#### CARILON GROUP OF RAYMOND JAMES®

#### The Fed, The Bond Market and What's in Store for Investors

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## Agenda

• The Role of the Federal Reserve System

• GeoPolitics

• Investment Strategies



## Role of the Fed

The mandate of the Federal Reserve is "to promote sustainable growth, high levels of employment, stability of prices to help preserve the purchasing power of the dollar and moderate long term interest rates."

- Promote Economic Growth
- Stable Prices
- Full Employment
- 2008 Stabilize Markets?



Source: https://www.federalreserve.gov/

## The Fed's Tools

• Open Market Operations

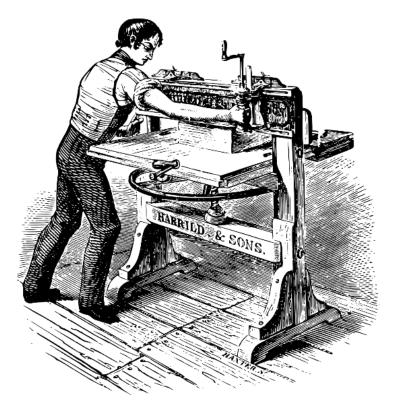
• Federal Funds Rate

• Discount Rate

Reserve Requirement



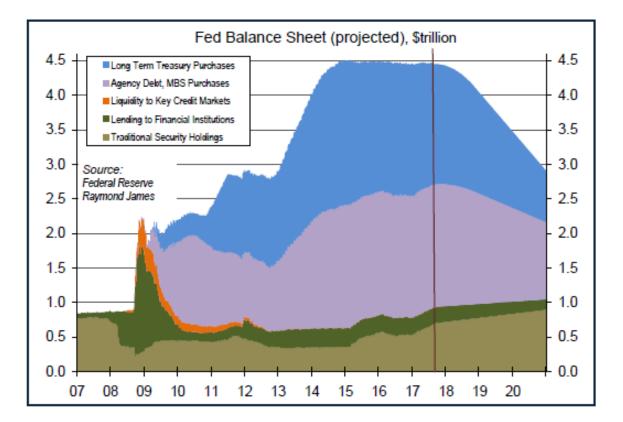
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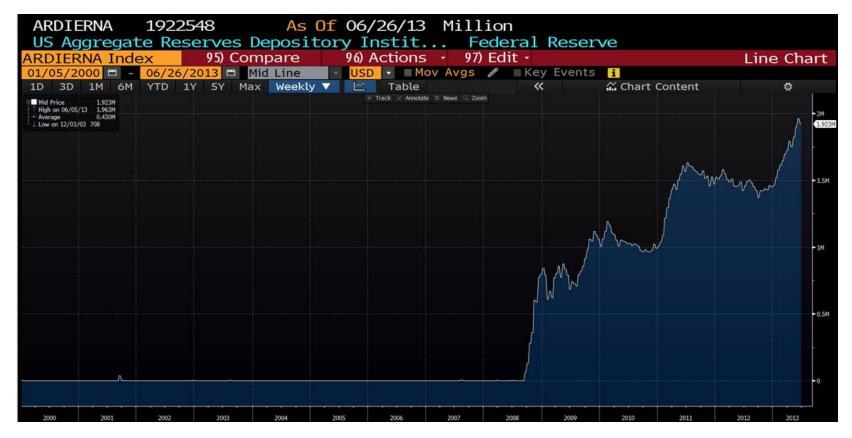


## Fed Balance Sheet





#### US Aggregate Reserves Depository Institutions Excess Reserves

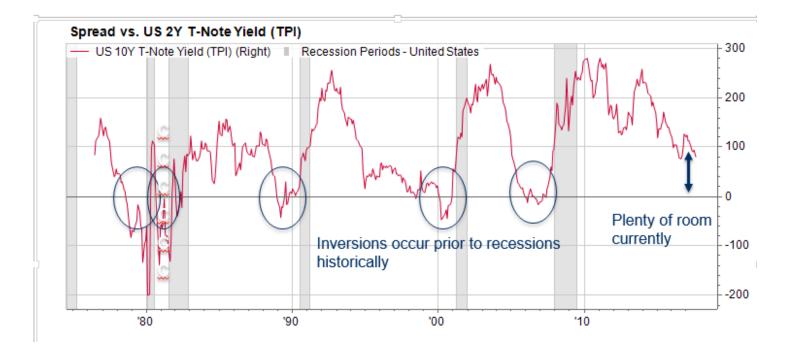




#### Term Premium

# Extra yield investors demand for the risk of lending over a longer term.





• What will be the net effect of the Fed shrinking its balance sheet?

