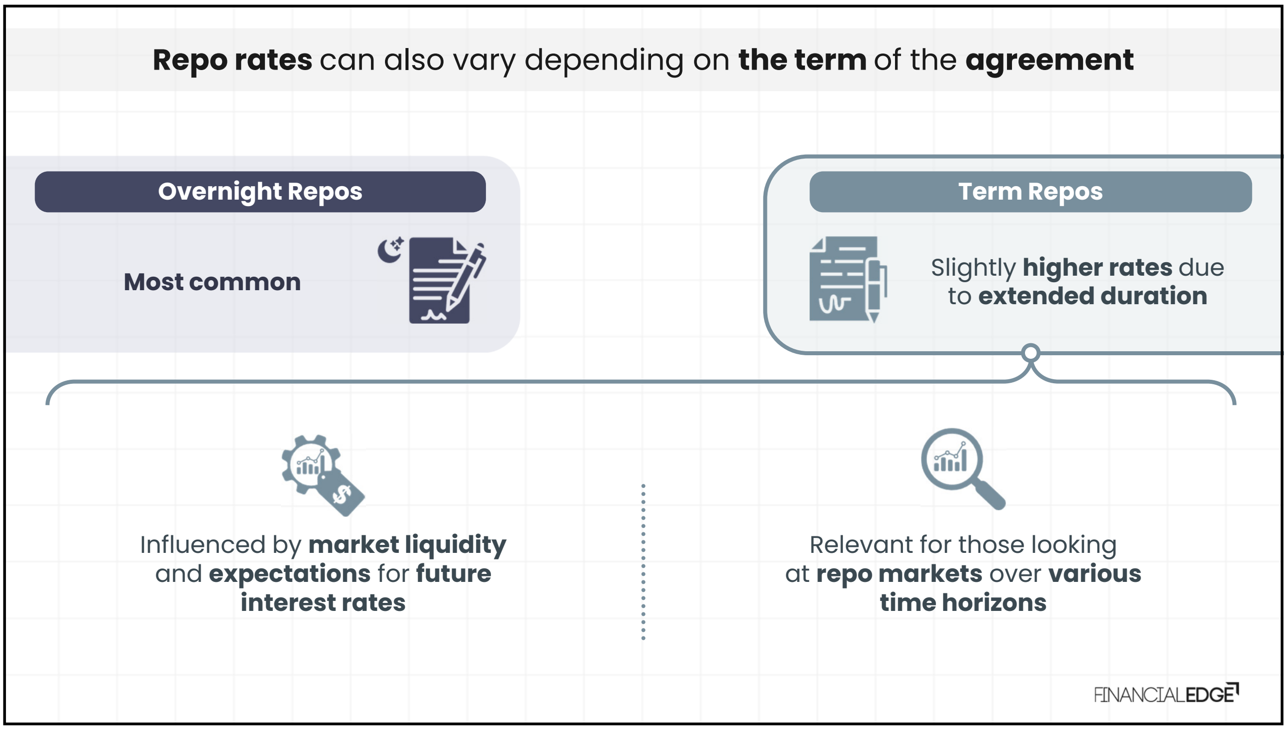
Repo rates can also vary depending on the term of the agreement
Overnight Repos
Most common
Term Repos
Slightly higher rates due to extended duration
Influenced by market liquidity and expectations for future interest rates
Relevant for those looking at repo markets over various time horizons
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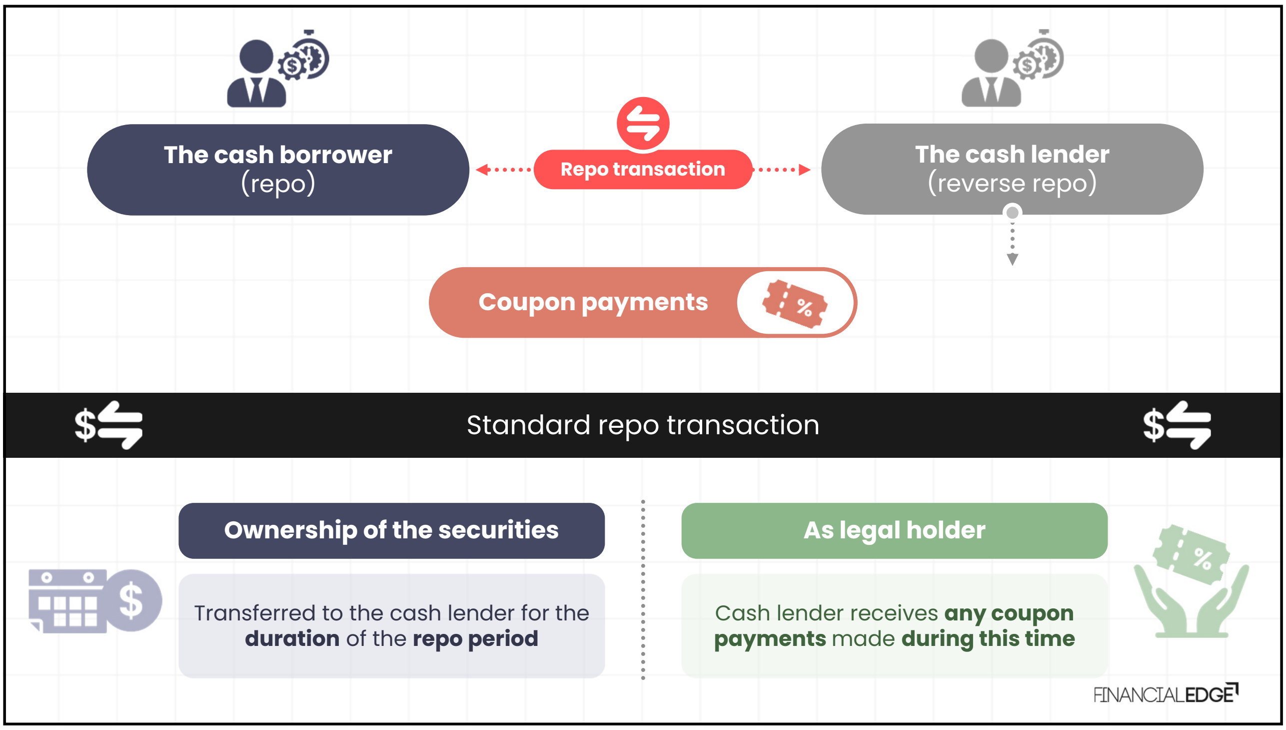
Corporate bonds

Mortgage-backed securities

Carry more credit risk than government bonds

Repos backed by such collateral
have **higher rates** to reflect the **added risk**

