



Investment Trends & Insights For Credit Unions



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Today's Agenda

- ALM First Market Update
- Credit Union Investment Trends
- TCU Portfolios Update



About Trust for Credit Unions

- Institutional investment options, **created specifically for credit unions**
- **ALM First** serves as *investment advisor*
- **Callahan Financial Services** serves as *distributor*
- Hundreds of credit union investors in our **30+ year history**

TRUST FOR CREDIT UNIONS

It's our mission to support credit union investment strategies through a professionally managed family of mutual funds that respond to the needs of the credit union industry.

Our mutual fund options keep credit unions always invested, are professionally managed, and are delivered with great client service and the cooperative values of credit unions always in mind.

Since 1987, TCU has helped credit unions invest excess member deposits, focusing on adding maximum value through collaboration.

We value what you value. Our core values, which have been derived from long-standing client relationships, say it all:

- Partnership and Collaboration
- Knowledge and Resource Management
- Access to Information
- Loyal Partners
- Strategic Resource



TCU Investor Webinar | December 15, 2021

ALM First Market Update

- **Volatility returns**

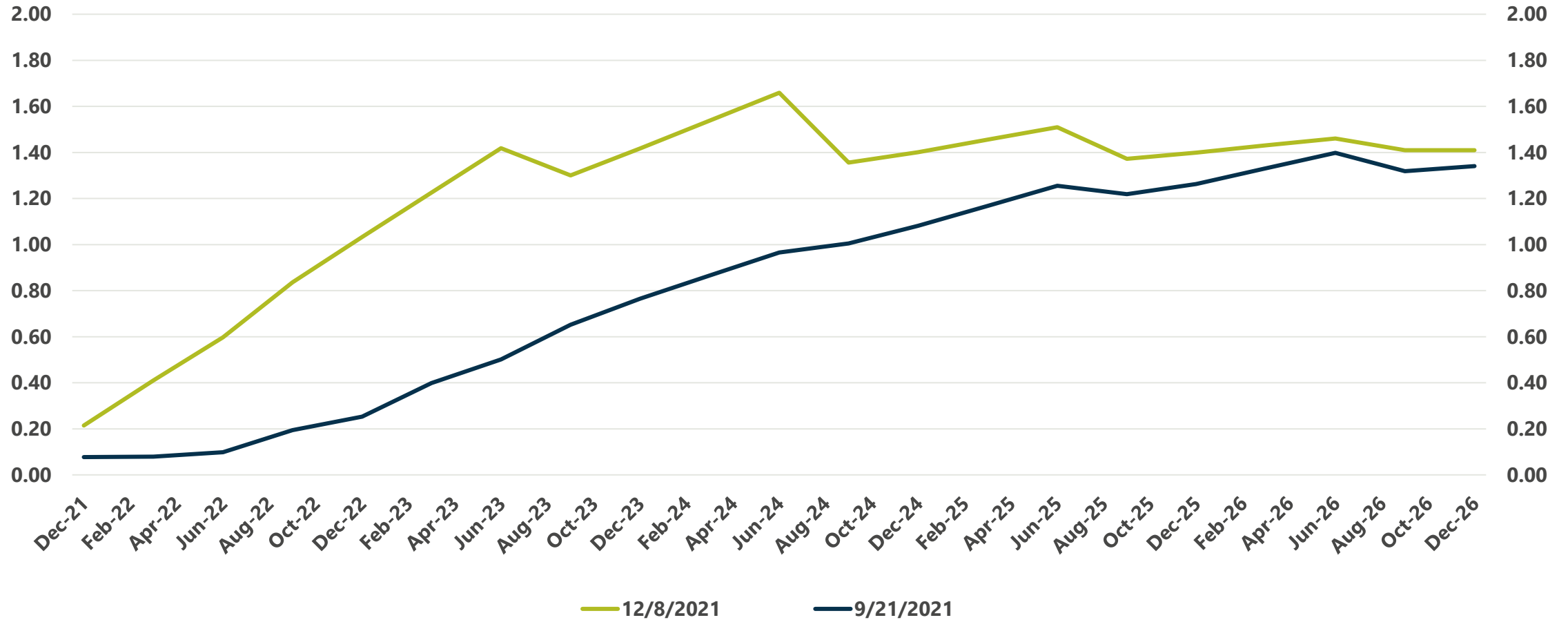
- Stubbornly-high inflation may force the Fed to respond sooner than it hoped
- Omicron variant another reminder Covid still looms as a risk
 - If cases are severe, consumer demand could be impacted
 - If cases are more moderate, it could negatively impact supply chain flows further
- Implied and realized rate volatility surged to the highest levels since March 2020
- Market pricing for 3 rate hikes by YE 2022

- **Fed changes tune; transitory no more**

- As expected, the Fed announced asset purchase tapering at the November 3 FOMC meeting
 - Pace of \$15 billion would have tapering completed by June 2022
- Jerome Powell renominated for Fed Chair by the White House, beating out Fed Governor Lael Brainard on November 22
- In 11/30 testimony before Congress, Powell caught markets somewhat off guard when he said it's "probably a good time to retire" the word transitory when describing current inflation risks
 - He also suggested that tapering may need to wrap up "a few months sooner"

Market Pricing For Fed Funds Rate

1-Month Overnight Index Swap (OIS) Implied Forward Curve (%)



More Hawkish Fed → Flatter Forward Treasury Curve

2yr/10yr Treasury Spread 2yrs Forward



Market Themes

- **Treasury curve twist and increased rate volatility**
 - 2-5yr yields have risen the most in Q4 on expectations for more hawkish Fed rate policy in 2022
 - 2yr/10yr spread now the flattest since the beginning of 2021
 - Implied and realized rate volatility has surged to the highest levels since March 2020
- **November fixed income performance suffered**
 - Higher front-end yields, higher rate vol, and wider spreads contributed to poor performance for broad fixed income
 - Bloomberg US Aggregate Index OAS +6 bps vs. prior month
 - Agency MBS, Corporate, and ACMBS indices (Bloomberg) all had their worst month relative to Treasuries since March 2020
 - OAS +10, +12, and +9 bps, respectively, in November
 - Higher rate vol pushed MBS spreads wider
 - How will spreads be impacted by more hawkish Fed?

| Treasury Curve | | | |
|----------------|---------------|---------------|--------------|
| Tenor | 12/7/2021 (%) | 9/30/2021 (%) | Change (bps) |
| 1-Month | 0.04 | 0.04 | 0.00 |
| 3-Month | 0.06 | 0.03 | 0.02 |
| 6-Month | 0.15 | 0.05 | 0.10 |
| 1-Year | 0.29 | 0.07 | 0.22 |
| 2-Year | 0.69 | 0.28 | 0.41 |
| 3-Year | 0.96 | 0.51 | 0.46 |
| 5-Year | 1.26 | 0.97 | 0.29 |
| 10-Year | 1.47 | 1.49 | -0.01 |
| 20-Year | 1.88 | 1.99 | -0.11 |
| 30-Year | 1.80 | 2.05 | -0.24 |
| Curves | | | |
| 3mo-10yr | 1.42 | 1.45 | -0.04 |
| 2yr-5yr | 0.57 | 0.69 | -0.12 |
| 2yr-10yr | 0.78 | 1.21 | -0.43 |
| 2yr-30yr | 1.11 | 1.77 | -0.66 |
| 5yr-10yr | 0.22 | 0.52 | -0.30 |

