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Repositioning for Rising Rates

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Managing Cash in a Rising Rate Environment

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KLA-Tencor Corporation

KLA-Tencor Overview

Global Leader in Process Control since 1976

>40 years

~23,000 tools installed worldwide

~6,400 global employees

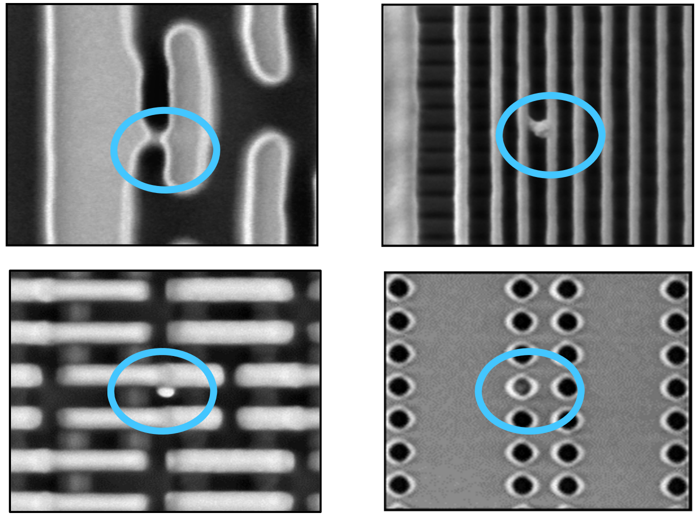
17 countries

$4.0B FY18 revenue

$2.1B R&D investment over last 4 fiscal years

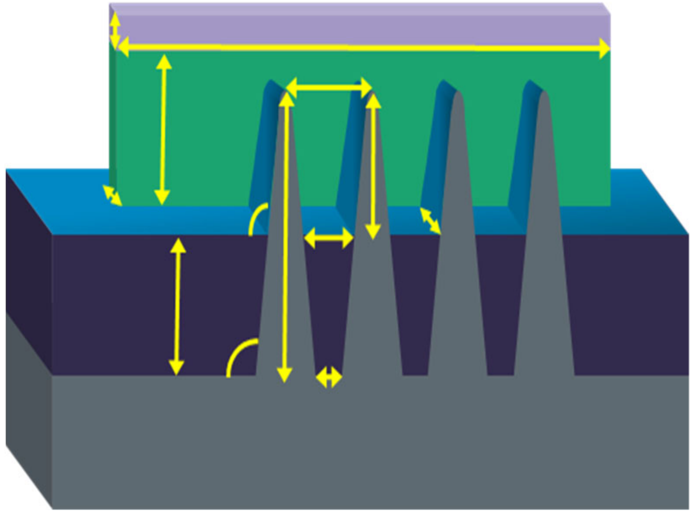
Our Core – Process Control

Inspection



You can't fix
what you can't find

Metrology

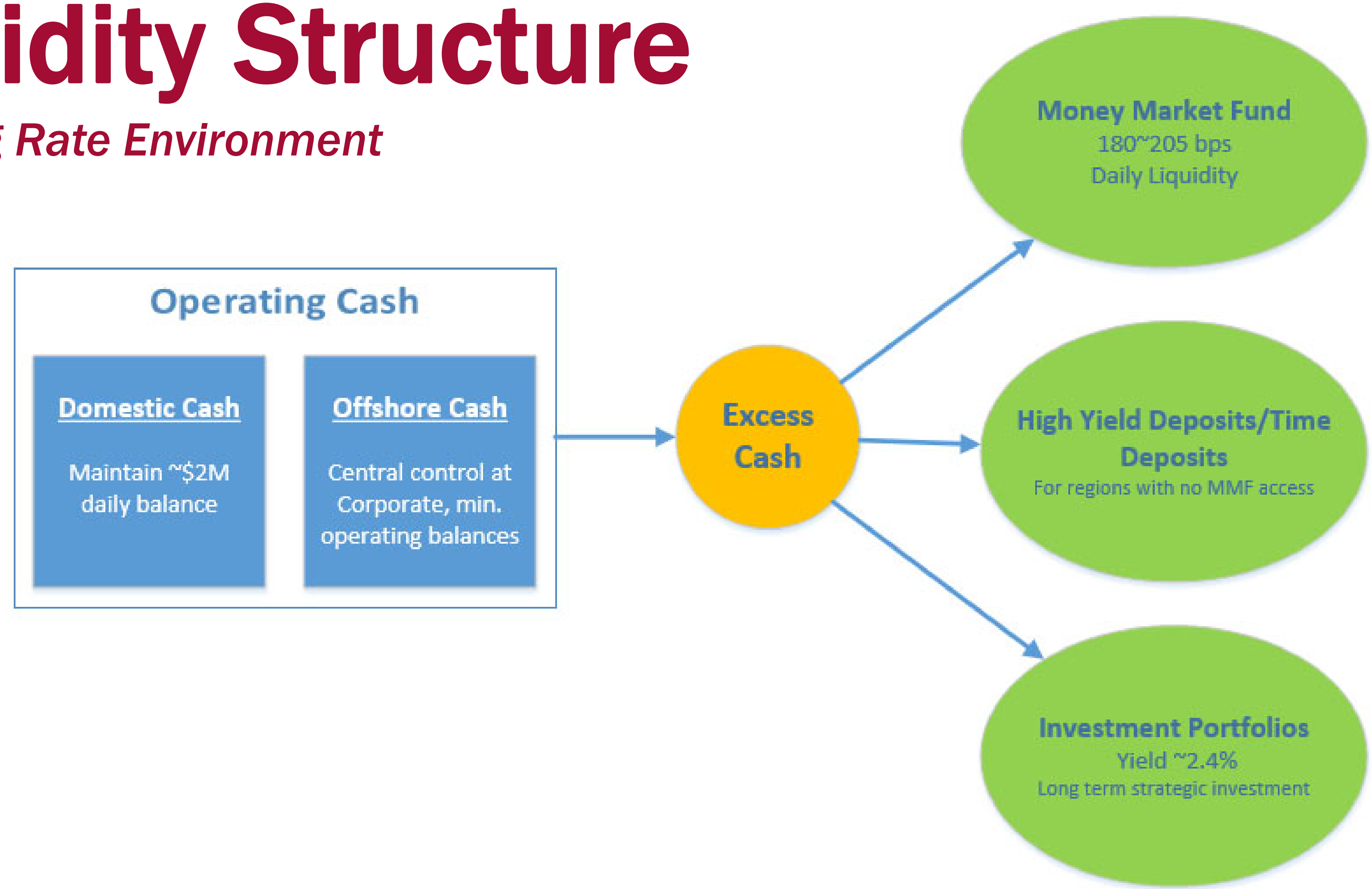


You can't control
what you can't measure

Process Control = Inspection + Metrology

Liquidity Structure

In a Rising Rate Environment



Liquidity Allocation/Strategies

- Maintain minimum operating cash balance in checking accounts
- Manage Daily Working Capital, send excess cash to MMF
- Proactively monitor Corporate Deposit rates, ensure we get a rate increase as the Fed hikes every time
- Based on cash flow projections, invest excess cash in Fixed Income portfolio
- Keep investment portfolio in short duration, increase holding in high credit floating securities
- In long run, active cash management with Fixed Income portfolio outperforms money market fund investment despite recent market volatilities

Investment Policy Summary

Objectives

- Preservation of capital, Liquidity, maximize total return

Credit Quality

- At least 2 credit quality ratings
- Minimum corporate debt security rating: A2/A
- Minimum weighted average portfolio quality: Aa3/AA-

Maximum Maturity: not to exceed 3 years

Target Duration: 1.25 yrs (75%-125%)

Diversification:

- 3% per issuer
- 20% industry concentration

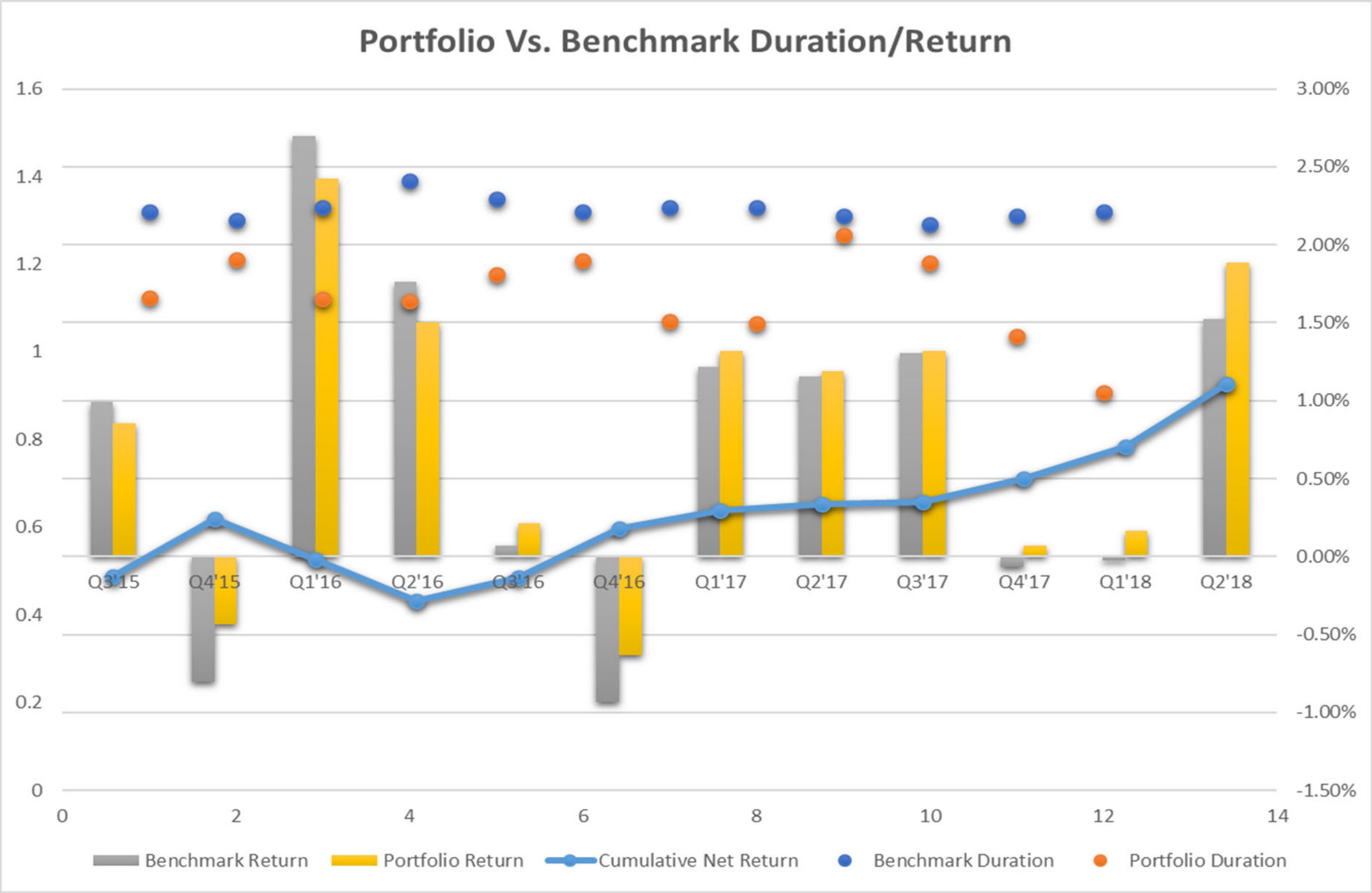
Sector limits:

- US Government:100%
- GSE:50%
- Corporate Debt: 60%
- Taxable Muni: 15% (Offshore not allowed)
- Sovereign: 30%

Portfolio Performance in a Rising Rate Environment

Portfolio Performance

- In a rate increasing environment, KLA portfolios benefit from shorter duration position
- Cumulative Net Return outperformed Benchmark in the last 8 quarters (Q3’16 to Q2’18)



Portfolio vs. MMF Returns Overview

Active Money Management has earned KLA-Tencor <u>$100M excess returns in 10 Years</u>