Handling Coupon Payments


The cash borrower
(repo)
Repo transaction
The cash lender
(reverse repo)
Coupon payments
Standard repo transaction
Ownership of the securities
Transferred to the cash lender for the duration of the repo period
As legal holder
Cash lender receives any coupon payments made during this time
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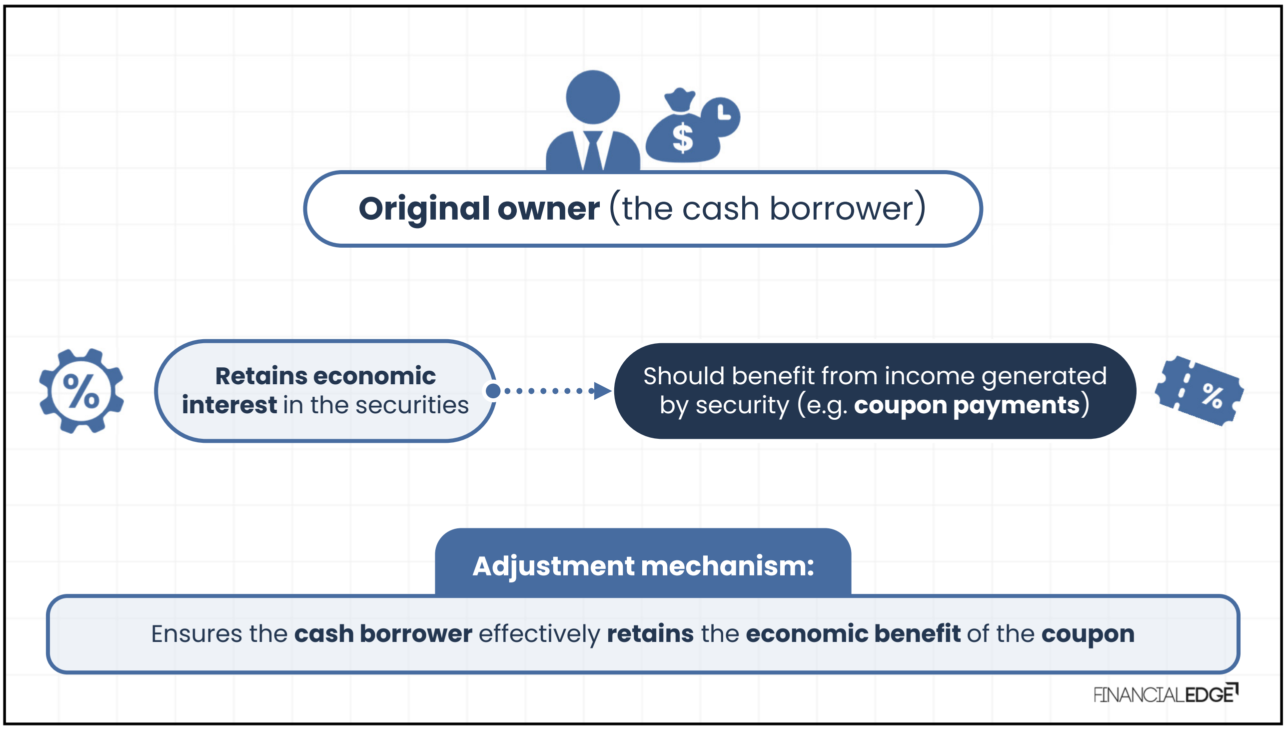
Original owner (the cash borrower)
Retains economic interest in the securities
Should benefit from income generated by security (e.g. coupon payments)
Adjustment mechanism:
Ensures the cash borrower effectively retains the economic benefit of the coupon
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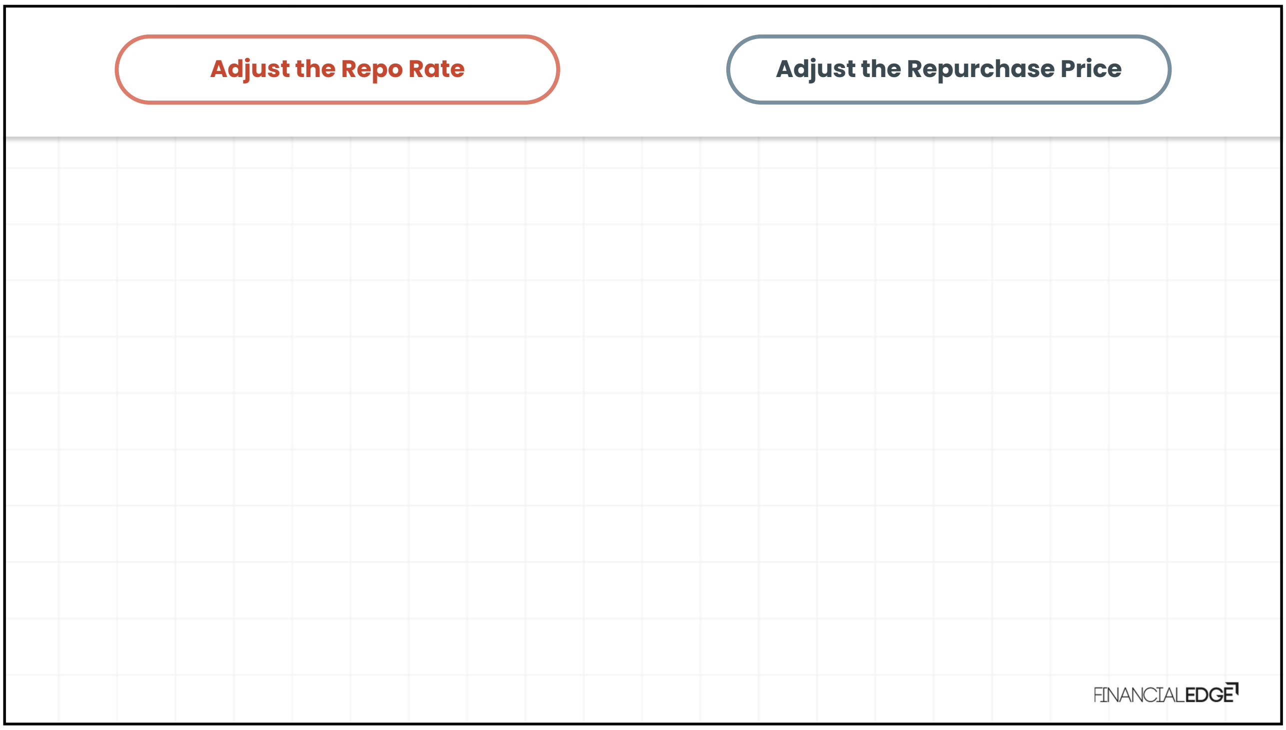
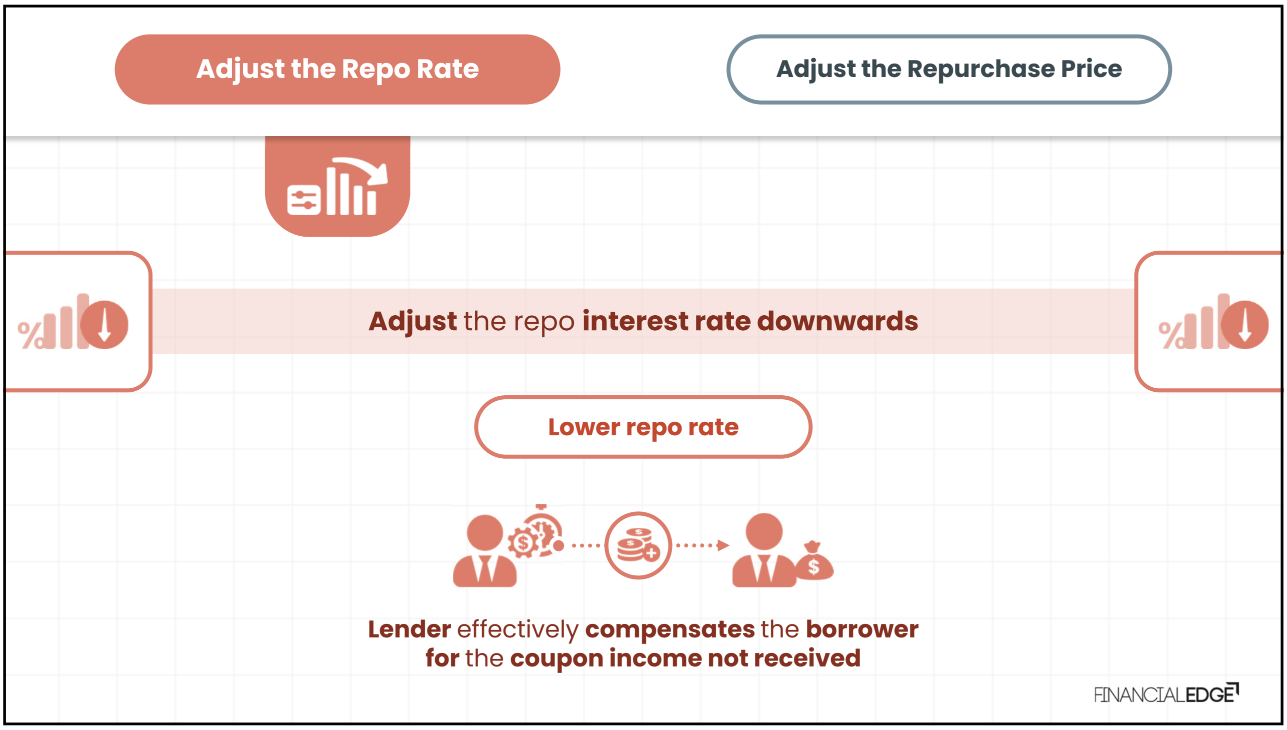