Process:

- Tapper purchases to zero
- Reinvest proceeds of maturing bonds
- Stop investing



#### Federal Reserve Policy – Balance Sheet Reduction

The Federal Open Market Committee directed the Open Market Trading Desk at the New York Fed "to reinvest each month's principal payments from Treasury securities, agency debt, and agency mortgage-backed securities (MBS) only to the extent that such payments exceed gradually rising caps":

Monthly Caps on SOMA Securities Reinvestment			
	Treasury Securities	Agency Securities	
Oct – Dec 2017	\$6 billion	\$4 billion	
Jan – Mar 2018	\$12 billion	\$8 billion	
Apr – Jun 2018	\$18 billion	\$12 billion	
Jul – Sep 2018	\$24 billion	\$16 billion	
From Oct 2018**	\$30 billion	\$20 billion	

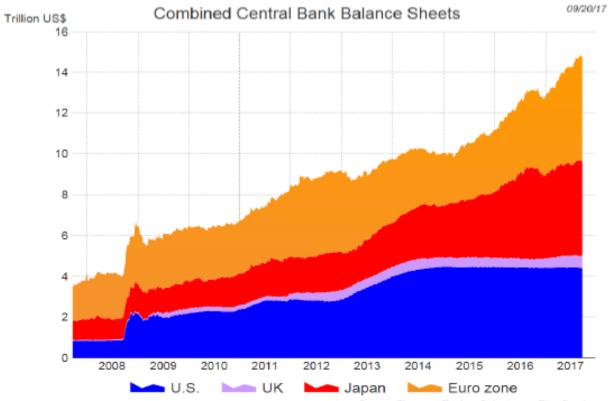
\*Applies to combined principal payments of agency debt and agency MBS.

\*\*Once caps reach their maximum amounts, they will remain in effect until the Committee judges that the Federal Reserve is holding no more securities than necessary to implement monetary policy efficiently and effectively.



# Geo Political Concerns





#### Global Central Banks Have Printed over \$10 Trillion Since 2008

Source: Thomson Reuters Datastream, RiverFront



World Bond Markets					
	2-Year	5-Year	10-Year	30-Year	
United States	1.436	1.848	2.229	2.770	
Canada	1.611	1.822	2.111	2.454	
France	-0.511	-0.053	0.705	1.805	
Germany	-0.718	-0.306	0.408	1.252	
Greece	3.255	-	5.648	-	
Ireland	-0.516	-0.169	0.723	1.854	
Italy	-0.205	0.718	2.123	3.310	
Japan	-0.124	-0.108	0.034	0.830	
Netherlands	-0.699	-0.343	0.530	1.258	
Spain	-0.288	0.274	1.612	2.846	
Sweden	-0.682	-0.005	0.882	-	
United Kingdom	0.446	0.761	1.330	1.901	
* as of 09/26/2017					
Source: Bloomberg LP, Raymond James					