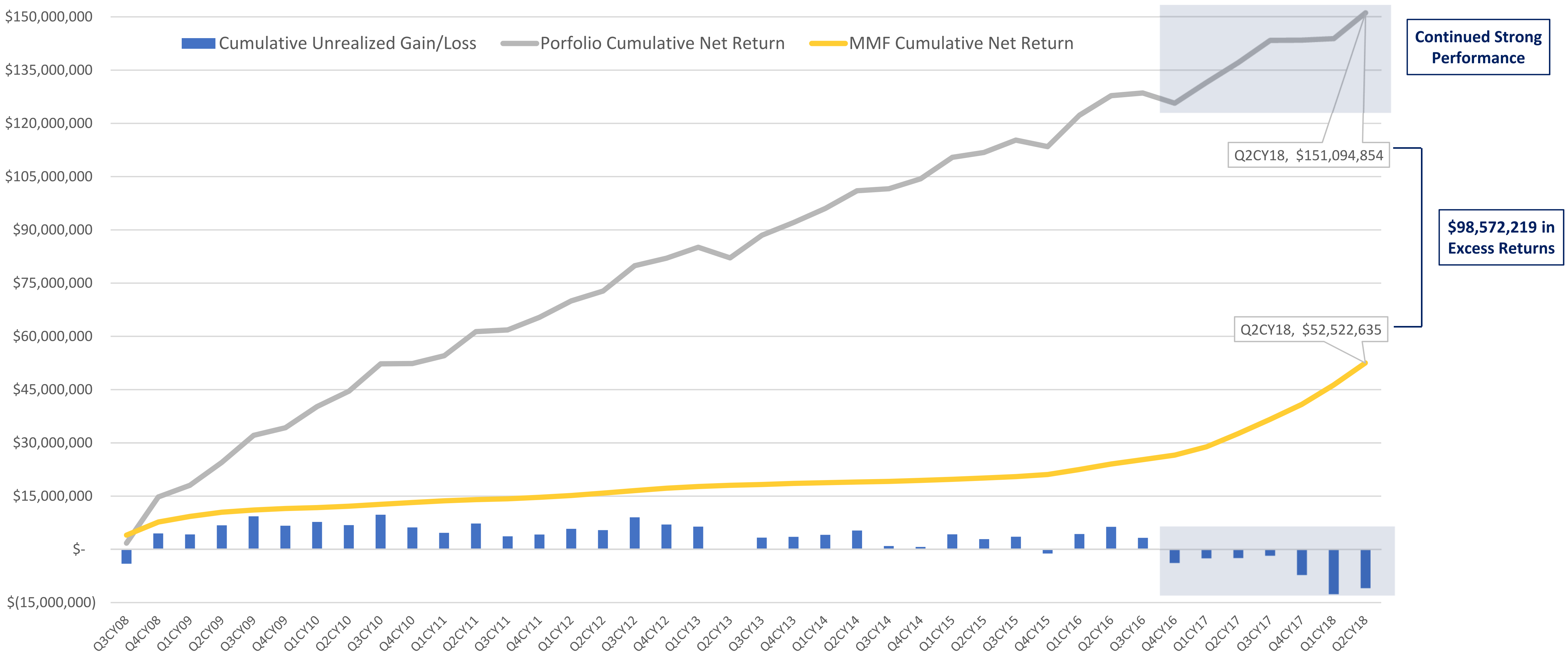
Portfolio has consistently outperformed MMF, despite a perceived volatility

- **Quarterly Net Return $ Performance:**
  - Portfolio has outperformed MMF in 79.5% of quarters, 91.5% of CY's
- **Quarterly Cumulative Net Return $ Performance:**
  - Portfolio has outperformed MMF in 97.5% of quarters, 100% of CY's

Financial Model

- **Compares Portfolio performance with theoretical MMF performance over the last 10 Years**
  - Portfolio Investments Cumulative 10Yr Net Return → +$151,094,635 M
  - MMF Investments Cumulative 10Yr Net Return → +$52,622,635 M

Recent Quarterly Performance



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Repositioning for Rising Rates:
Investment Manager's Perspective

Jim Palmer, CFA

Chief Investment Officer

U.S. Bancorp Asset Management, Inc.

usbancorp

Typical Investment Strategies

- Shorten portfolio duration
- Bulleted portfolio structure
- Targeting Fed meeting dates
- Floating-rate notes
- Money market funds and bank deposits

Impact of Rising Rates on Investor Behavior

- **Impact of increasing portfolio unrealized losses**
  - Permanent vs. temporary impairments
  - Company financials
- **Evolving portfolio objectives**
  - Book yield vs. total return
  - Absolute return vs. relative return
- **Evolving investment policy constraints**

Impact of Rising Rates on Trading Strategies

- **When extension trades make sense**
  - Market yields vs. Fed policy expectations
  - Simple break-even analysis
  - Fixed vs. floating-rate debt
- **Realized loss restrictions impact active trading**
  - Maintaining portfolio duration
  - Funding expected and unexpected cash withdrawals
    - Increased importance of cash flow forecasting
    - Match funding strategies