Adjust the Repo Rate
Adjust the Repurchase Price
FINANCIALEDGE


Adjust the Repo Rate
Adjust the Repurchase Price
Adjust the repo interest rate downwards
Lower repo rate
Lender effectively compensates the borrower for the coupon income not received
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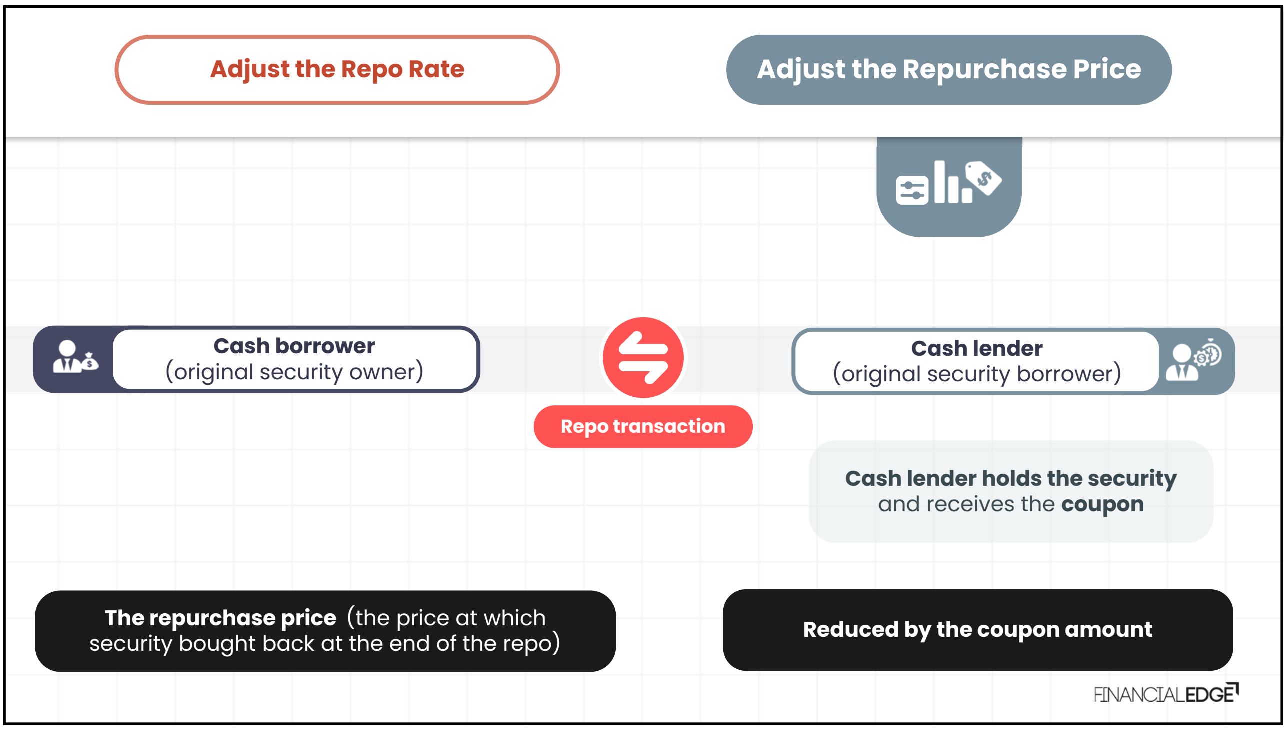
Adjust the Repo Rate
Adjust the Repurchase Price
Cash borrower (original security owner)
Repo transaction
Cash lender (original security borrower)
Cash lender holds the security and receives the coupon
The repurchase price (the price at which security bought back at the end of the repo)
Reduced by the coupon amount
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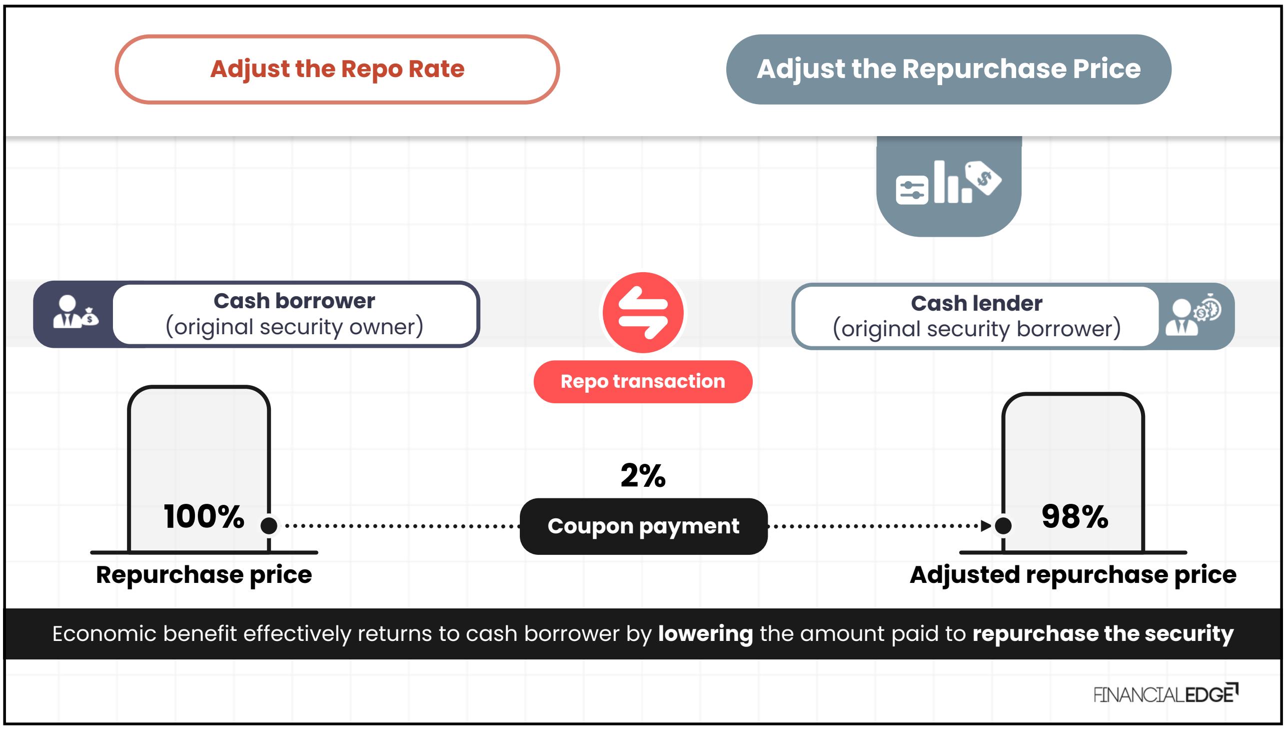
Adjust the Repo Rate
Adjust the Repurchase Price
Cash borrower (original security owner)
Repo transaction
Cash lender (original security borrower)
100%
Repurchase price
2%
Coupon payment
98%
Adjusted repurchase price
Economic benefit effectively returns to cash borrower by lowering the amount paid to repurchase the security
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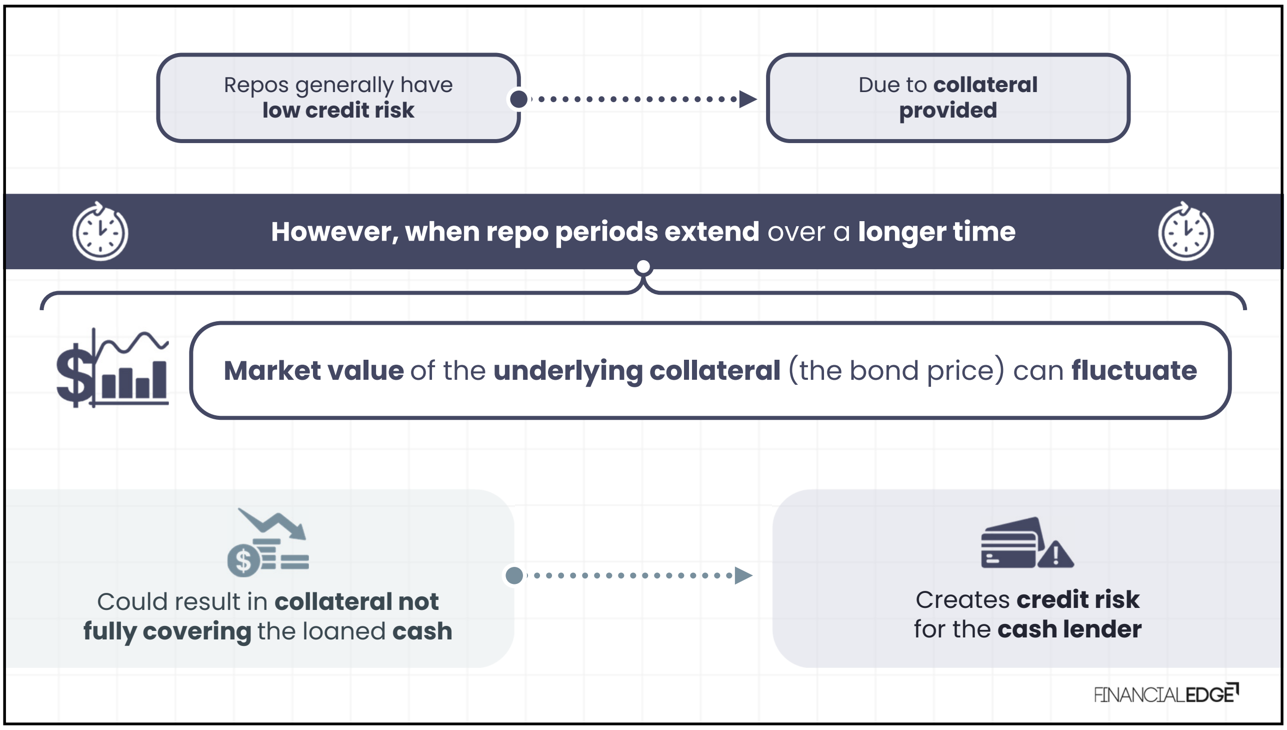
Credit Risk in Repos