Source: Bloomberg



Credit Union Investment Trends

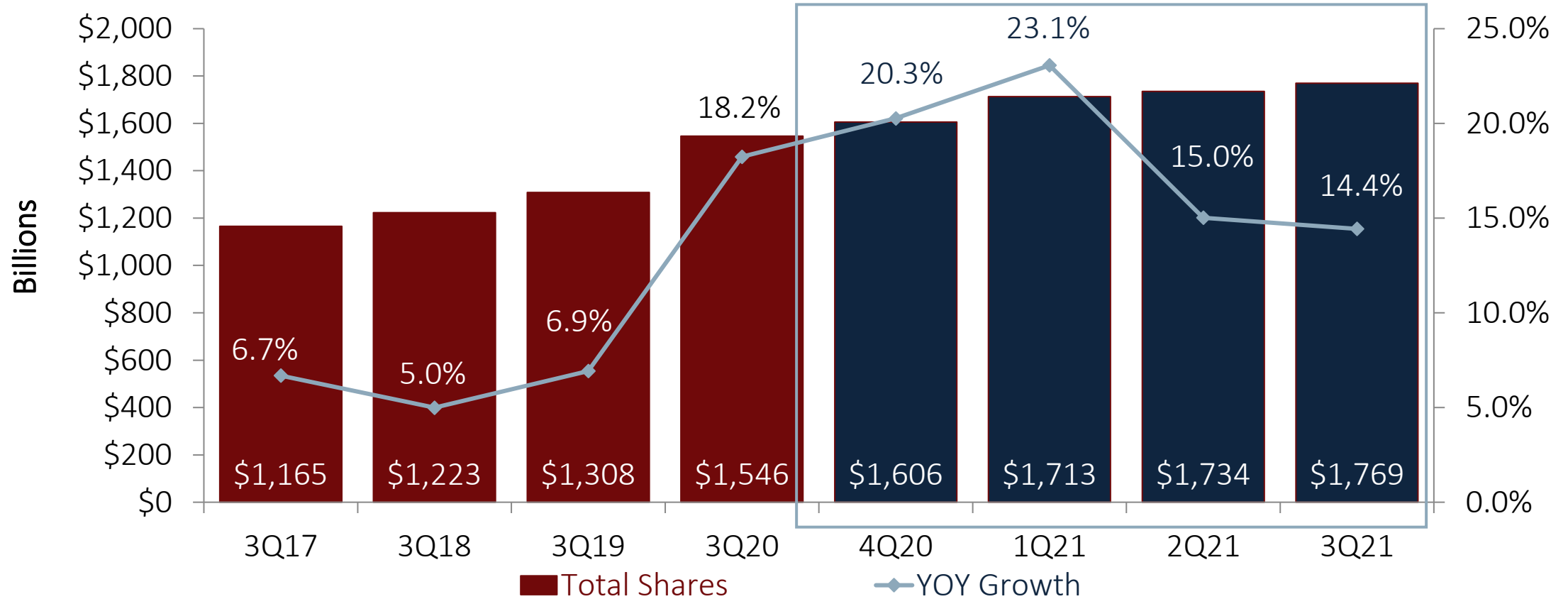
Jay Johnson
President
Trust for Credit Unions

Credit union assets surpass \$2 trillion in the third quarter

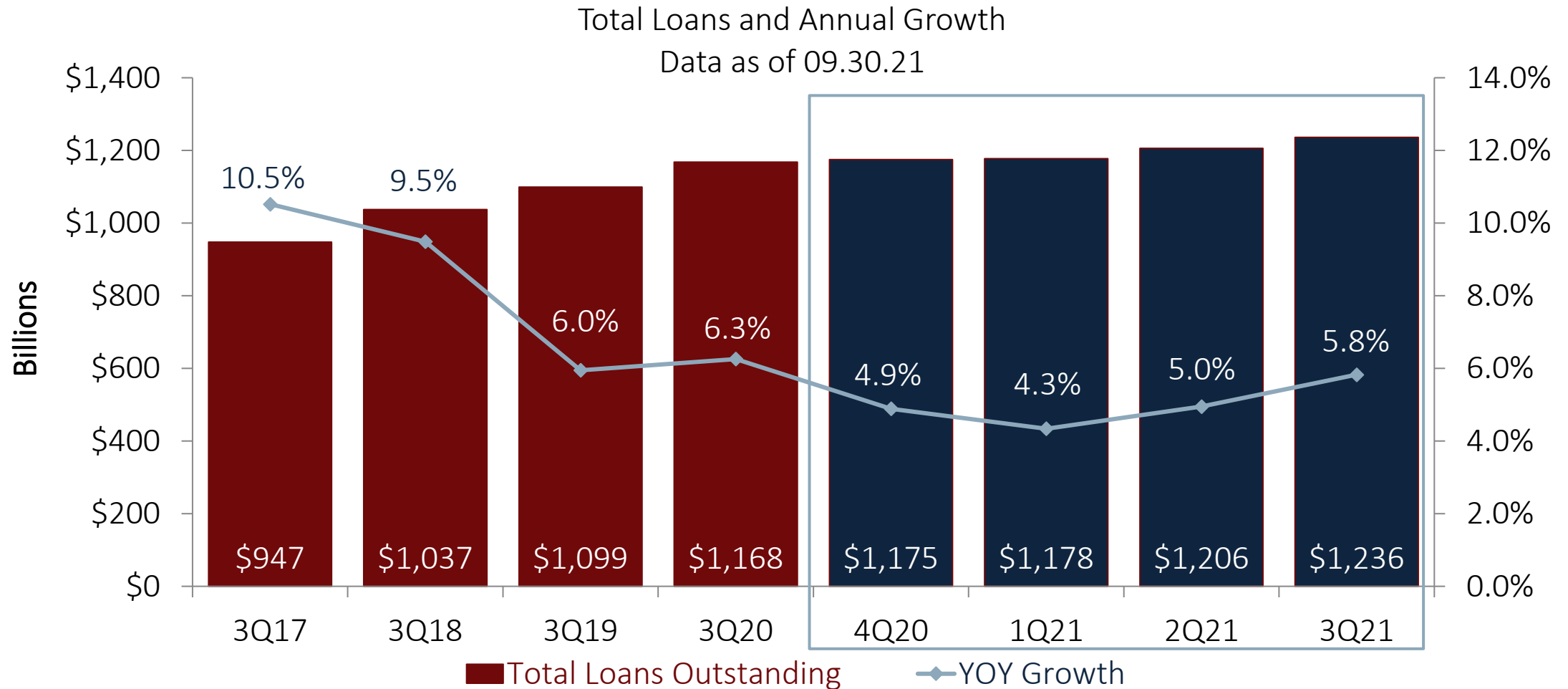
| | 09/30/2021 | 12-Mo. Growth | 09/30/2020 | 12-Mo. Growth |
|-------------|------------|---------------|------------|---------------|
| Assets | \$2,041.7B | 12.9% | \$1,807.2B | 16.1% |
| Loans | \$1,236.0B | 5.8% | \$1,168.0B | 6.3% |
| Shares | \$1,769.4B | 14.4% | \$1,546.3B | 18.2% |
| Investments | \$710.6B | 28.6% | \$552.6B | 44.8% |
| Capital | \$217.8B | 7.4% | \$202.7B | 9.4% |
| Members | 130.2M | 4.1% | 125.0M | 3.4% |

