Segal Marco Advisors

Nevada Public Employees' Deferred Compensation Program

REVIEW OF INVESTMENT STRUCTURE

Presented by:

Frank Picarelli
Senior Vice President

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Introduction

With the recent transition to fee level model, this study is to evaluate alternative investment products and asset classes for Committee consideration.

The objective is to determine optional number and types of options/products to further enhance participant diversification.

The total assets at approximately $800 million presents opportunities to evaluate the pros and cons of alternative investment products.

Any new investment asset class or product requires participant education, so participants can make informed investment decisions.

The goal is to continue to follow industry best practices as they pertain to the overall design of the investment structure of the Plan, and ensure that the lowest possible management fees are made available to the participants.

Collective Investment Trusts CITs

- CITs are pooled institutional investment vehicles and are not publicly traded
- Trust must be established by a bank trust company that will act as fiduciary and maintain the ultimate responsibility for the discretion and control of the trust
- CITs are regulated and governed by federal or state levels
- Unlike mutual funds, they are exempt from SEC regulations
- CITs aren't new, mutual funds were the option of choice in all types of Defined Compensation Programs
- CITs today have more common shared features as mutual funds
- CITs are attractive to plans that have large asset under management in an specific individual fund for favorable investment management fees however this may require higher recordkeeping fees, daily unit value
- State of Nevada plan assets in variable options range from $8 million to a high of $70 million
- Under the new fee level mode the investment options are at the most efficient share class with revenue sharing if any being returned back into the participants account.

Collective Investment Trusts CITs

Pricing	Generally CITs have a low cost advantage over mutual funds, due to different regulatory requirements
Flexibility	Managers have the ability to offer multiple fee classes to clients with sliding fee schedules based on asset growth
NSCC Trading	Can trade through NSCC same operational process as mutual funds for recordkeeper daily valuations

Collective Investment Trusts CITs

Plans greater than $1 billion in AUM hold 37% of assets in CITs.

Two-thirds of large mega plans hold CITs in their plans

Mutual Funds vs. CITs Fees					
Large Blend		Foreign Large Blend		Intermediate Bonds	
Mutual F	CIT	Mutual F	CIT	Mutual F	CIT
0.74	0.66	0.85	0.52	0.52	0.32

- Low regulatory cost structure
- Can customize portfolio for specific needs and asset size
- Rename a fund to simplify participant communications or create branding example State of Nevada Large Cap Growth Fund

Mutual Funds versus White Label Funds

	Mutual Funds	White Label
Pros	- Participants are used to the investment structure	- Can provide diversification by combining multiple managers under one fund; may allow investment in niche strategies (i.e. asset allocation models) All market caps under one option
	- Mutual funds are publically traded so information is readily available	- Easy to change underlying managers if needed with no extensive participant education and communications as overall objective of asset class is maintained
	- Often well recognized firms manage the investment options; may give participants a comfort level	- Identify a fund by asset class or objective rather than the brand of the investment firm; often guideline flexibility over underlying managers
	- Plan sponsors do not have to make decisions on fund management; only need to monitor the investment managers	- May realize lower management fees through combining active and passive strategies, collective trusts or leveraging separate account managers used on other plans
Cons	- Participant notification recommended each time an option changes	- Participants may feel that choice has been taken away with reduced total number of investments
	- Do not force investment diversification as participants can put their money into a single fund	- No ticker symbol or public transparency and lack a trackrecord; may frustrate participants who want to do their own research
	- No control over investment guidelines of the mutual fund	- May incur additional costs such as calculating a daily net asset value, rebalancing, structure design, custody, etc.
		- Committee retain fiduciary responsibility over fund structure and implementation unless outsourced

Multi-Asset Class Solutions
Overview

Investment programs that include a broad cross-section of asset classes

Solutions-oriented in that they can be tailored to fit specific client needs

Will shift allocations between various asset classes to produce improved outcomes

What Are Multi-Asset Class Solutions?