INITIAL MARGIN

VARIATION MARGIN

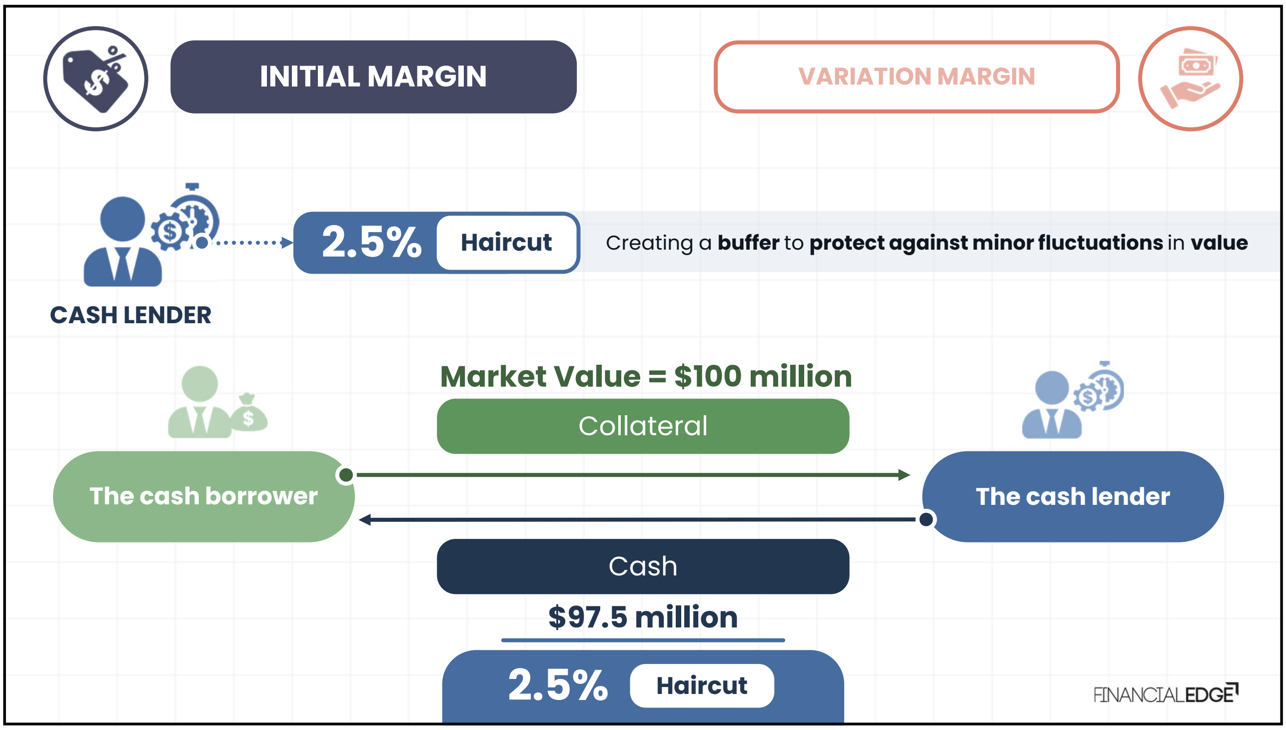
INITIAL MARGIN

VARIATION MARGIN

Ensure the **market value** of the **securities** exceeds the amount of **cash lent**

"Haircut"

Expressed as a percentage reduction from the **market value** of the **collateral**