Share growth slows a year removed from the CARES Act

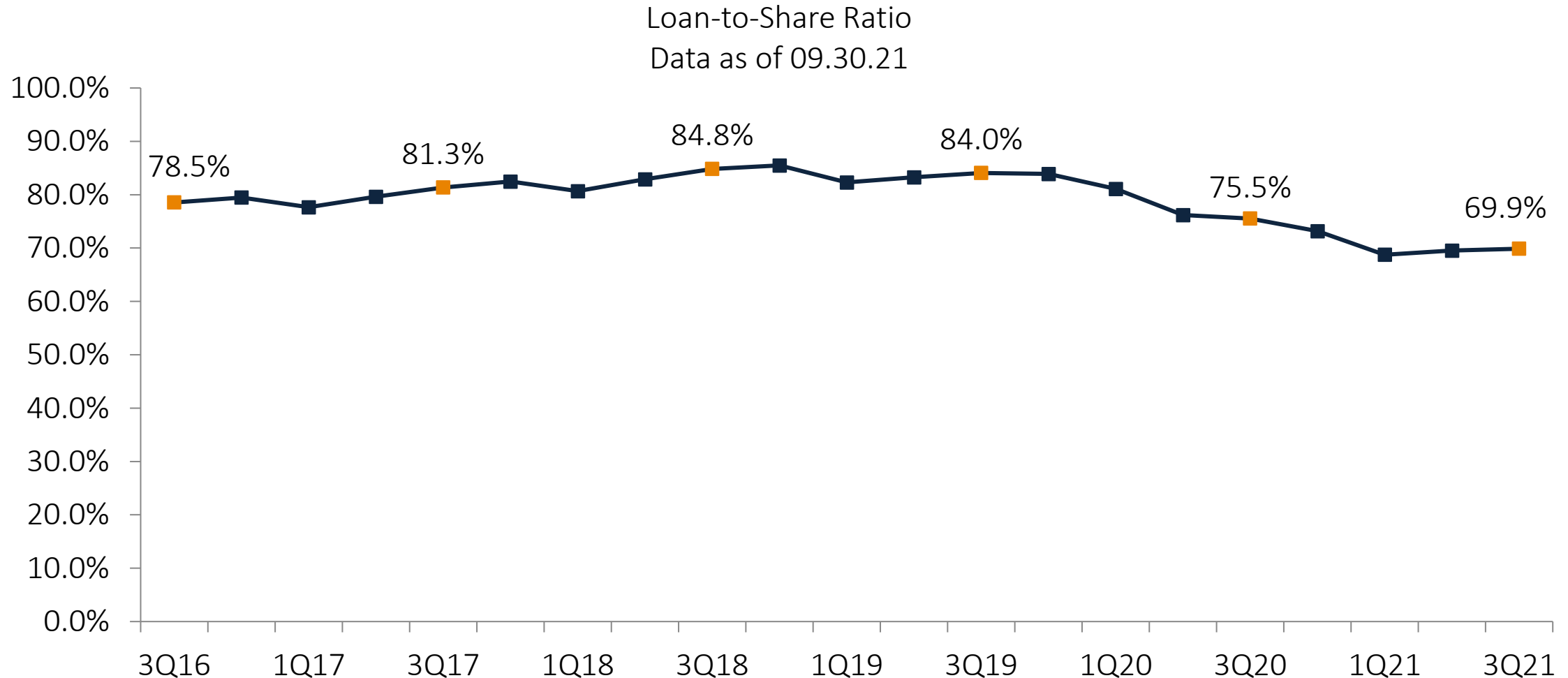
Total Shares and Annual Growth
Data as of 09.30.21