Impact of Rising Rates on Trading Strategies

- **Implications of buying discounted securities**
  - Mortgage and asset-backed securities
  - Agency callable securities
  - Special Mandatory Rights (SMR) securities

Disclosure

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Repositioning for Rising Rates:
Investment Consultant's Perspective

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Bridgebay®
Investment & Retirement Consulting
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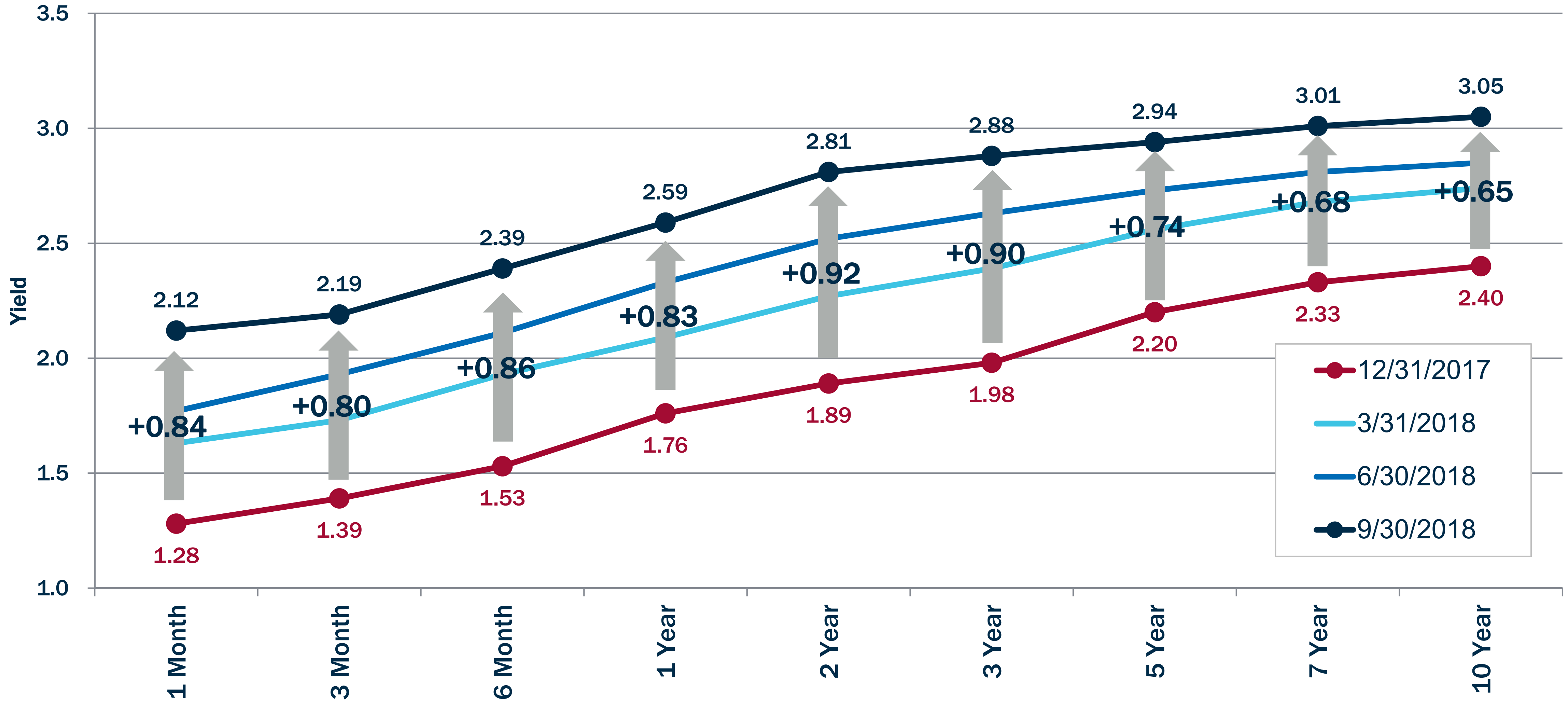
Treasury Yield Curve