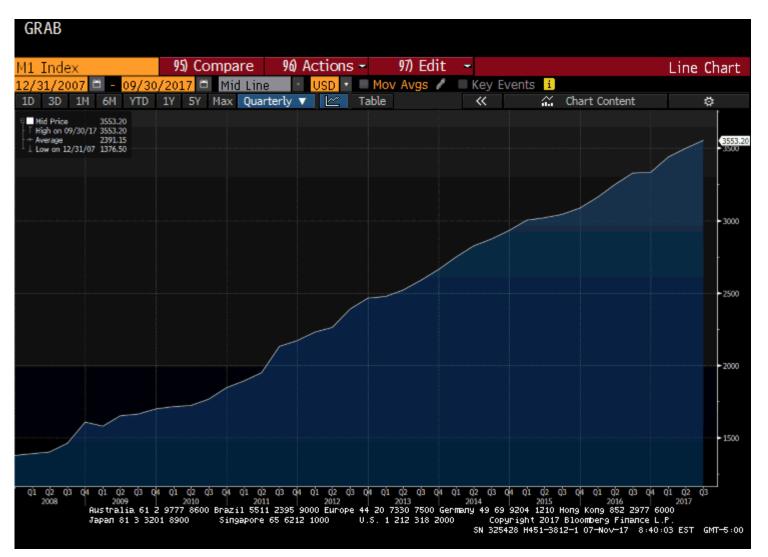




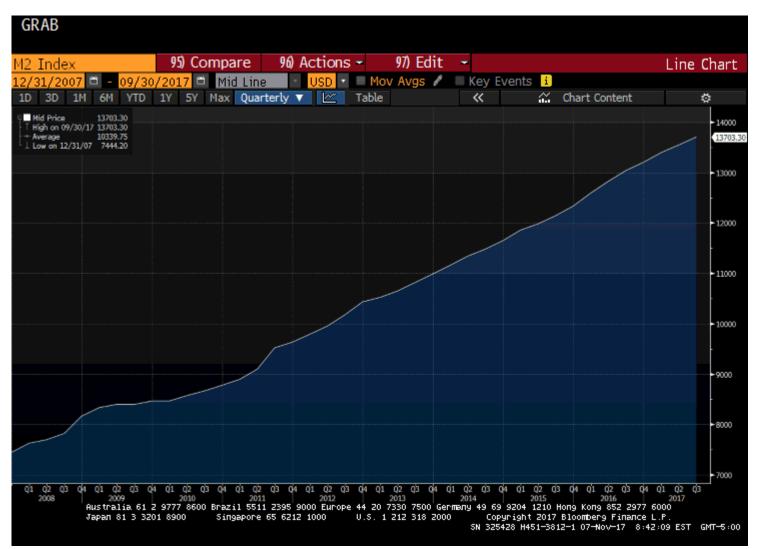














#### We don't know what we don't know

- Powell replaces Yellen
- Four Fed Governors stepping down
- Draghi's replacement
- Policy concerns



# What is the yield curve and why should you care ?



## Yield Curve Definition

A yield curve is a line that plots the interest rates, at a set point in time, of bonds having equal credit quality, but differing maturity dates. The most frequently reported yield curve compares the three-month, two-year, five-year and 30-year U.S. Treasury debt. This yield curve is used as a benchmark for other debt in the market, such as mortgage rates or bank lending rates. The curve is also used to predict changes in economic output and growth.



Source: Investopedia

### 10 Basis Points = \$1,000/ per \$1,000,000 Per YEAR



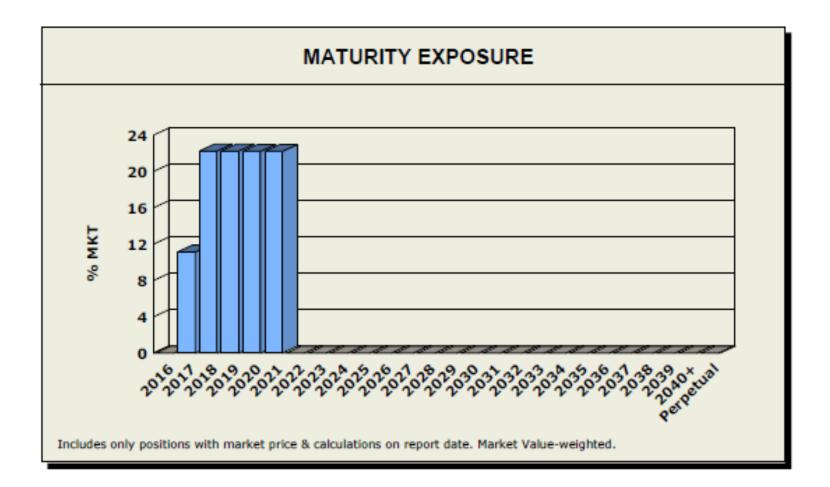
## **Basic Strategies**

- Laddered Maturity Distribution
- Barbell Maturity Distribution
- Bullet Maturity Distribution
- Importance of Duration