Loan growth at credit unions is picking up

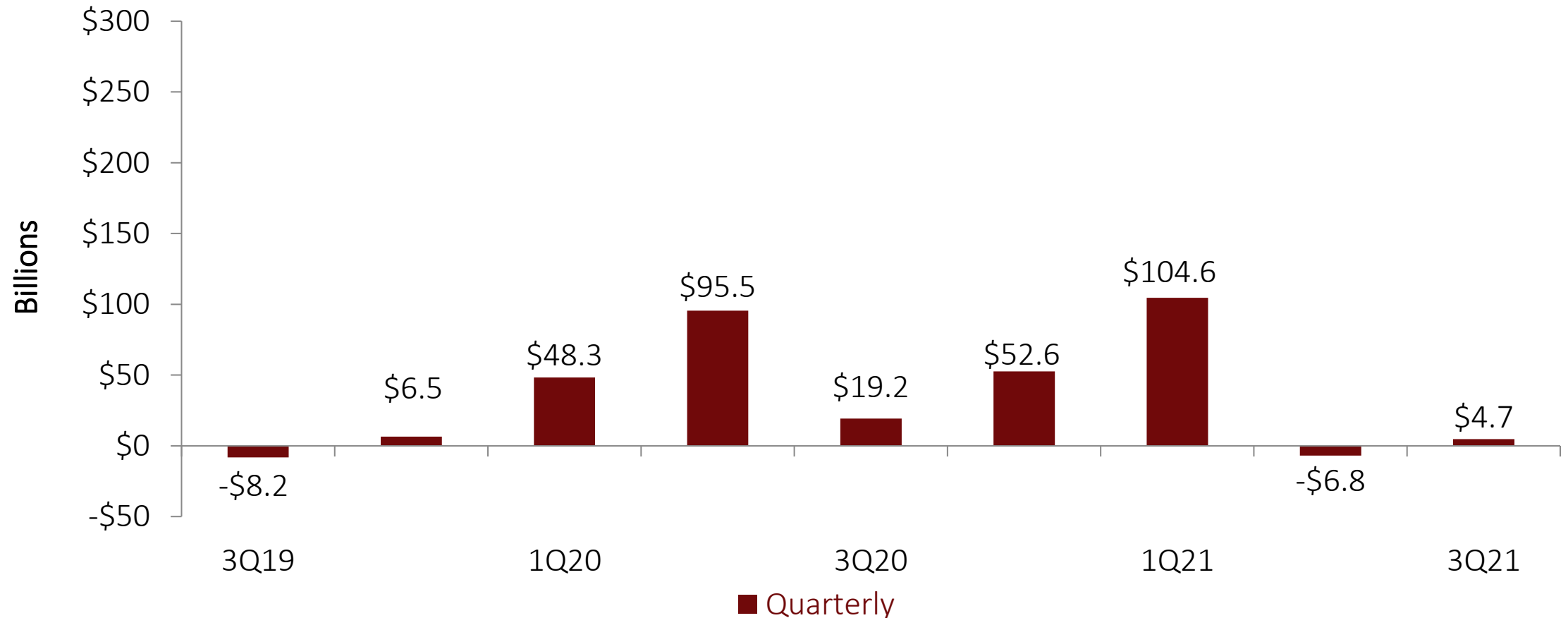


The loan-to-share ratio inches up for the second straight quarter

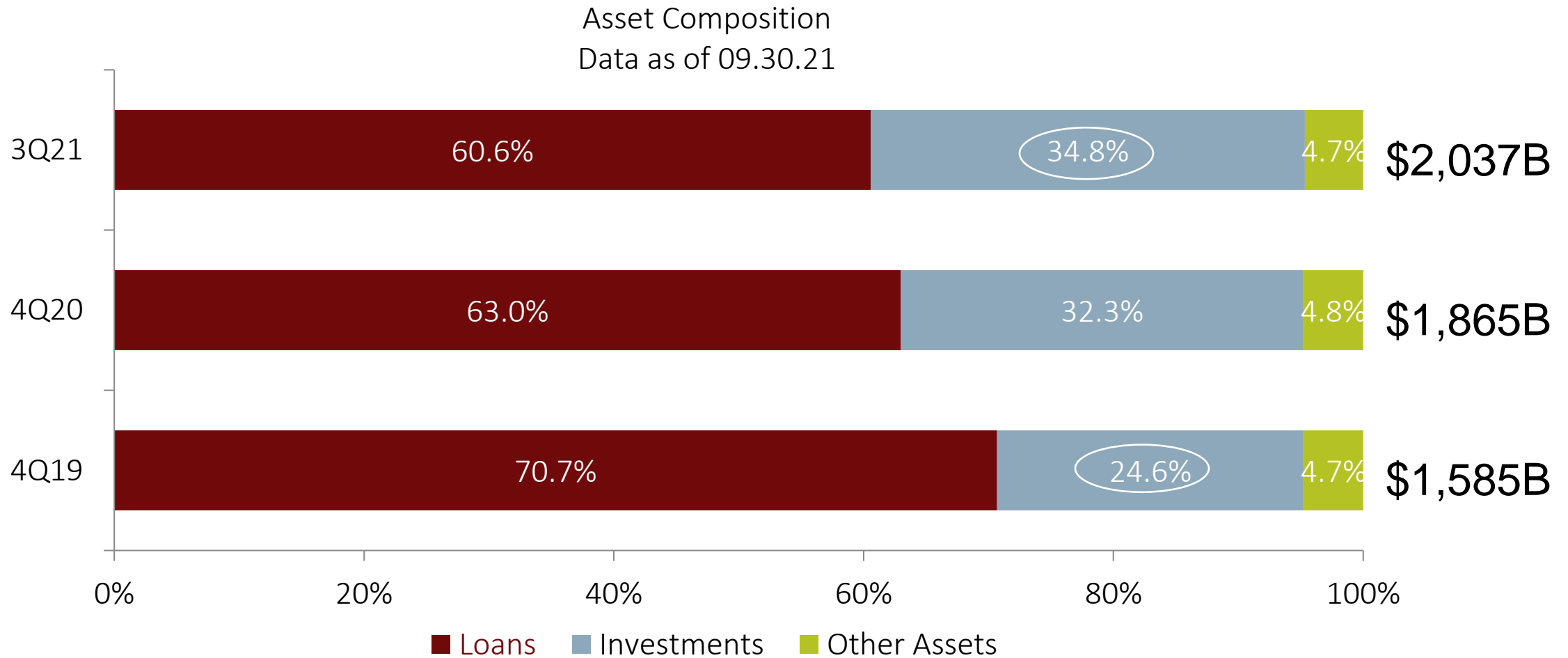


Industry loan balances expanded faster than share balances for the second straight quarter

Net Liquidity Change
Data as of 09.30.21

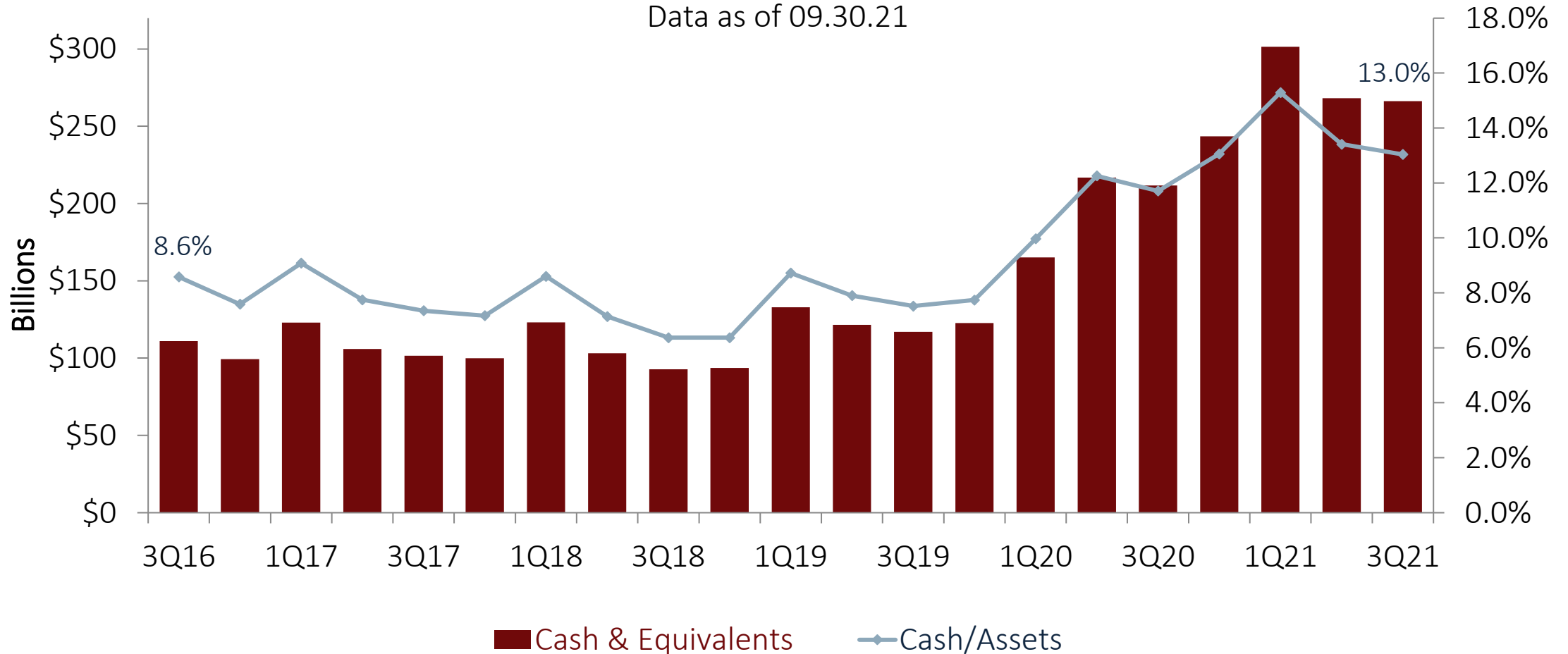


70% of the balance sheet increase since year-end 2019 is in investments



Cash and equivalents continue to fall from March 2021 high

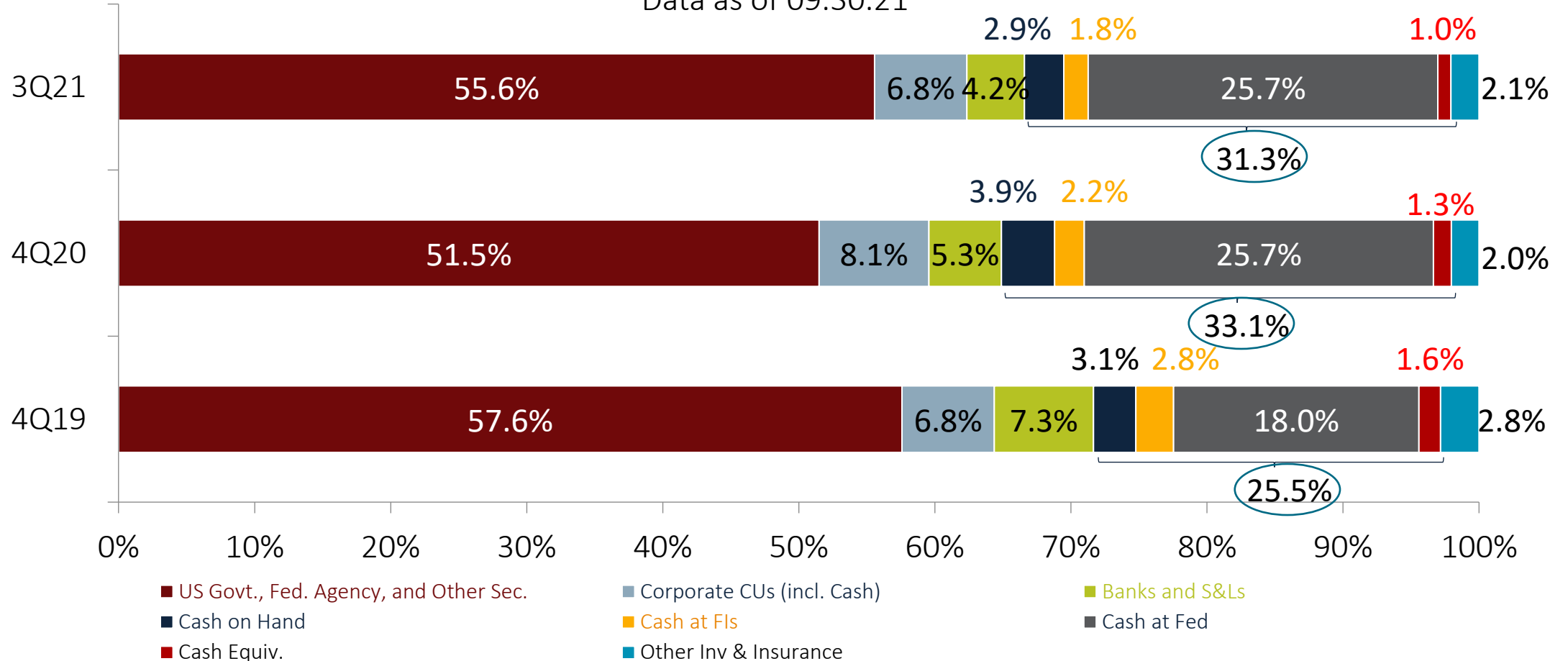
Cash & Equivalents Balances and % of Total Assets
Data as of 09.30.21