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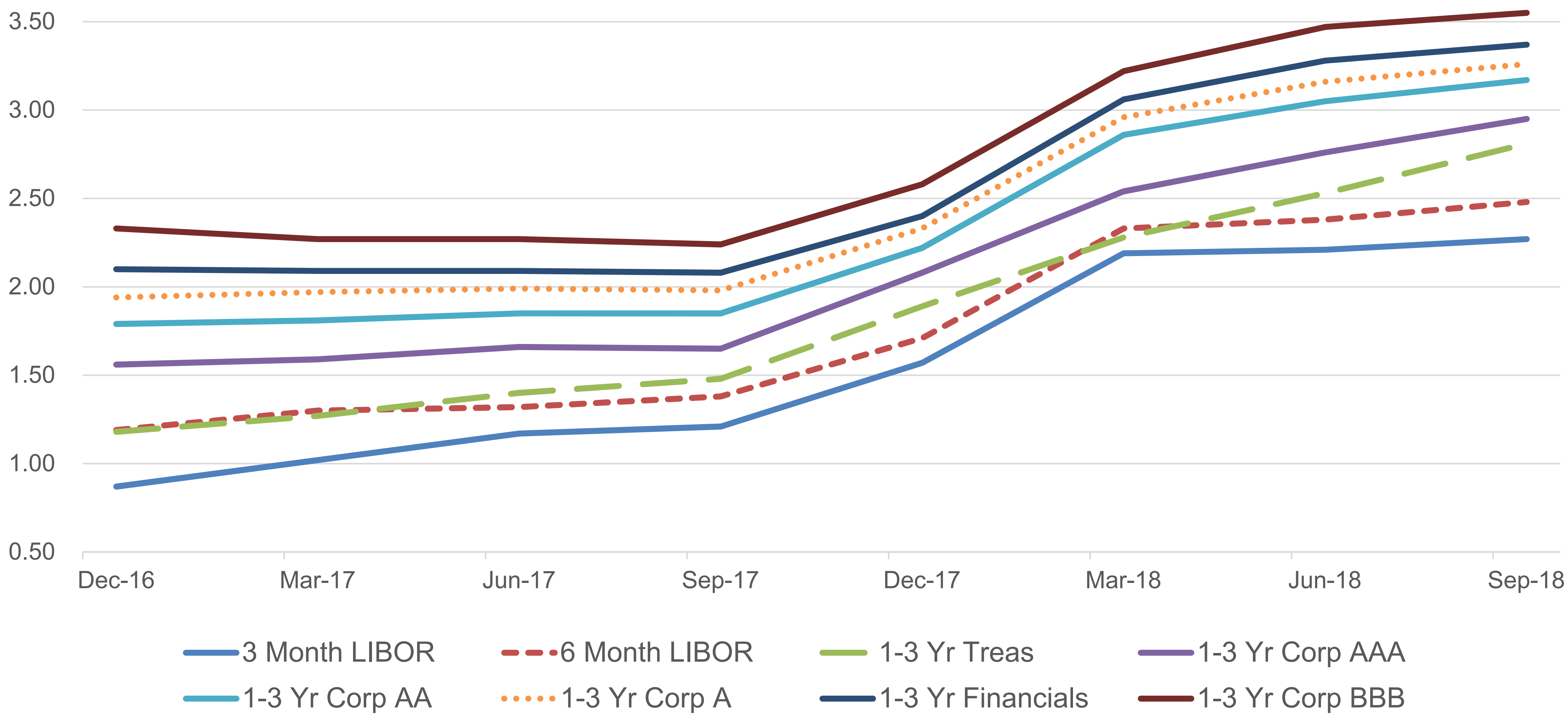
Credit Sector Effective Yields



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Portfolio Comparison

Portfolio A	
Duration:	0.3 Years
Yield:	2.0%
Credit Rating:	AA-
WAL:	0.4 Years
Max WAL:	3 Years

Portfolio B	
Duration:	1.2 Years
Yield:	2.4%
Credit Rating:	AA
WAL:	1.8 Years
Max WAL:	3 Years

Portfolio C	
Duration:	2.5 Years
Yield:	2.9%
Credit Rating:	A+
WAL:	2.6 Years
Max WAL:	5 Years

Liquidity Comparison

Percent of Portfolio Available for Re-Investment

Portfolio A	+3 Months	+6 Months	+9 Months	+12 Months
Duration: 0.3 Years Maturity Range: 0-2 Years	54.5%	69.1%	83.0%	94.2%
Portfolio B				
Duration: 1.2 Years Maturity Range: 0-3 Years	9.7%	14.7%	18.5%	24.5%
Portfolio C				
Duration: 2.5 Years Maturity Range: 1-5 Years	1.9%	2.8%	3.5%	5.3%