## Ladder



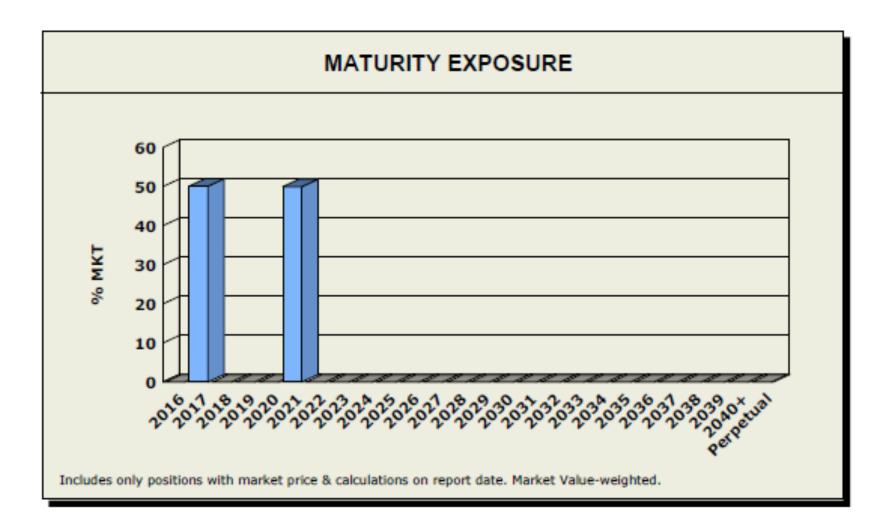




This chart is for illustration purposes only

# Barbell



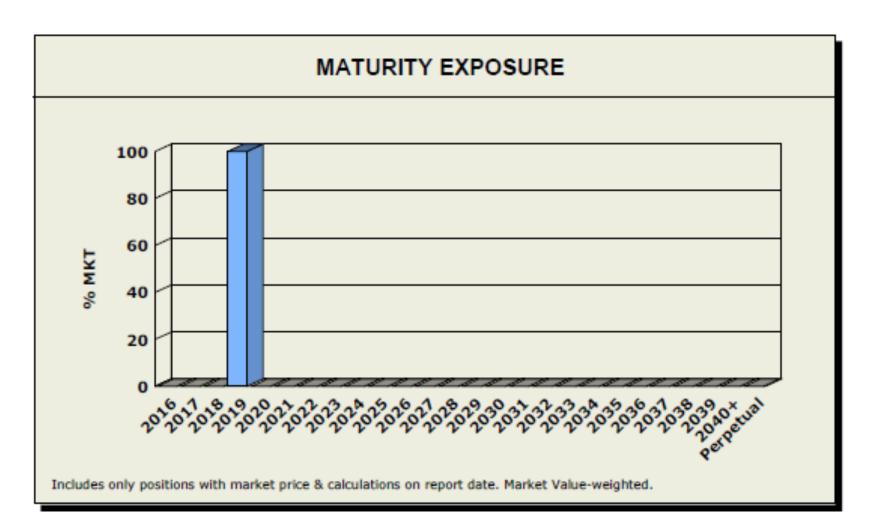


This is hypothetical information and shown for illustrative purposes only. A disclaimer and definitions of terms are provided at the end of this presentation. Data and evaluations are provided by Interactive Data Corp (IDC) and other sources deemed reliable.



# Bullet





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	Ladder	Barbell	Bullet
	\$2,500,000	\$2,500,000	\$2,500,000
Yield to Worst	1.19%	1.13%	1.15%
Duration	3.12	2.9	2.9
Horizon Effect 1% Parallel Shift	(\$14,993)	(\$11,098)	(\$18,418)

This chart is based on the hypothetical examples offered in this presentation and do not reflect actual investments or their results.