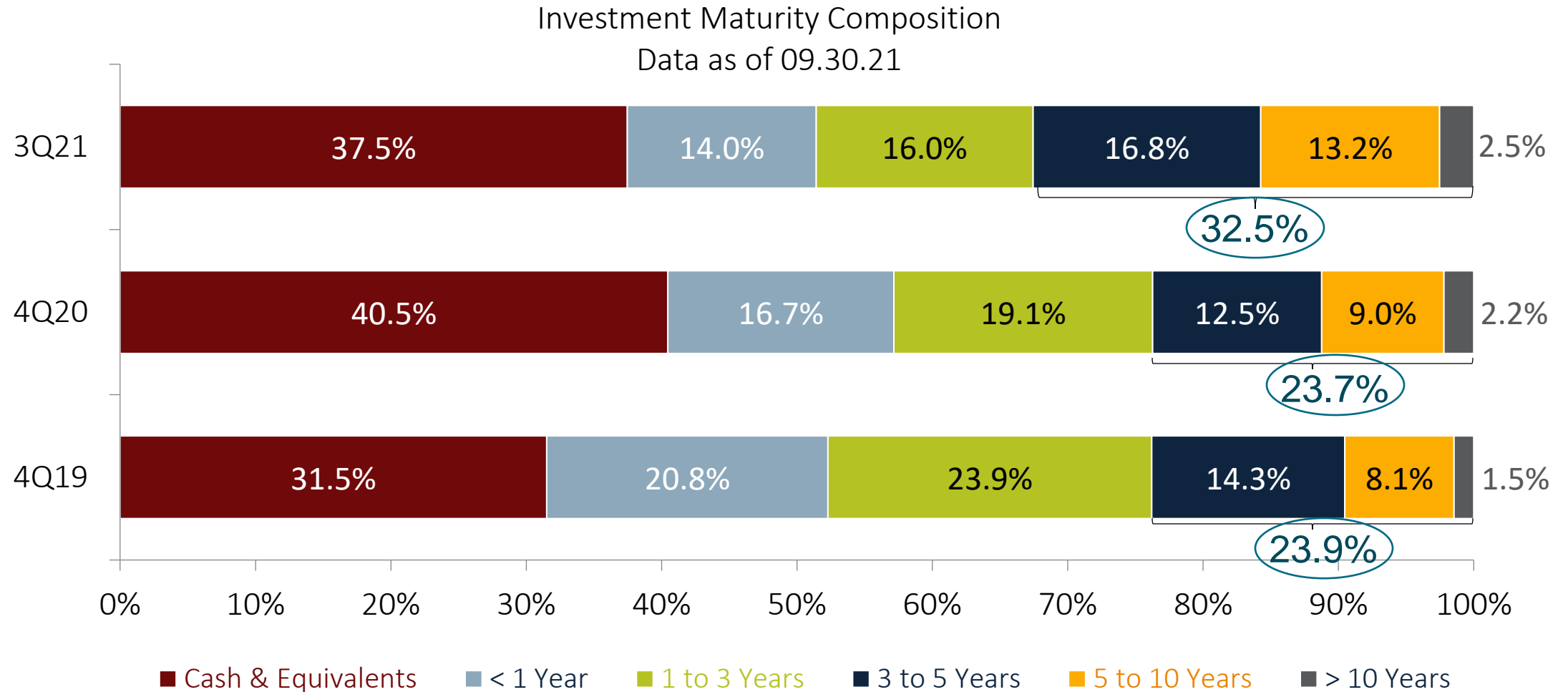
Cash levels remain elevated from 4Q19

Historical Investment Composition

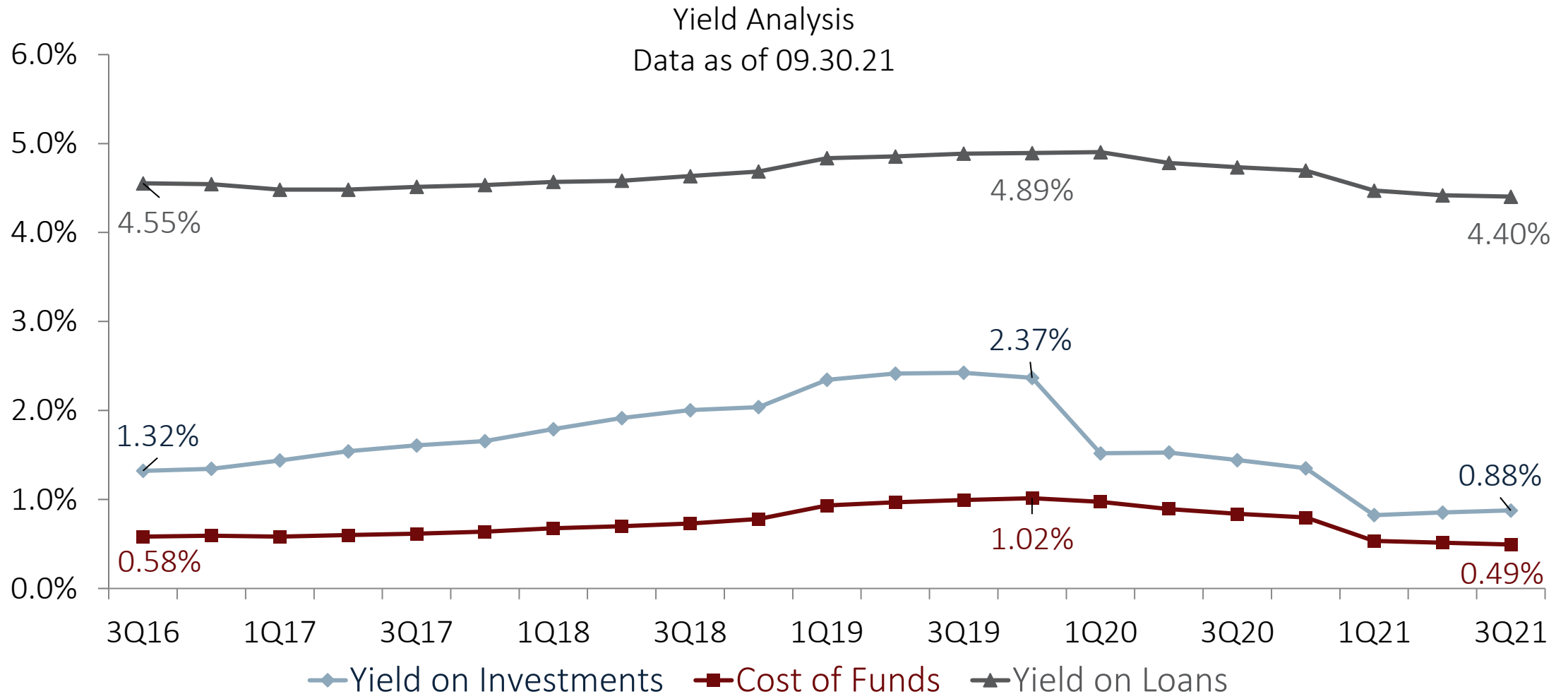
Data as of 09.30.21



Credit unions have extended the maturity of their investment portfolios

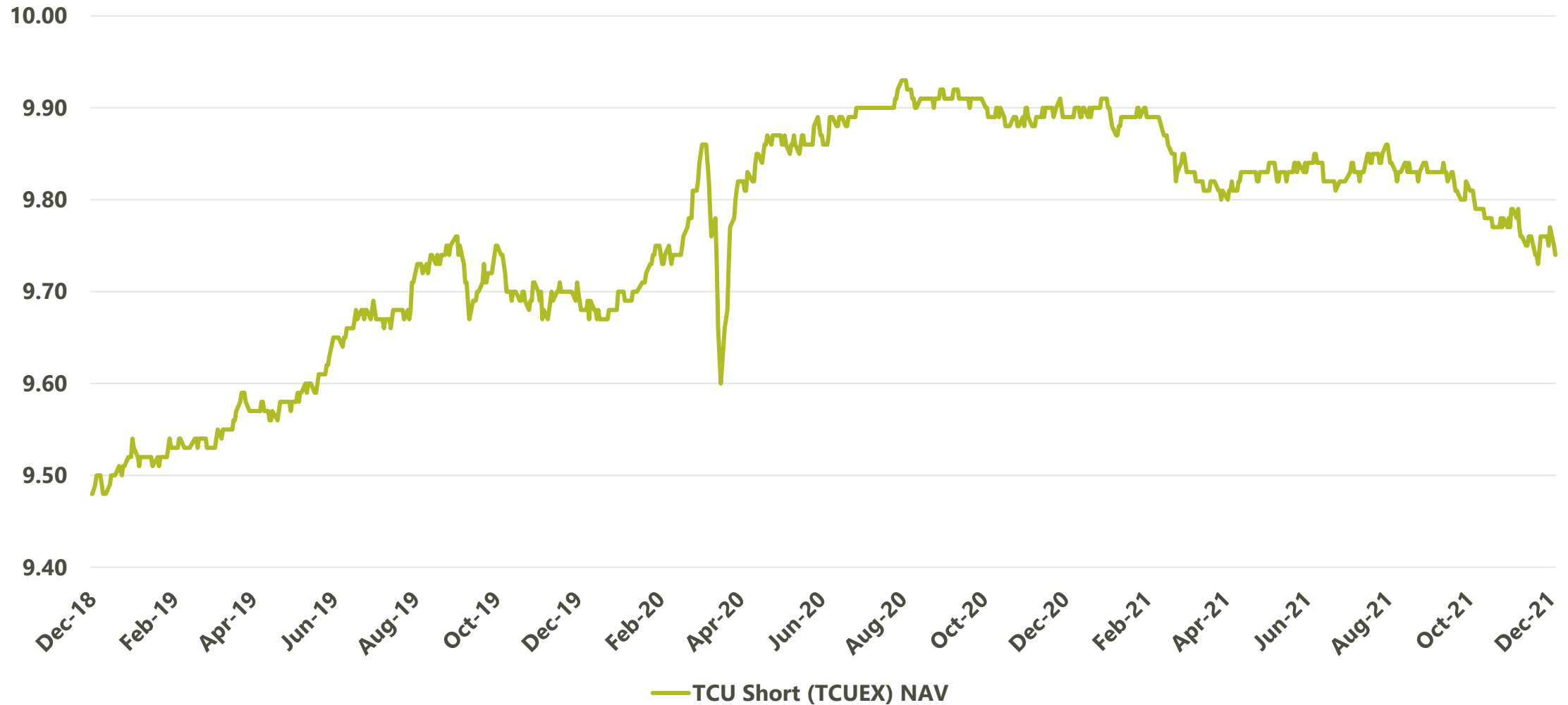


Investment yields post modest uptick in 2021 as loan yield, cost of funds continue to decline



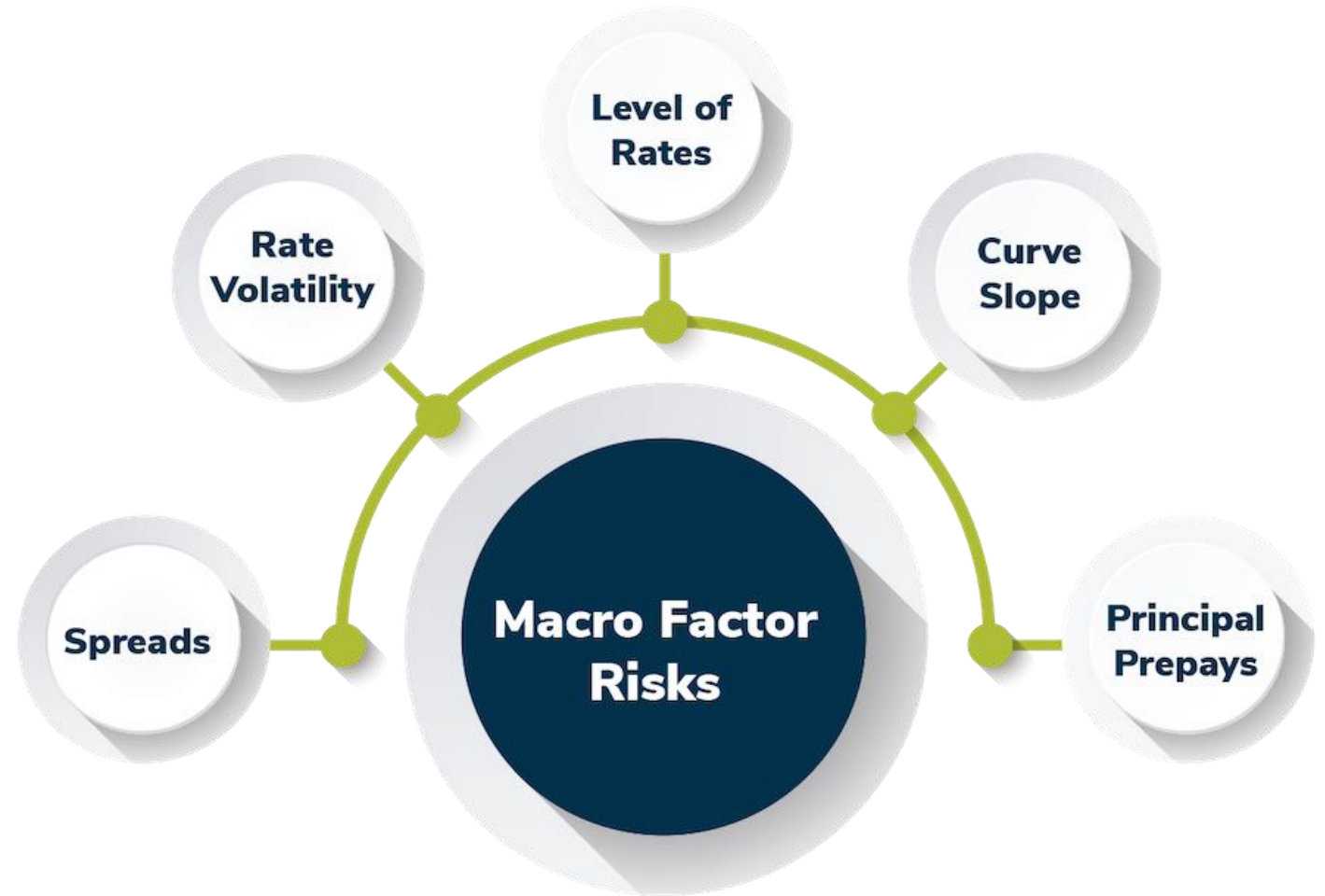
TCU Portfolios Update

TCU Short Duration Portfolio NAV



Source: Bloomberg

Drivers of Fixed Income Performance



Drivers of TCU Short Duration Portfolio Performance in 2021

- **Rising bond yields**

- Year-to-date Treasury yield changes through December 10:
 - 2yr +53 bps, 3yr +82 bps, 5yr +89 bps, 10yr +57 bps

- **Curve steepening**

- 2yr/5yr +36 bps, 2yr/7yr +25 bps YTD through 12/10

- **Spread widening**

- MBS option-adjusted spread (OAS) +25 bps versus Treasuries since mid-April lows
- ACMBS spreads +16 bps since mid-June lows

Strategies to Maximize Risk-Adjusted Returns Vs. Benchmark

1. Buy the benchmark

- Return variance relative to benchmark would be eliminated, but return would lag benchmark persistently by the level of fund expense ratio