Shock Analysis

Change in Portfolio Market Value (%)

Portfolio A	+75 bps	+100 bps	+150 bps
Duration: 0.3 Years Maturity Range: 0-2 Years	-0.22%	-0.30%	-0.45%
Portfolio B			
Duration: 1.2 Years Maturity Range: 0-3 Years	-0.92%	-1.23%	-1.85%
Portfolio C			
Duration: 2.5 Years Maturity Range: 1-5 Years	-1.84%	-2.45%	-3.68%

Proactive Credit Monitoring – "Cliffhangers"

				Outlook			Watch				
Security Description	S&P	Moody's	Fitch	S&P	Moody's	Fitch	S&P	Moody's	Fitch	Market Value	% Consolidated Portfolio
SOUTHERN POWER CO	BBB+	Baa1	BBB+	Negative	Stable	---	---	---	---	$22 MM	0.44%
SUNCOR ENERGY INC	A-	Baa1	NA	Negative	Stable	---	---	---	---	$6 MM	0.12%
TECO FINANCE INC	**BBB**	**Baa2**	**BBB**	**Negative**	**Stable**	**---**	**---**	**Downgrade**	**---**	**$5 MM**	**0.10%**
VOLKSWAGEN GROUP	BBB+	A3	NA	---	Negative	---	---	---	---	$40 MM	0.80%
WALGREENS BOOTS ALLIANCE INC	**BBB**	**Baa2**	**BBB**	**Negative**	**Stable**	**---**	**---**	**Downgrade**	**---**	**$16 MM**	**0.32%**
										$89 MM	**1.78%**

Minimum Credit Rating per IPS: BBB/Baa2/BBB

Alternatives to Money Market Funds

- **In-house portfolio**
  - Direct investments in CP, TD, CDs, Treasuries/Agencies
- **7-day maturity institutional prime fund (FNAV)**
  - Short maturity fund with 60 day maximum maturity (FNAV)
- **Ultra-short duration bond fund, SEC-registered (FNAV)**
- **Separate account managed by external manager**
  - Average 6 or 9-12 month duration
- **Institutional collective trusts (CNAV $1.00)**
- **Private fund with MMF characteristics**
  - High minimum balance

LIBOR Transition to SOFR

- Secured Overnight Financing Rate (SOFR) to replace LIBOR in 2021
- SOFR is transaction-based rate, started on April 3, 2018
- Only an overnight rate currently available, published daily
- New issues maturing after December 31, 2021 will be SOFR-based
- Any new purchases of LIBOR-linked floating rate notes should mature prior to the transition in 2021
- $400 billion investment grade floating rate notes are LIBOR -based

Repurchase Agreements (Repo)

- Sale of a security with a commitment by seller to repurchase the security at a future date at a specified price
- The security is held as collateral
- Acts as a collateralized loan to the seller of the repo
- Buyers and sellers transact directly with each other

Tri-party Repo

- A clearing bank handles settlement and operational issues
- Collateral and loan flow through third-party custodian
- Banks responsible for trade settlement and collateral pricing
- Popular with MMF for operational efficiency

Tri-party Repo Process

Repo transaction between money market fund and broker/dealer

Amount and terms of the trade are agreed upon.

Money market fund delivers cash to clearing bank

Broker/dealer delivers securities to the same clearing bank.

Clearing bank moves cash to the seller at same time collateral is moved to the buyer

At maturity, clearing bank unwinds the repo, sending cash plus accrued interest to the money market fund and returning securities held as collateral to broker/dealer.