INITIAL MARGIN
VARIATION MARGIN
CASH LENDER
2.5% Haircut
Creating a buffer to protect against minor fluctuations in value
Market Value = $100 million
Collateral
The cash borrower
The cash lender
Cash
$97.5 million
2.5% Haircut
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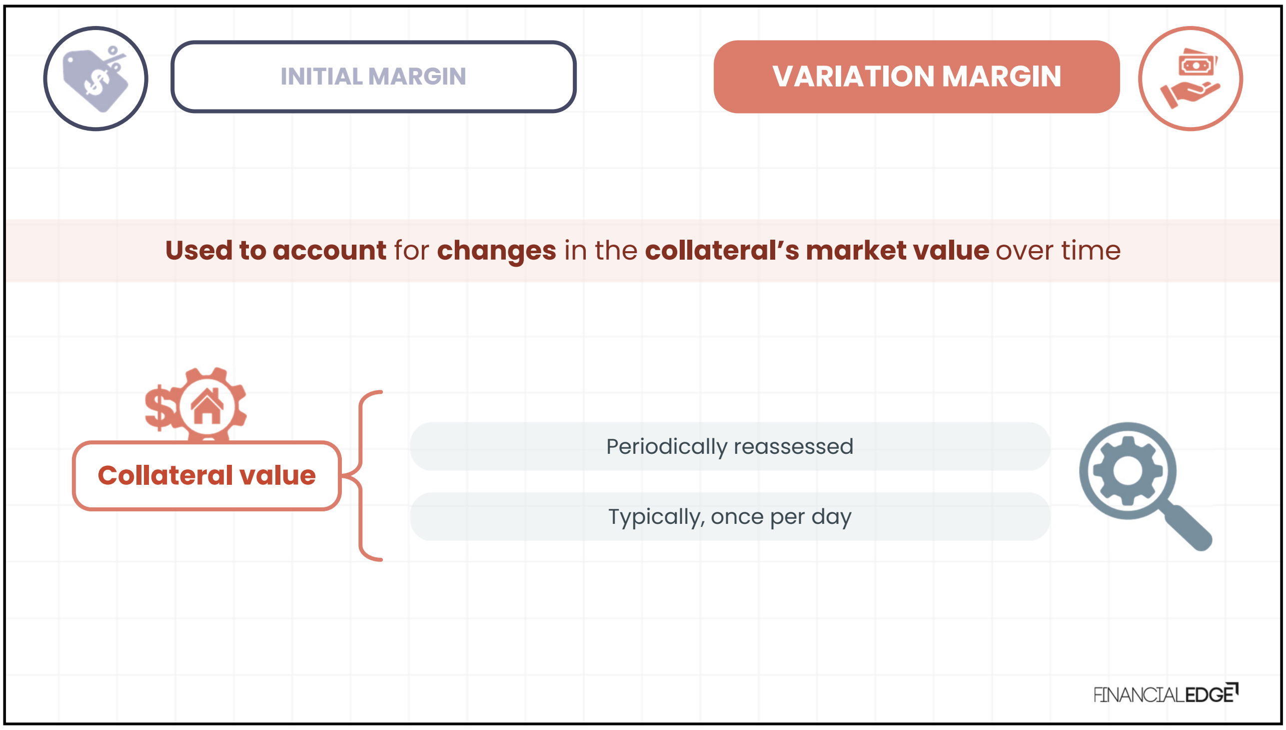
INITIAL MARGIN
VARIATION MARGIN
Used to account for changes in the collateral's market value over time
Collateral value
Periodically reassessed
Typically, once per day
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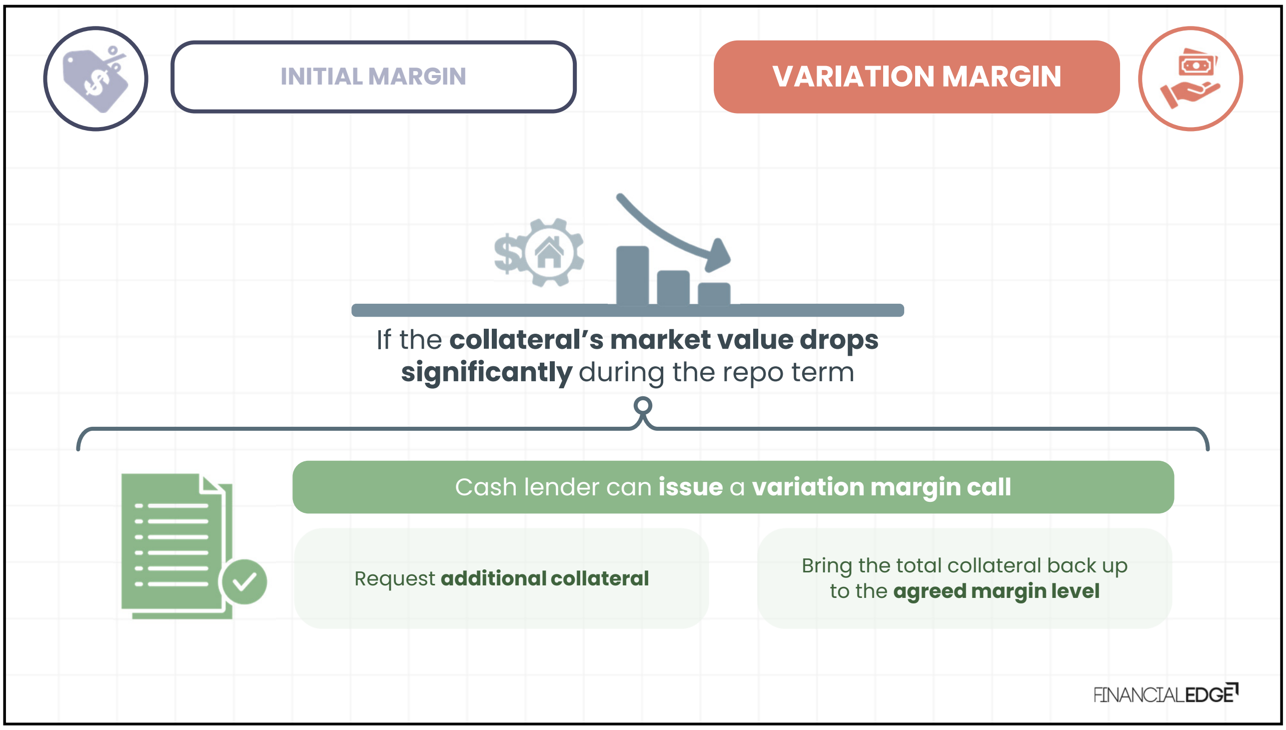
INITIAL MARGIN
VARIATION MARGIN
If the collateral's market value drops significantly during the repo term
Cash lender can issue a variation margin call
Request additional collateral
Bring the total collateral back up to the agreed margin level
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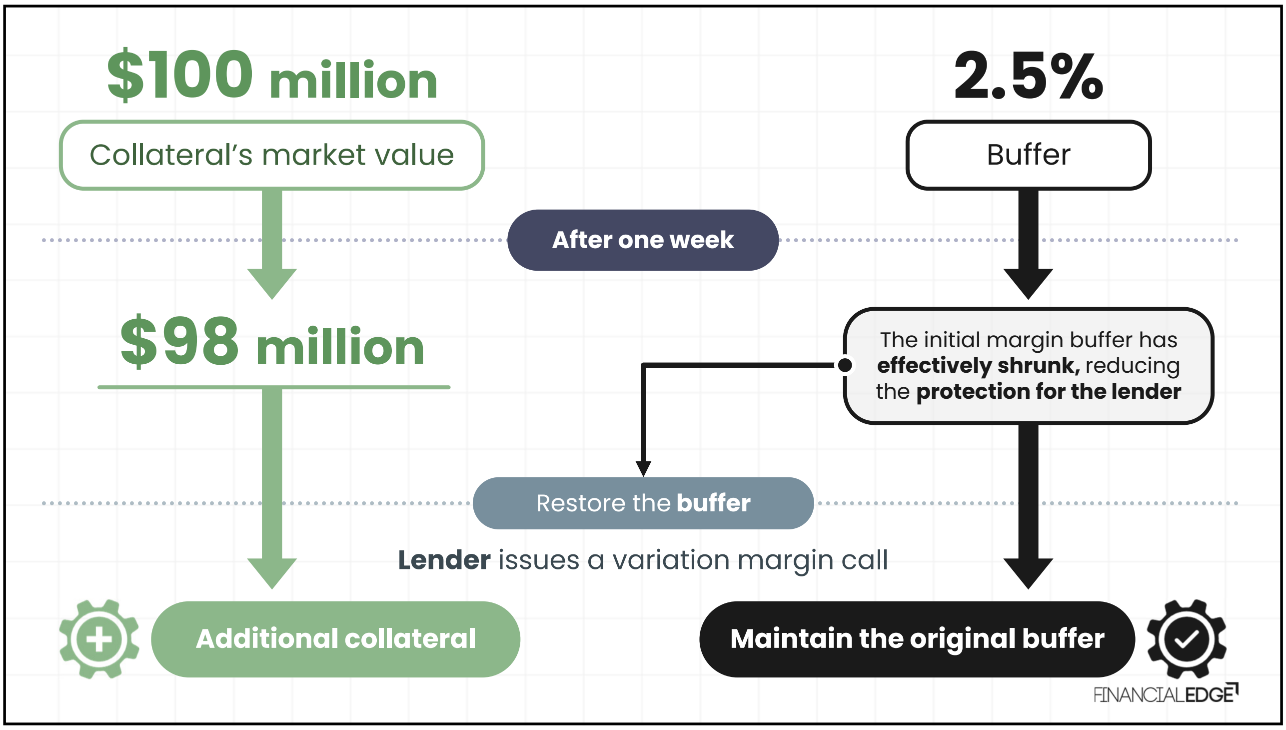
$100 million
Collateral's market value
2.5%
Buffer
After one week
$98 million
The initial margin buffer has effectively shrunk, reducing the protection for the lender
Restore the buffer
Lender issues a variation margin call
Additional collateral
Maintain the original buffer
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Tri-Party Repos

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Tri-party repos

Tri-party agent: central role in managing the **collateral throughout the transaction**