# **Advanced Strategies**



#### Analyze Spread Differentials



April 27, 2016

	1 Year	2 Year	3 Year	5 Year
Treasury	.60	.85	1.00	1.37
Agency		1.00	1.30	1.75
CD	.70	1.05	1.20	1.45
Spread	+ .10	+.20	+.20	+.08

*SOURCE: Bloomberg* This is a hypothetical example for illustrative purposes only.



June 16, 2016

	1 Year	2 Year	3 Year	5 Year
Treasury	.49	.67	.79	1.06
Agency		1.00	1.32	1.70
CD	.70	1.05	1.25	1.5
Spread	+ .21	+ .38	+.46	+ .44

*SOURCE: Bloomberg* This is a hypothetical example for illustrative purposes only.



October 16, 2017

	1 Year	2 Year	3 Year	5 Year
Treasury	1.4	1.52	1.66	1.93
Agency	1.38	1.63	1.85	2.28
CD	1.50	1.70	2.00	2.35
Spread	+ .2	+ .25	+ .38	+.44

*SOURCE: Bloomberg* This is a hypothetical example for illustrative purposes only.



# **Advanced Strategies**

Rolling Down the Curve



### **Discounted Agency Securities**

Primary Market	Coupon	Price	YTM	ΥТС
4 Year FHLMC	1.5%	100	1.5%	1.5%
3 Year FHLB	1%	100	1%	1%
Secondary Market	Coupon	Price	YTM	YTC
4 Year FNMA	1.375%	99.7	1.45%	2.48%

SOURCE: Bloomberg

This is a hypothetical example for illustrative purposes only.



# Yield to Worst Call



FHLB 2 11/09/22 (	Corp	Settings 👻	Pa	ge 1/11 Secu	rity Descriptior	1: Structured Note
Data not provided	<u> </u>		9	4)Notes 🔡 🗎	95) Buy	96) Sell
<ul> <li>25) Bond Description</li> <li>Pages</li> <li>11) Bond Info</li> <li>12) Addtl Info</li> <li>13) Covenants</li> <li>14) Guarantors</li> <li>15) Bond Ratings</li> <li>16) Identifiers</li> <li>17) Exchanges</li> <li>18) Inv Parties</li> <li>19) Fees, Restrict</li> </ul>	Issuer In Issuer Industry Security Mkt Iss Country Rank	Unsecured 2.000000		USD Step-Up	Identifiers ID Number CUSIP ISIN Bond Ratings Moody's S&P Composite	AP5529494 3130ACMC5 US3130ACMC52 Aaa AA+ AA+
20) Schedules 21) Coupons <b>Quick Links</b> 32) ALLQ Pricing 33) QRD Quote Recap	Day Cnt Maturity	30/360 11/09/2022 09/18@100.00	Iss Price	100.00000	Issuance & Tra Amt Issued/Ou USD USD	
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ield to Custom	02/0	09/2018 🗖	100.00	2.1608	64	
ield to Next Call	02/09	9/2018	100.00	2.1608	64	
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02/09/18 03/09/18	100.0000 100.0000	2.1609 2.1208	1.129 1.182	1.032 0.939	0.249 0.331	0.33
03/09/18	100.0000	2.1208	1.182	0.939	0.331	0.33 0.41
03/09/18 04/09/18	100.0000 100.0000	2.1208 2.0968	1.182 1.241	0.939 0.856	0.331 0.413	0.33 0.41 0.49
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03/09/18 04/09/18 05/09/18 06/09/18	100.0000 100.0000 100.0000 100.0000	2.1208 2.0968 2.0808 2.0706	1.182 1.241 1.270 1.296	0.939 0.856 0.811 0.775	0.331 0.413 0.495 0.577	0.33 0.41 0.49 0.57 0.65
03/09/18 04/09/18 05/09/18 06/09/18 07/09/18	100.0000 100.0000 100.0000 100.0000 100.0000	2.1208 2.0968 2.0808 2.0706 2.0624	1.182 1.241 1.270 1.296 1.321	0.939 0.856 0.811 0.775 0.741	0.331 0.413 0.495 0.577 0.658	0.33
03/09/18 04/09/18 05/09/18 06/09/18 07/09/18 08/09/18	100.0000 100.0000 100.0000 100.0000 100.0000 100.0000	2.1208 2.0968 2.0808 2.0706 2.0624 2.0557	1.182 1.241 1.270 1.296 1.321 1.348	0.939 0.856 0.811 0.775 0.741 0.708	0.331 0.413 0.495 0.577 0.658 0.740	0.33 0.41 0.49 0.57 0.65 0.74