2. Purchase duration- and curve-matched credit risk (corporate bonds, ABS, & RMBS)

- 2 of the 3 sectors are impermissible for FCUs, and RMBS is not currently permissible under TCU guidelines

3. Take curve and spread risk via duration barbell

- Current strategy for TCU portfolio
- Uses a mixture of fixed-rate and floating-rate 703 permissible assets

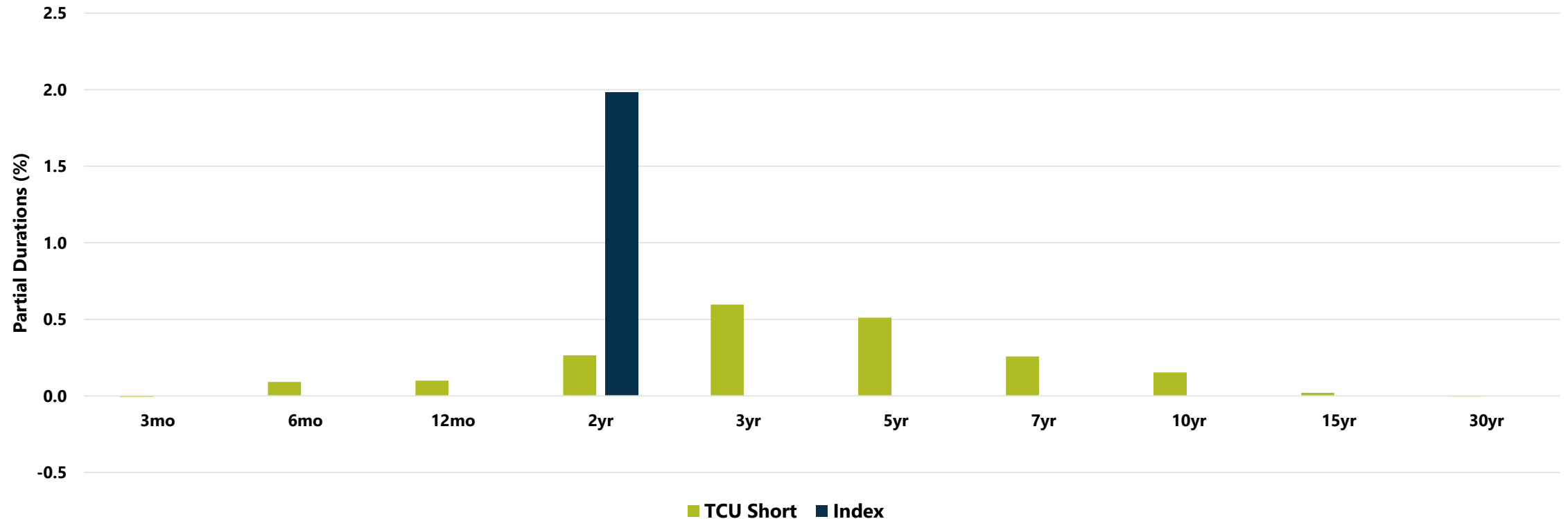
4. Hedged portfolio using interest rate derivatives/futures

- New NCUA rule allows for potential use of derivatives in mutual funds
- Interest rate risk and curve risk can be mitigated, but it wouldn't extinguish all price/NAV volatility (i.e., spread risk, volatility risk, prepay risk)

Yield Curve Exposure – TCU Short Fund

| | 3mo | 6mo | 12mo | 2yr | 3yr | 5yr | 7yr | 10yr | 15yr | 30yr | Total |
|--------------------|-------|------|------|------|------|------|------|------|------|------|-------|
| TCU Short | -0.01 | 0.09 | 0.10 | 0.27 | 0.60 | 0.51 | 0.26 | 0.15 | 0.02 | 0.00 | 1.98 |
| 2yr Treasury Index | | | | 1.98 | | | | | | | 1.98 |

Partial Durations - Short Fund vs Index



TCU Short Duration Portfolio

| TCU Short Duration Portfolio Summary ¹ | | | | |
|---|--------------------|-------------------|-----------|-----|
| | Current Allocation | Ex-Ante Analytics | | |
| | | Eff. Dur | Sprd. Dur | OAS |
| ARM | 1% | 1.05% | 3.76% | 55 |
| Bank Note Fixed | 8% | 2.28% | 2.59% | 42 |
| Bank Note Float | 1% | 0.22% | 0.39% | 76 |
| CMBS Fixed | 28% | 3.64% | 3.81% | 62 |
| CMO Fixed | 2% | -0.56% | 4.40% | 16 |
| CMO/ACMBS Floaters | 34% | 0.24% | 3.26% | 27 |
| MBS Fixed | 25% | 3.69% | 4.38% | 26 |
| Muni | 0% | 4.08% | 4.09% | 48 |
| UST | 0% | 0.00% | 0.00% | 0 |
| Repo | 2% | 0.00% | 0.00% | 7 |
| | 100% | 2.21% | 3.59% | 37 |

| Total Return Summary ¹ | | | |
|-----------------------------------|------------------------|------------------------|--------|
| | TCU Short ² | Benchmark ³ | Excess |
| 3 month | -0.72% | -0.34% | -0.38% |
| YTD | -1.08% | -0.25% | -0.83% |
| 12 month | -1.01% | -0.18% | -0.83% |
| Avg Annual ⁴ | 1.91% | 1.65% | 0.26% |

| Portfolio Characteristics | | |
|-------------------------------|---------------|-----------|
| | TCU Short | Benchmark |
| Total assets ¹ | 1,359,095,926 | |
| Effective Duration | 2.21% | 1.99% |
| Spread Duration | 3.59% | 1.98% |
| 30 day Eff Yield ⁵ | 0.41% | NA |
| OAS | 37 | -26 |

¹ As of 11/30/2021

² Investor Shares

³ Benchmark is 2-year Treasury index

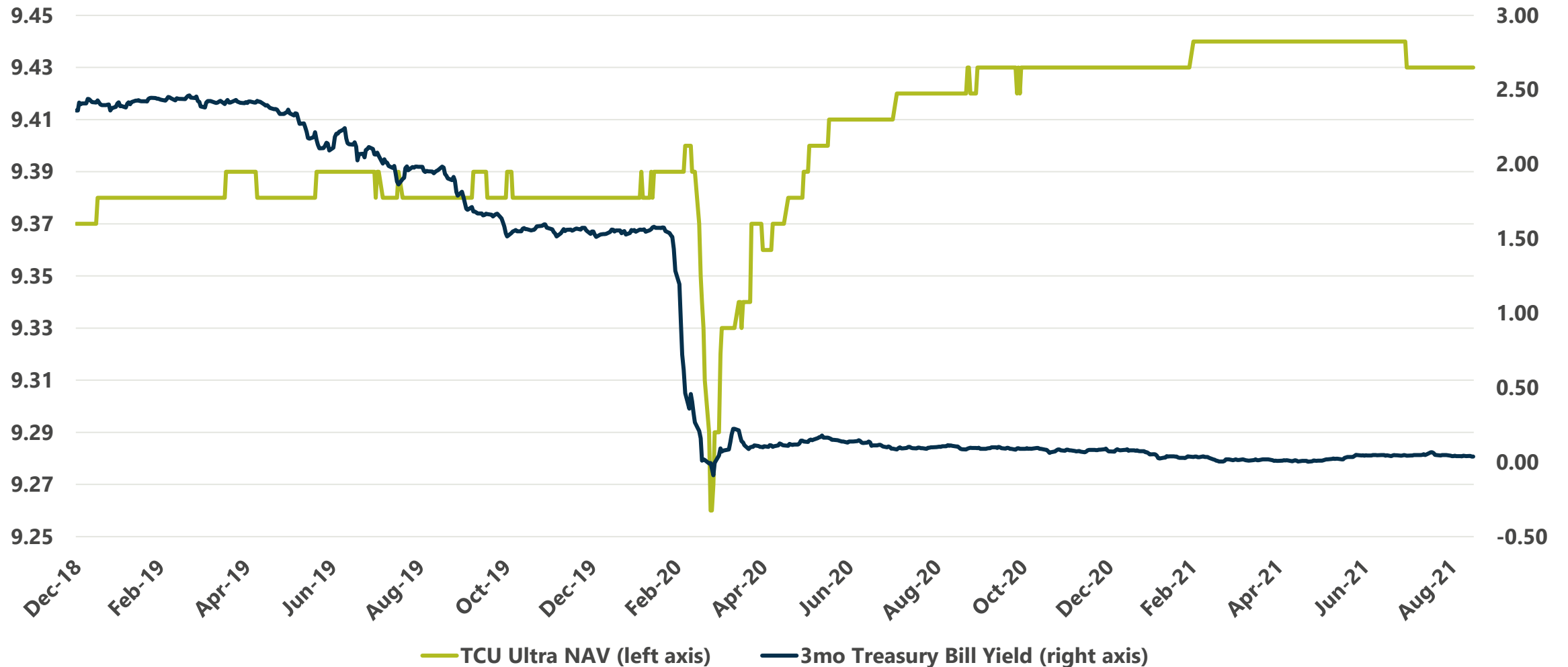
⁴ Since 4/30/2017 (when ALM First became portfolio manager)