Repo Collateral Types

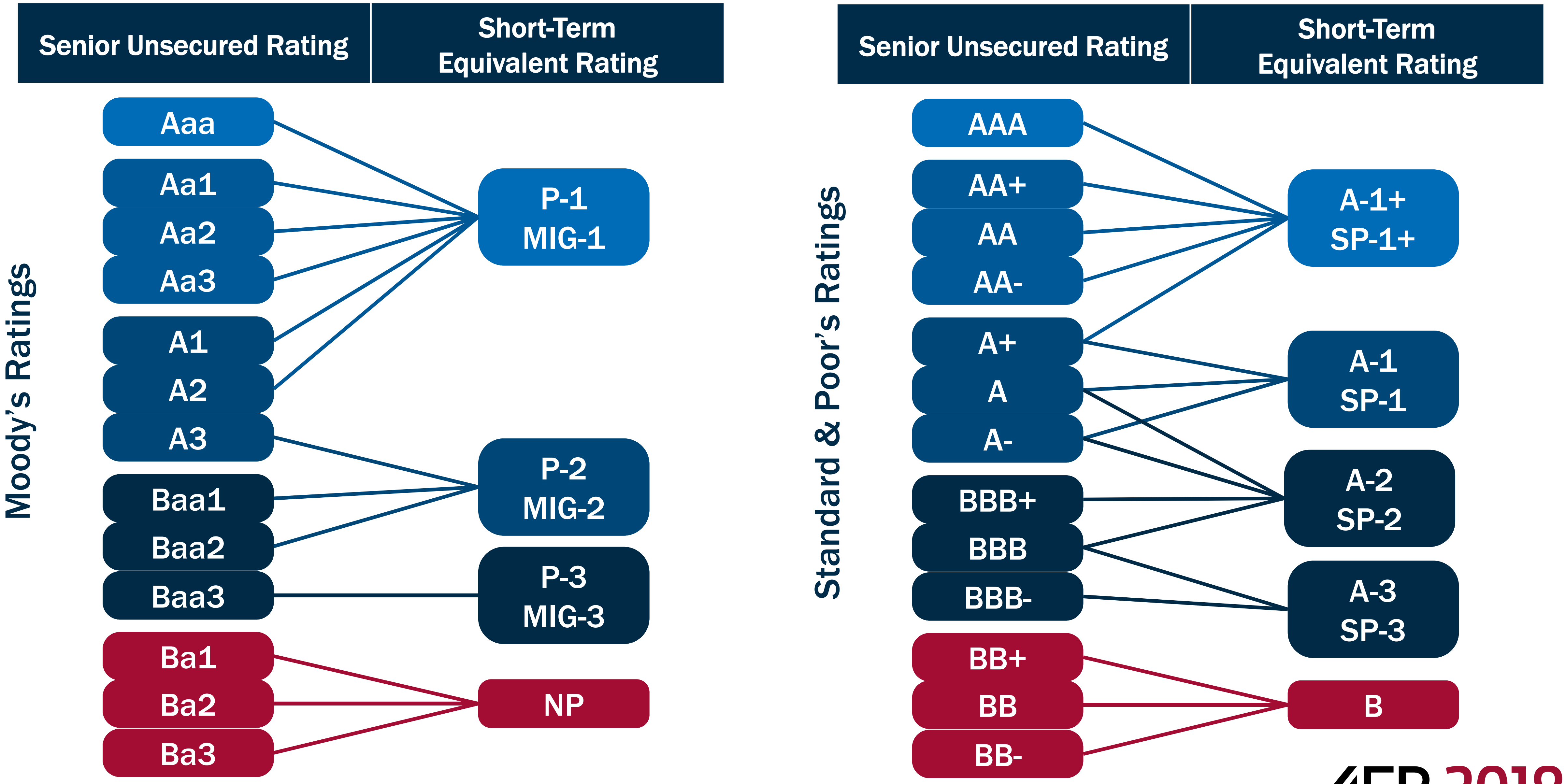
Traditional Repo

- Treasury
- Government Agencies

Non-Traditional Repo

- Equities
- Exchange traded funds (ETFs)
- Investment-grade fixed income
- Non-investment-grade fixed income
- Asset-backed securities (ABS)
- Structured securities
- Money market securities
- Corporate bonds
- Municipal bonds

Credit Ratings



Conventional Wisdom – Declining Rates

In declining interest rate environment:

- **Long-term is better**
- **When budgeting credit risk:**
  - BBB with higher coupon and longer duration is better
  - Spreads between AA-A and BBB for less than 1 year are negligible compared to spreads between 1-3 and 1-5 year paper
- **Many guidelines exclude A2/P2 because credit risk is better used in longer duration securities**

Currently - Rising Rate Environment

- Low duration is better
- Interest-rate replaces credit as primary risk factor
- Staying short allows re-investment at higher rates
- When budgeting credit risk:
    - BBB allocation should be shortened to take advantage of A2/P2 to pick up spread over A1/P1
    - The A2/P2 issues of guideline-approved BBB issuers should be considered for portfolio

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Q & A

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