### October 16, 2017

	1 Year	2 Year	3 Year	5 Year
Treasury	1.4	1.52	1.66	1.93
Agency	1.38	1.63	1.85	2.28
CD	1.50	1.70	2.00	2.35

FHLB 2% Step	2.05	2.02	2.01	2.67
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*SOURCE: Bloomberg* This is a hypothetical example for illustrative purposes only.



# CARILLON GROUP OF RAYMOND JAMES®

# Questions

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There is an inverse relationship between interest rate movements and bond prices. Generally, when interest rates rise, bond prices fall and when interest rates fall, bond prices rise.

A credit rating of a security is not a recommendation to buy, sell or hold securities and may be subject to review, revisions, suspension, reduction or withdrawal at any time by the assigning rating agency. Ratings and insurance do not remove market risk since they do not guarantee the market value of the bond. Ratings apply to the company's claims paying ability and not to the safety or performance of an investment. No representation is made as an insurer's ability to meet its financial commitments. U.S. Treasury securities are guaranteed by the U.S government and, if held to maturity, offer a fixed rate of return and guaranteed principal value.

To learn more about the risks and rewards of investing in fixed income, please access the Securities Industry and Financial Markets Association's "Learn More" section of investinginbonds.com, FINRA's "Smart Bond Investing" section of finra.org, and the Municipal Securities Rulemaking Board's (MSRB) Electronic Municipal Market Access System (EMMA) "Education Center" section of emma.msrb.org.

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### **Terms and Definitions**

### Accrued Interest

The amount of interest that has accumulated from and including the most recent interest payment date or dated date up to but not including the date of settlement.

### Adjustable and Floating Rate Bonds

A bond for which the interest rate is adjusted periodically according to a predetermined formula (i.e. linked to an index). In case of variable securities such as stepups

or floaters, the initial yield may be lower than the yield on comparable fixed -rate bonds in return for the potential of higher yields over the life of the investment.

### Adjusted Price (Adj Price)

Acquisition price adjusted by amortization of a premium or accretion of a discount using the constant yield method as recommended by the IRS except preferreds.

### Alternative Minimum Tax (AMT)

Taxation based on an alternative method of calculating federal income tax intended to ensure that taxpayers are not able to avoid paying any federal income tax.

### Auction Rate Preferred Securities (ARS)

Floating-rate bonds where the rate is periodically reset by a dutch auction.

### **BQ (Bank Qualified Bonds)**

Designation given to bonds when the issuer expects to issue no more than \$10 million in par in the calendar year.

### Convexity

A measure of the change in a security's duration with respect to changes in interest rates. The more convex a security is, the more its duration will change with interest rate changes.

### Coupon

The bond's annual interest rate expressed as a percentage. Payment frequency may vary with each security and some bonds pay interest at maturity.

### Coupon Cash Flow (Graph)

Cash flow over the next 12 months including atypical interest payments for first or last coupons. Auction, Floating and Variable rate securities assume constant coupon rate to maturity which may not represent actual future results.

### **Current Face Value**

The current amount of principal outstanding on a security, which is calculated by multiplying the original face value by the most recent factor (i.e. discount bond, Collateralized Mortgage Obligation or factored security).

### **Current Yield**

The ratio of interest paid to the purchase or market price, stated as a percentage. For example, a bond with a current market price of \$1,000 that pays \$60 per year in interest would have a current yield of 6%.



### **Effective Maturity**

The date to which a bond is priced taking into account embedded options (i.e. call or pay down features). Call or average life dates are substituted for maturity dates on bonds priced to a call for portfolio average calculations.

### Estimated Annual Coupon Cash Flow (Graph)

Estimated Annual Income (see below) in monthly graphical format.