⁵ Investor shares

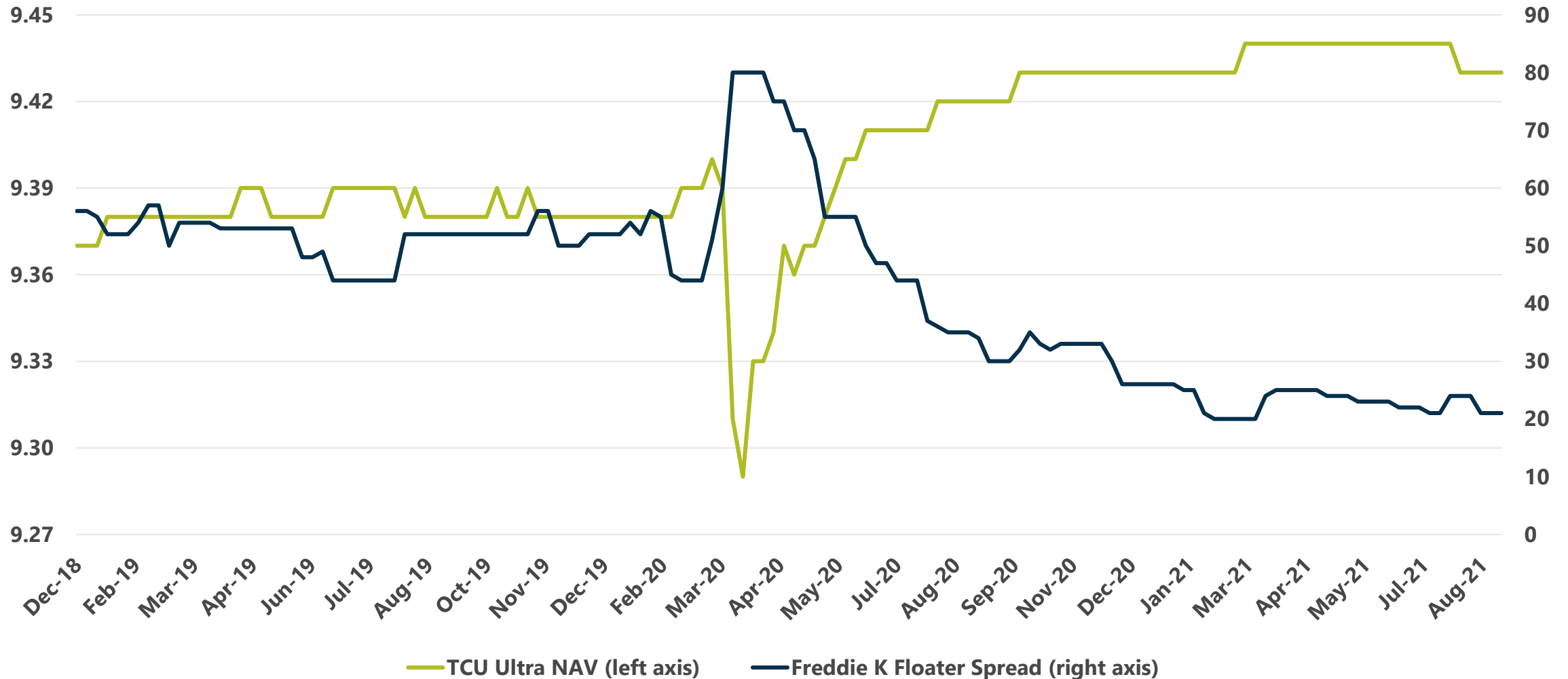
TCU Ultra-Short Duration Strategy

- Interest-rate target
 - 3-month Treasury bill
- Strategy aims to minimize interest-rate risk while maintaining a yield spread over IOER
- ***Not a money market fund (and not intended to be)***
 - Most institutional government money market funds yield <0.05% currently
- Typical portfolio composition
 - Combination of short-term repo (~30%) and agency floating rate securities (~70%)
- In order to generate excess return relative to the Fed's IOER rate (currently 0.15%), the portfolio must target risk other than interest-rate risk
 - Spread risk of floating-rate securities is the primary source of Ultra Short Portfolio return

TCU Ultra Short NAV Vs. Changes in Rates



TCU Ultra Short NAV Vs. Changes in Spreads



TCU Ultra Short Duration Portfolio

| TCU Ultra Short Duration Portfolio | | | | |
|------------------------------------|--------------------|-------------------|-----------|------|
| | Current Allocation | Ex-Ante Analytics | | |
| | | Eff. Dur | Sprd. Dur | OAS |
| ARM | 0% | 0.80% | 3.70% | 50 |
| Agency Floater | 0% | 0.19% | 1.41% | 60 |
| Bank Note Float | 1% | 0.22% | 0.57% | 47 |
| CMBS Fixed | 0% | 3.19% | 3.46% | 30 |
| CMO Fixed | 0% | 2.81% | 3.03% | 37 |
| CMO/ACMBS Floaters | 73% | 0.26% | 3.57% | 30 |
| MBS Fixed | 0% | 2.30% | 2.98% | -103 |
| Repo | 25% | 0.04% | 0.04% | 31 |
| | 100% | 0.22% | 2.64% | 31 |

¹ As of 11/30/2021

² Investor Shares

³ Prior to 1/1/2019, benchmark was effectively a 9-month Treasury bill index; current benchmark is 3-month Treasury bill index

⁴ Since 4/30/2017 (when ALM First became portfolio manager)

⁵ Investor shares

| Total Return Summary ¹ | | | |
|-----------------------------------|------------------------|------------------------|--------|
| | TCU Ultra ² | Benchmark ³ | Excess |
| 3 month | -0.06% | 0.01% | -0.07% |
| YTD | 0.11% | 0.04% | 0.07% |
| 12 month | 0.14% | 0.05% | 0.09% |
| Avg Annual ⁴ | 1.27% | 1.25% | 0.02% |

| Portfolio Characteristics | | |
|-------------------------------|---------------|-----------|
| | TCU Ultra | Benchmark |
| Total assets ¹ | 2,899,654,771 | |
| Effective Duration | 0.22% | 0.24% |
| Spread Duration | 2.64% | 0.24% |
| 30 day Eff Yield ⁵ | 0.21% | NA |
| OAS | 31 | -11 |

Questions & Discussion

Disclaimer

Returns are gross of fees, unaudited, and estimated using the Modified Dietz method. ALM First does not have complete discretionary trading authority over each account reflected in the performance discussed herein. Some clients had investment results materially different from those portrayed in this document. These data were compiled from client portfolios that consistently accepted ALM First investment advice.

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