The agent

BNY Mellon

JPMorgan

Oversees the **collateral's administration**

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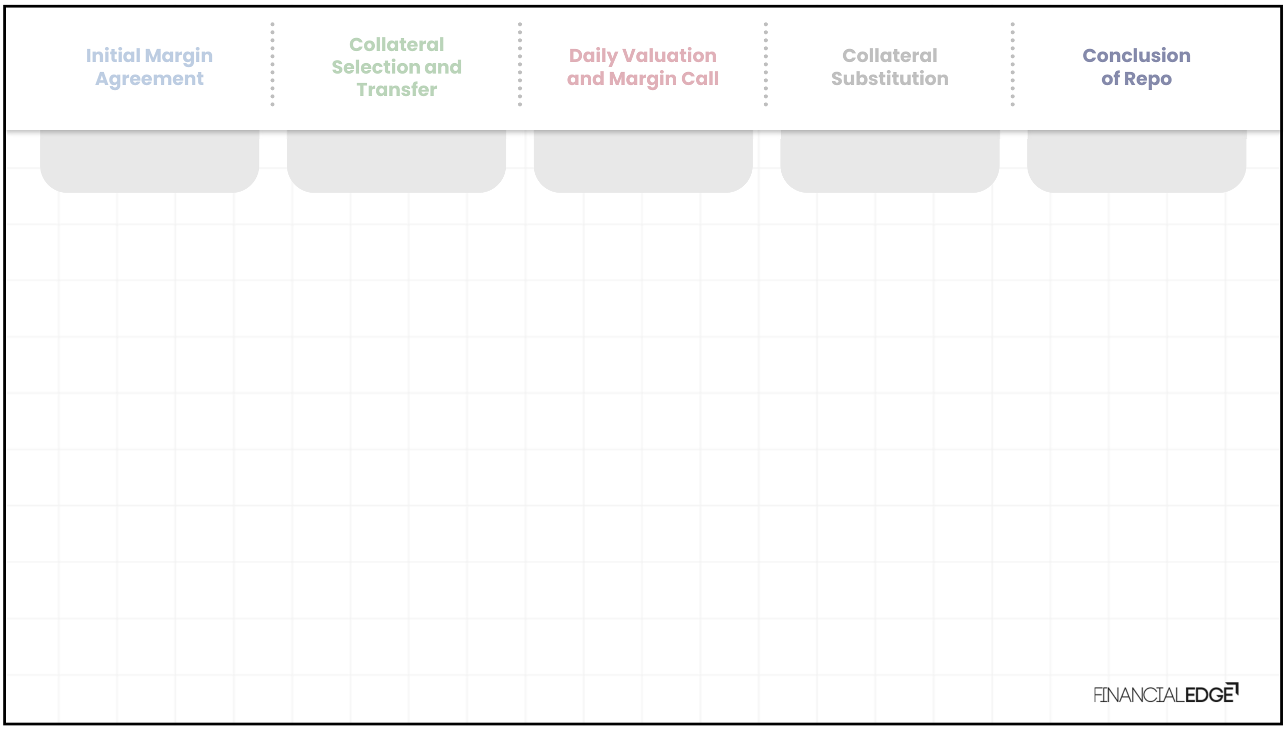
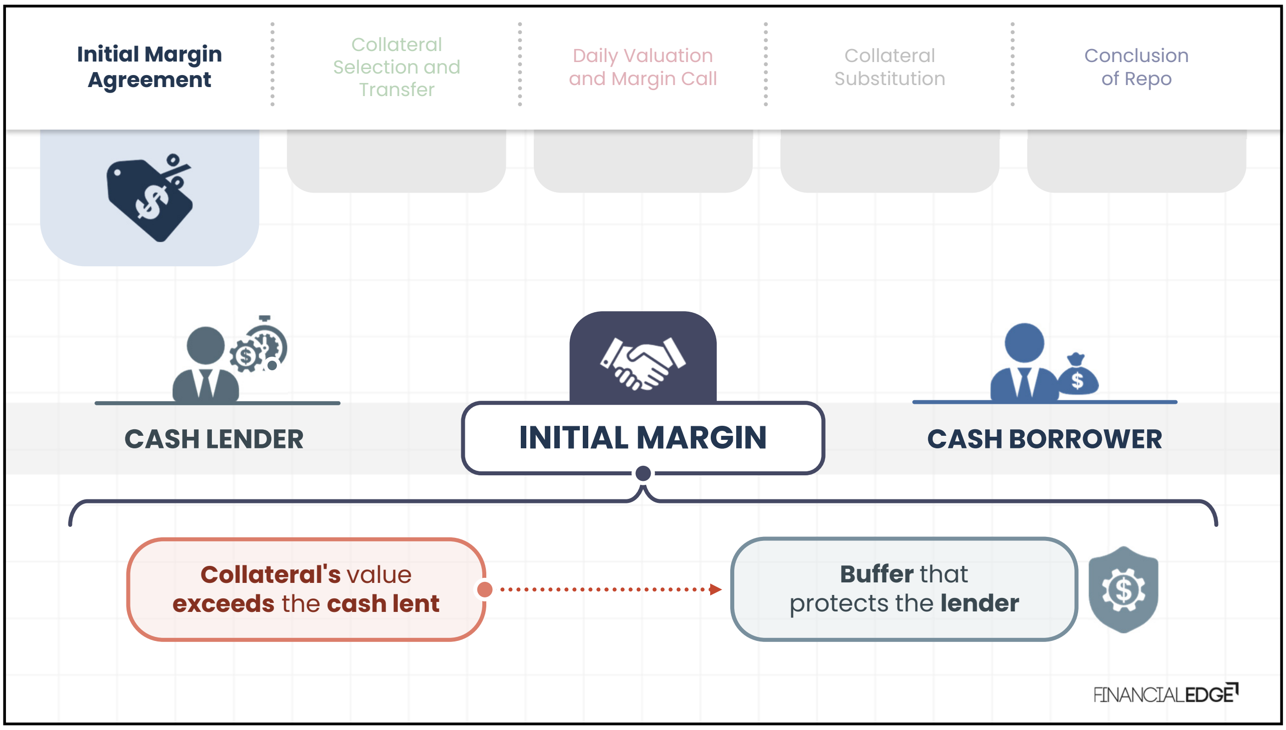

Initial Margin Agreement
Collateral Selection and Transfer
Daily Valuation and Margin Call
Collateral Substitution
Conclusion of Repo
FINANCIALEDGE