### Estate Protection Feature (survivor's option, death put)

This feature allows the estate of the beneficial holder to return the bond to the issuer at face (par) value in the event of the beneficial holder's death, regardless of the price at which the security is trading at that time. If this security has a zero coupon, then it will be redeemed at the accreted value. As certain limitations may apply, please refer to each individual issuer's prospectus, offering circular or disclosure document.

### **Estimated Annual Income**

Annual cash flow from coupon payments based on current portfolio composition; does NOT reflect long or short first coupon payments or maturing bonds. Auction, Floating and Variable rate securities assume constant coupon rate to maturity which may not represent actual future results.

### G/L (Unrealized Gain/Loss)

The difference between the adjusted purchase price of the bond and its current evaluated market price.

### Insurer

The company that guarantees the payment of principal and interest on the bonds (also includes PSF a credit enhancement provided by the Texas Permanent School Fund).

### **Market Price**

Price per \$100 based on current market as determined by third party data sources; subject to change without notice.

### **Market Value**

The sum of each security's most recent market price multiplied by quantity held.

### Maturity

The date on which the bond is due; unpaid principal balance is payable and interest payments stop. Adjusted for pre-refunded, crossover refunded and mandatory put bonds. Certain securities may reflect average life based upon principal pay-down assumptions.

### **Modified Duration**

A measurement of price volatility when interest rates change. Bonds of similar duration will have similar price movements for a given move in interest rates. Effective Duration takes into account any calls, puts or other options of the security.



### **Mortgage-Backed Securities**

Mortgage backed securities are generally regarded as higher yielding investments with relative safety of principal. However, the potential reward of higher yields is dependent on the predictability of timing the return of principal contingent upon the cash flows from the underlying mortgage pools. Homeowners have the option of prepaying their principal at any time. For those well-diversified portfolios looking for an additional yield and willing to accept the prepayment risk, mortgage backed securities are an alternative worth investigating. Fannie Mae, Ginnie Mae, and Freddie Mac are government sponsored enterprises backing the timely payment of principal and interest. This backing does not protect against loss of principal if sold prior to maturity.

### Original Face Value (Par)

The face value or original principal amount of a security on its issue date.

#### Past Performance

There can be no assurance that past performance will be repeated in the future.

#### **Preferred Securities**

Preferred securities are considered fixed income investments as their income payments are generally fixed over the term of the investment and will react similarly to other debt investments to changes in the market conditions. Preferred securities are quoted on either current yield or yield to call if trading at a premium. Some preferred securities may have a deferrable interest feature, which allows the issuer, in certain circumstances, to defer interest payments between 5 to 10 years or longer depending on the security. The deferred income will generally accumulate, but will be considered as ordinary income for the year in which it is accrued, even though the holder of the security receives no payment until the issuer reinstates interest payments. If deferred, the ability of issuer to reinstate interest payments is subject to credit worthiness of the issuer.

#### Term to Maturity and Early Redemption (call)

Except where noted, the investments shown are for a specified term. Some investments provide for the maturity extension by the issuer. Some preferred securities are perpetual and, therefore, have no stated maturity date. The yields displayed assume ownership until maturity date or termination date. Should your ownership cease for any reason prior to that date, the amount of principal you receive may differ from that originally invested (market risk), and your return may differ from that shown. Certain early redemption features, such as calls, provide the issuer an option to repay principal prior to maturity and may change the term of the investment. The likeliness of a call may vary, and may depend upon prevailing interest rates and credit condition of issuers. Bonds may only be called at the issuer's option, on predetermined dates or at any time with notice.

#### **Total Market Value**

Market value plus accrued interest as of the last pricing date.

### Yield to Maturity

Yield to final maturity based on current market evaluation. Adjusted for pre-refunded, crossover refunded and mandatory put bonds. Auction, Floating and Variable rate securities assume constant coupon rate to maturity which may not represent actual future results.

#### Yield to Worst

Yield to applicable call, average life or maturity date whichever is lowest based on current market evaluation. Auction, Floating and Variable rate securities assume constant coupon rate to maturity which may not represent actual future results.



#### Disclaimer

### YIELDS REPRESENT YIELD TO MATURITY OR YIELD TO WORST CALL AS INDICATED. PLEASE REVIEW THIS INFORMATION CAREFULLY WITH YOUR FINANCIAL ADVISOR TO ASSURE IT MEETS YOUR INVESTMENT OBJECTIVES.

Minimum purchases may apply. Prices and yields are subject to change based upon market conditions and availability.

An overview of these investments, their features and risks is available at raymondjames.com, "Smart Bond Investing" at finra.org, under "Learn More" at investinginbonds.com, or emma.msrb.org.

**RISK CONSIDERATIONS:** These securities are subject to risk factors that may decrease (or increase) the market value of your investment. Interest or dividend rate risk is the risk that changes in interest rates may reduce (or increase) the market value of your investment. Generally, a rise in interest rates decreases market price; while a fall in interest rates increases market price. Default or credit risk is the risk that the issuer, obligor, or insurer will be unable to make interest payments or repay principal when due. Liquidity risk is the risk that you will be unable to sell these securities in the secondary market. If you decide to sell prior to maturity, your proceeds may be more or less than the original cost, and may be subject to capital gains or loss.

**CREDIT RISK OR DÉFAULT RISK** refers to the risks that the issuer's creditworthiness may weaken or possibly the issuer will not be able to pay interest or repay principal. Adverse changes in the creditworthiness and rating may decrease value of the investment. Generally, higher yields and/or lower ratings reflect higher perceived credit risk. Independent rating agencies provide actual and underlying security ratings on most securities which at times include future outlook and/or placement of the security under review for future action. These ratings are subject to change at any time and are not meant as a recommendation to buy, sell or hold. Securities with the same rating can actually trade at significantly different prices. Raymond James trade confirmations, online accounts and monthly statements display only the current ratings and subsequent changes of those Rating Agencies to which Raymond James subscribes. Investors may request Moody's and/or S&P credit reports from their financial advisors, and Fitch reports are available for municipal bonds. To learn more please refer to moodys.com

Insurance, if specified, relates to the timely payment of principal and interest. Insurance does not guarantee market value or protect against fluctuations in bond prices resulting from general market fluctuations. No representation is made as to the insurer's ability to meet its financial commitments and the underlying credit should be considered. High yield bonds are not suitable for all investors and are generally considered speculative in nature with greater potential loss of interest and/or principal. Brokered Certificate of Deposit FDIC insurance covers up to \$250,000 (including principal and interest) for deposits held in different ownership categories, including single accounts, joint accounts, trust accounts, IRAs, and certain other retirement accounts, per issuer. Funds may not be withdrawn until the maturity date or redemption date. However, these CDs are negotiable, which means, that although not obligated to do so, Raymond James and other broker/dealers currently maintain an active secondary market at current interest rates. FDIC insurance does not guarantee market value or protect against fluctuations in CD prices resulting from general market changes.

**INCOME**: In general, fixed income investments pay a fixed interest rate coupon. Some bonds, however can pay variable payments such as step coupons and or variable rates based on a predetermined formula. Interest from taxable zero coupon securities is subject to annual taxation as ordinary income, even though no

income is received. Certain federally tax-exempt municipal securities, although federally tax-exempt, may be subject to federal alternative minimum tax (AMT). Brokered CDs annual percentage yields (APY) represents the interest earned based on simple interest calculations.

**MATURITY:** Brokered CDs with a maturity of longer than 1 yr are considered as Long-Term. Certain early redemption features, such as a call at issuer's option, provide the issuer an option to repay principal prior to maturity and may change the term of the investment. Certain brokered CDs are also callable at the

option of the issuer. Modified Duration and Convexity are measures of price sensitivity of a fixed-income security to changes in interest rates. Modified Duration is the approximate percentage change in price that would occur with a 1% change in interest rates. Convexity estimates the impact of interest rate changes on modified duration. Modified Duration and Convexity may be used together to approximate price volatility of fixed-income securities. Modified Duration does not account for early redemption features, such as calls by the issuer. Mortgage-backed securities and Collateralized Mortgage Obligations (CMOs) are priced based on average life which includes prepayment assumptions that may or may not be met and changes in prepayments may significantly affect yield and average life.

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