Initial Margin Agreement
Collateral Selection and Transfer
Daily Valuation and Margin Call
Collateral Substitution
Conclusion of Repo
CASH LENDER
INITIAL MARGIN
CASH BORROWER
Collateral's value exceeds the cash lent
Buffer that protects the lender
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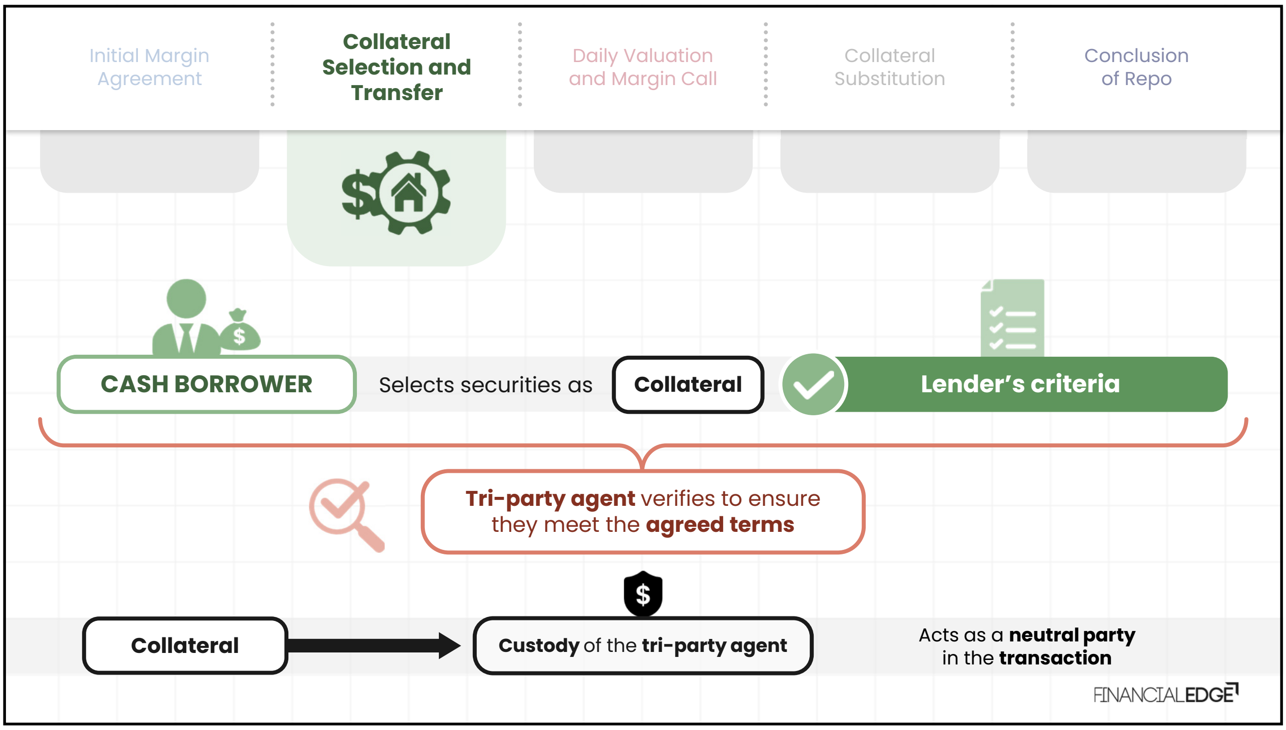
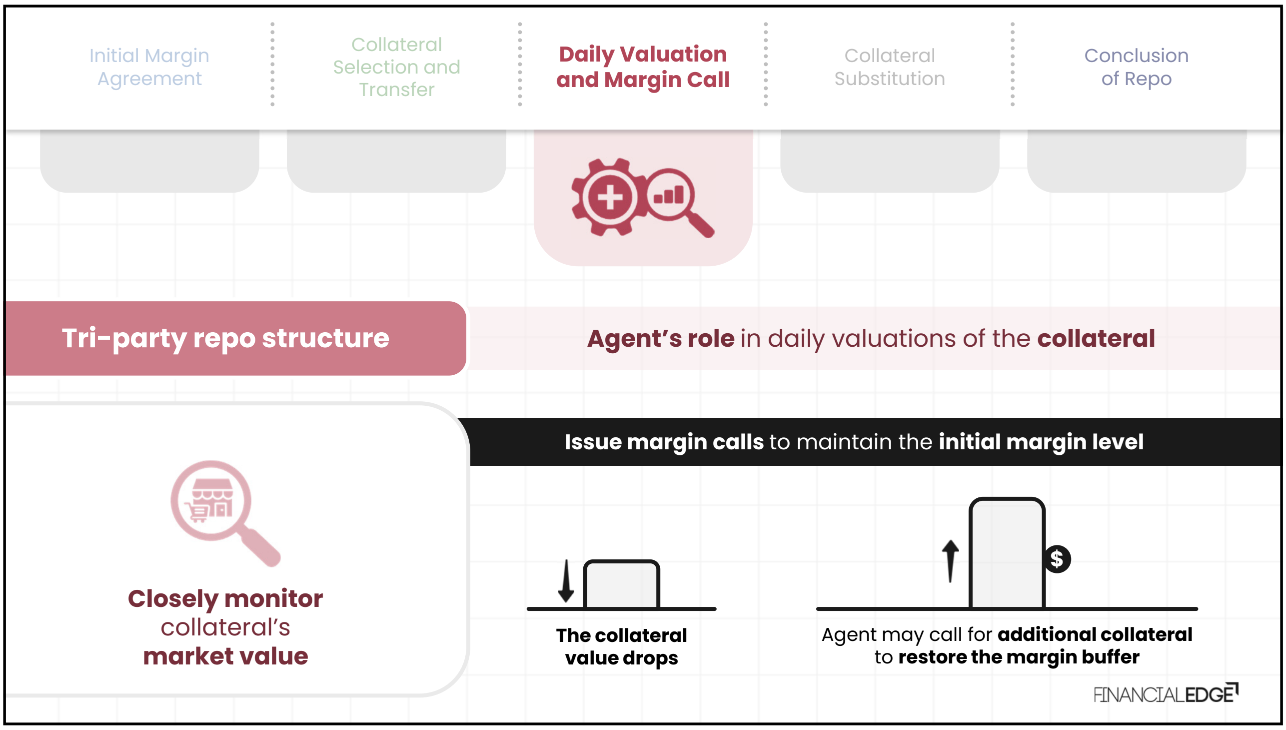
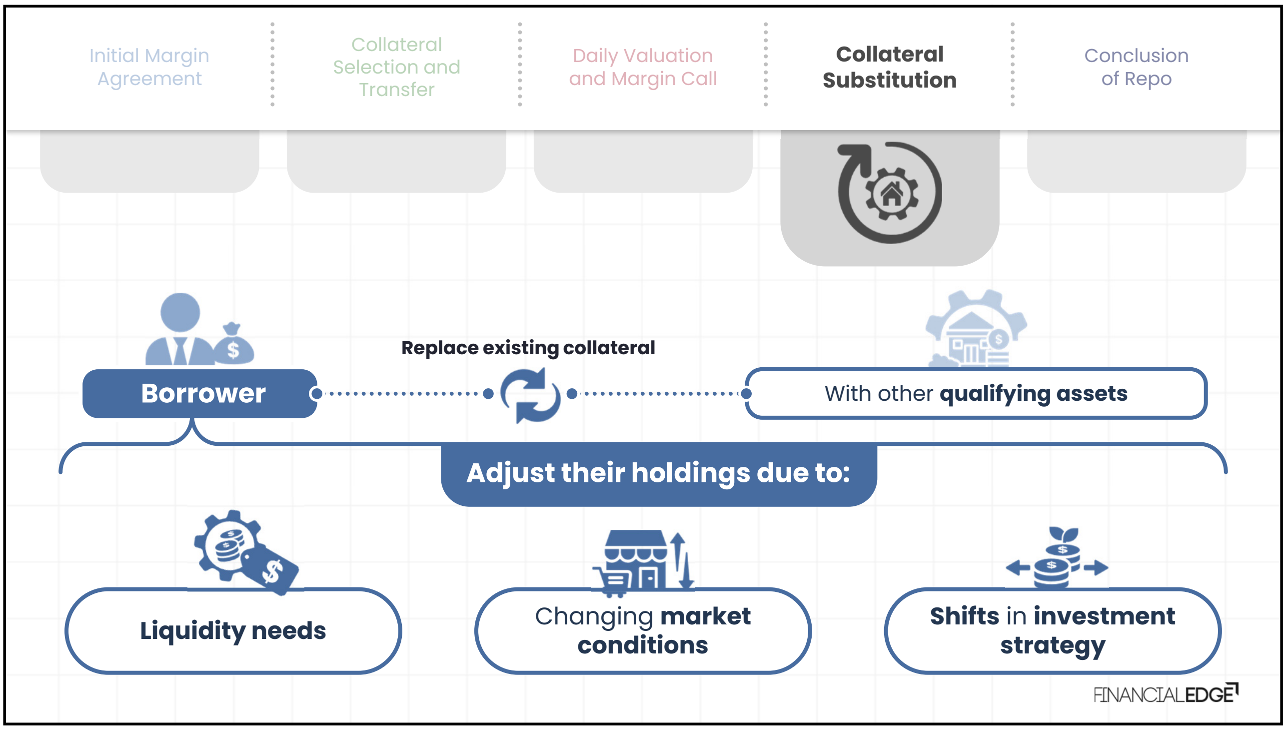

Initial Margin Agreement
Collateral Selection and Transfer
Daily Valuation and Margin Call
Collateral Substitution
Conclusion of Repo
CASH BORROWER
Selects securities as
Collateral
Lender's criteria
Tri-party agent verifies to ensure they meet the agreed terms
Collateral
Custody of the tri-party agent
Acts as a neutral party in the transaction


Initial Margin Agreement
Collateral Selection and Transfer
Daily Valuation and Margin Call
Collateral Substitution
Conclusion of Repo
Tri-party repo structure
Agent's role in daily valuations of the collateral
Closely monitor collateral's market value
Issue margin calls to maintain the initial margin level
The collateral value drops
Agent may call for additional collateral to restore the margin buffer


Initial Margin Agreement
Collateral Selection and Transfer
Daily Valuation and Margin Call
Collateral Substitution
Conclusion of Repo
Borrower
Replace existing collateral
With other qualifying assets
Adjust their holdings due to:
Liquidity needs
Changing market conditions
Shifts in investment strategy
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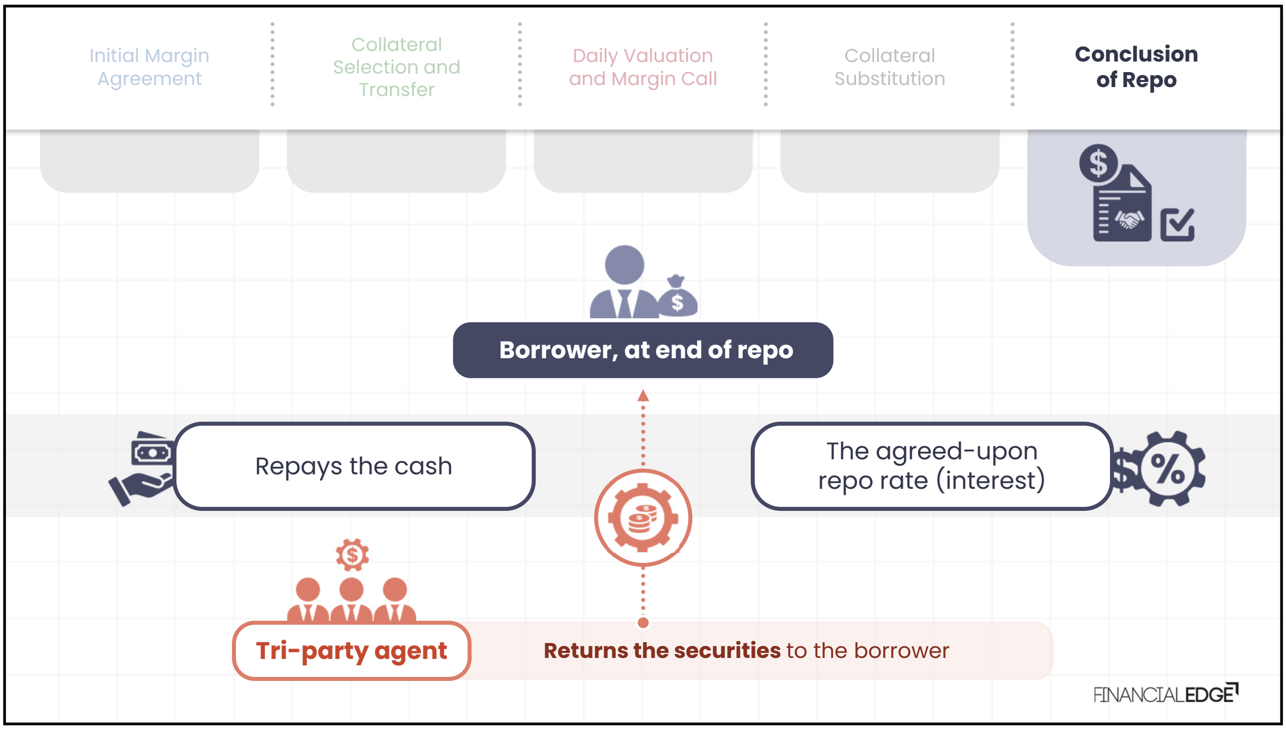
Initial Margin Agreement
Collateral Selection and Transfer
Daily Valuation and Margin Call
Collateral Substitution
Conclusion of Repo
Borrower, at end of repo
Repays the cash
The agreed-upon repo rate (interest)
Tri-party agent
Returns the securities to the borrower
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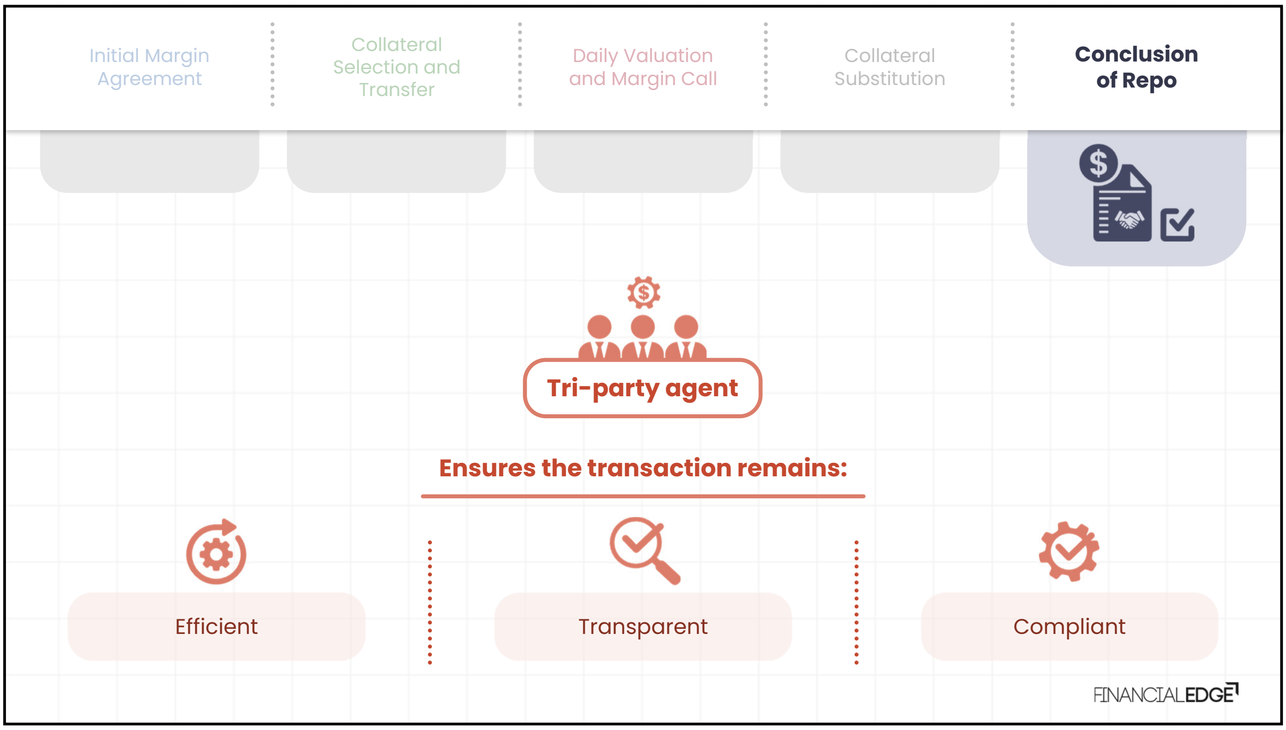
Initial Margin Agreement
Collateral Selection and Transfer
Daily Valuation and Margin Call
Collateral Substitution
Conclusion of Repo
Tri-party agent
Ensures the transaction remains:
Efficient
Transparent
Compliant
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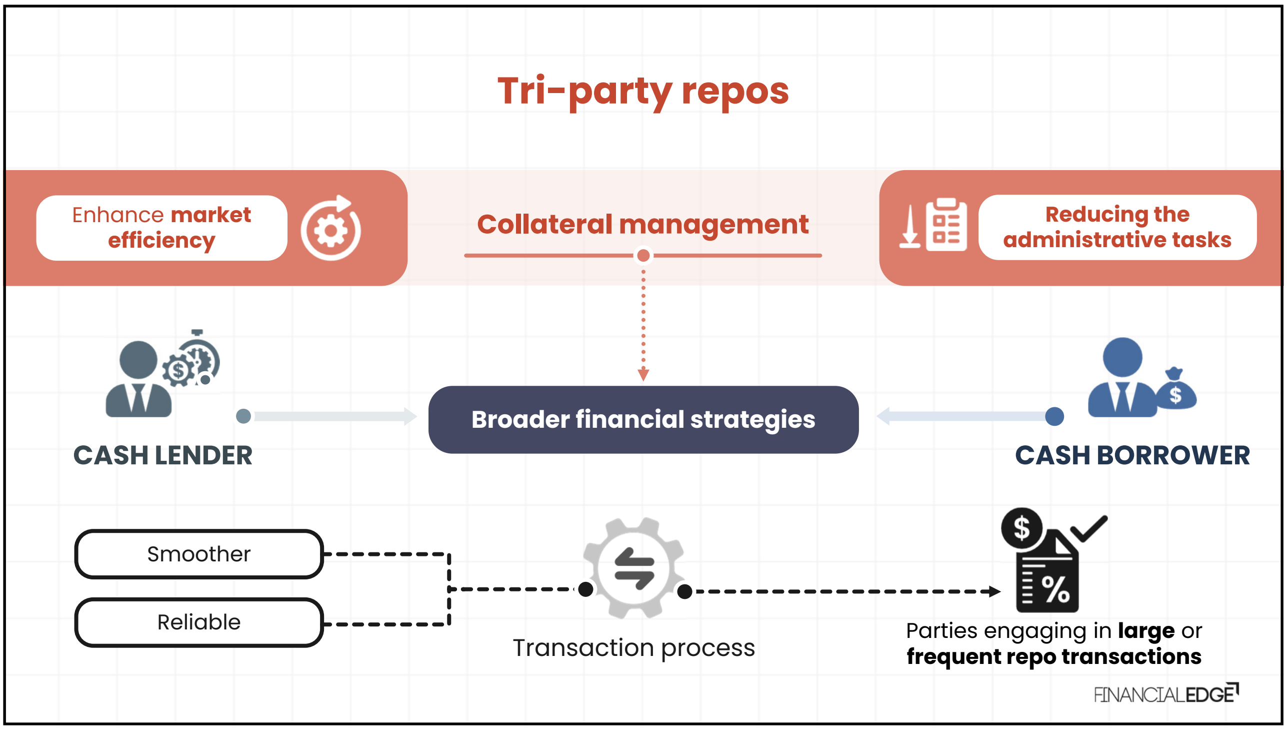
Tri-party repos
Enhance market efficiency
Collateral management
Reducing the administrative tasks
Broader financial strategies
CASH LENDER
CASH BORROWER
Smoother
Reliable
Transaction process
Parties engaging in large or frequent repo transactions
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