Representative Strategy Comparison

	Risk Parity	GTAA	Other Liquid Alternative Solutions
Investment Objective(s)	• Diversification • Attractive risk-adjusted performance	• Diversification • Downside protection with upside potential • Inflation hedging • Alpha through TAA	• Diversification • Downside protection with upside potential • Inflation hedging • Alpha through short-and medium-term market dislocations • Among other things
Strategy Characteristics	• Risk-weighted • Long-only	• Capital-weighted but risk-conscious • Generally long-only, but may have shorting flexibility	• Contrarian • Leverage proprietary models and senior team experience to identify and exploit inefficiencies
How Strategy is Used in Broad Portfolio	• Complementary beta diversifying strategy to pair with more alpha centric mandates	• Core beta diversifying strategy with alpha potential through TAA • Complement to less liquid and/or more alpha-centric investment solutions; productive liquidity source	• Complement to traditional allocations; used in part as a hedge • Core, standalone diversifying allocation
Return Expectations	• Tends to <u>outperform</u> when: markets reward diversification • Tends to <u>underperform</u> when: markets trend and/or experience sharp upward rallies	• Tends to <u>outperform</u> when: asset class fundamentals dominate macro noises • Tends to <u>underperform</u> when: market uncertainty dictates asset pricing	• Tends to <u>outperform</u> when: markets are trending • Tends to <u>underperform</u> when: markets experience material and persistent price fluctuations
Fee Terms	• 0.30% to 0.50% management fee, on average	• 0.60% to 1.20% management fee, on average	• Management fee + incentive fee, on average
Liquidity Terms	• Daily, Weekly, Monthly	• Daily, Weekly, Monthly	• Daily, Weekly, Monthly

How Are Multi-Asset Class Solutions Used

- Managing volatility and enhance diversification view as a balanced type product with multiple assets classes
- Reducing reliance upon equity exposure
- Acting as a swing balanced type option between cheap and expensive assets classes
- Creating an active method of hedging inflation risk, downside protection
- Assisting in managing complexity and adding new opportunities quickly
- A substitute for other absolute return approaches if liquidity, fees, transparency are desirable or necessary
- An alternative to fully outsourcing where governance of areas like rebalancing would be helpful, but the asset owner does not wish to cede decisions such as manager selection
- Investing in alpha generators overlooked by many traditional managers (risk tactical trading, and factor tilts, for example)

What is ESG Investing?

- ESG stands for Environmental, Social and Governance
- Concept of "Universal Ownership" – as a long-term owner of a diversified investment portfolio, an investor's long-term financial interest in their investment depends on the ability of global markets to produce economic growth on a sustainable basis
- Goal – to integrate the long-term nature of the investments (30 years or longer for certain pension funds) with the short-term behavior of their agents

Source: MSCI ESG Research; 2017

ESG Factors and Impact

Area of Focus	Activity	Potential Impact on Financial Performance
Environment	Resource management and pollution prevention Reduced emissions and climate impact Environmental reporting/disclosure	Avoid or minimize environmental liabilities Lower costs/increase profitability through energy and other efficiencies Reduce regulatory, litigation and reputational risk Indicator of well-governed company
Social	Workplace: Diversity Health and safety Labor-Management relations Human rights Product Integrity: Safety Product quality Emerging technology issues Community Impact: Community relations Responsible lending Corporate philanthropy	Workplace: Improved productivity and morale Reduce turnover and absenteeism Openness to new ideas and innovation Reduce potential for litigation and reputational risk Product Integrity: Create brand loyalty Increase sales based on products safety and excellence Reduce potential for litigation and reputational risk Community Impact: Improve brand loyalty Protect license to operate
Corporate Governance	Executive compensation Board accountability Shareholder rights Reporting and disclosure	Align interests of shareowners and management Avoid negative financial surprises or “blow-ups” Reduce reputational risk

Source: ESG Managers Portfolios

Mutual Fund Options for ESG/SRI Investing

Several Fund Families are specifically committed to a focus on ESG and SRI:

- Calvert
- Domini
- Pax World

In addition, several traditional investment firms offer funds specific to different forms of ESG and SRI:

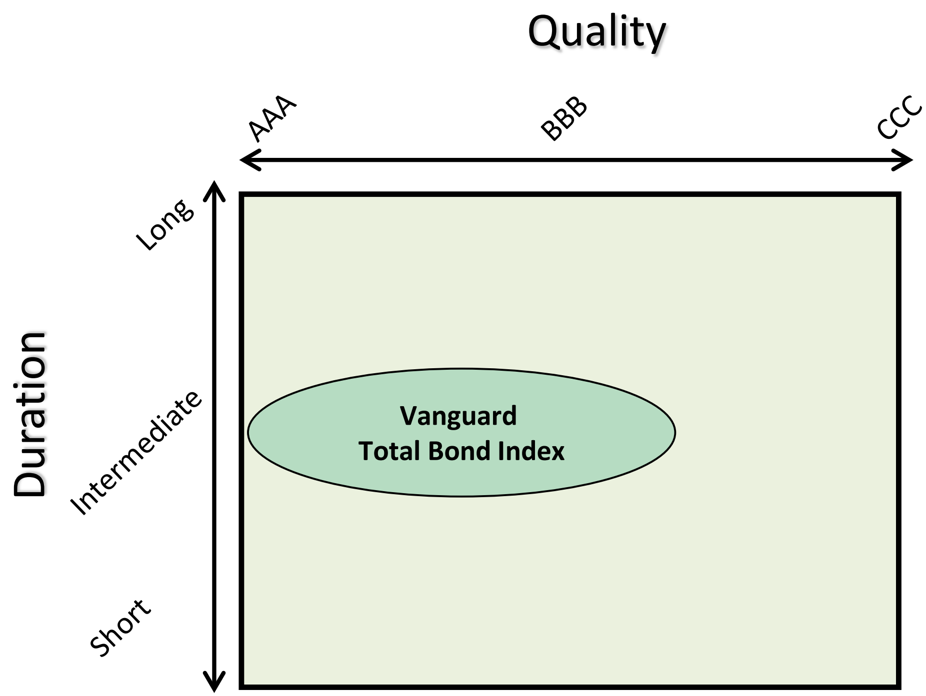
- American Century
- Brown Advisory
- DFA
- Fidelity
- Invesco
- Legg Mason/Clearbridge
- Morgan Stanley
- Neuberger Berman
- Saturna Capital / Amana (Halal Investing)
- Sentinel
- Touchstone
- Wells Fargo

Retirement Date Funds
Off-the Shelf versus Custom TDF Implementation

	Off-the-Shelf	Custom TDF
Pros	- Strategy and implementation known and consistent; track record available for analysis	- Ability to choose from the best-in-class funds already in place; may allow investment in niche strategies (i.e. private real estate & alternatives) that may be excluded from off-the-shelf options
	- Mutual funds are publically traded so information is readily available	- Glidepath designed as a better fit for the specific characteristics of the plan participants
	- Often well recognized firms manage the investment options; may give participants a comfort level	- Managers removed from or added to the plan lineup can be simultaneously replicated in the custom TDF
	- Plan sponsors do not have to make decisions on fund management; only need to monitor the investment manager	- Provide the plan sponsor greatest flexibility in construction
Cons	- “Best” fit glidepath, not specific to participant base	- Additional fiduciary responsibilities of due diligence, asset allocation, oversight, implementation, and ongoing monitoring for the plan sponsor
	- Many are 100% proprietary for underlying investments; no flexibility in manager implementation	- Additional costs associated with glidepath design, administration, consultant fees, etc.
	- Plan sponsor and participants subject to any generic changes (i.e. glidepath updates & tactical asset allocation) made to the product	- No ticker symbol or public transparency and lack a trackrecord; may frustrate participants who want to do their own research

U.S. Fixed Income Options

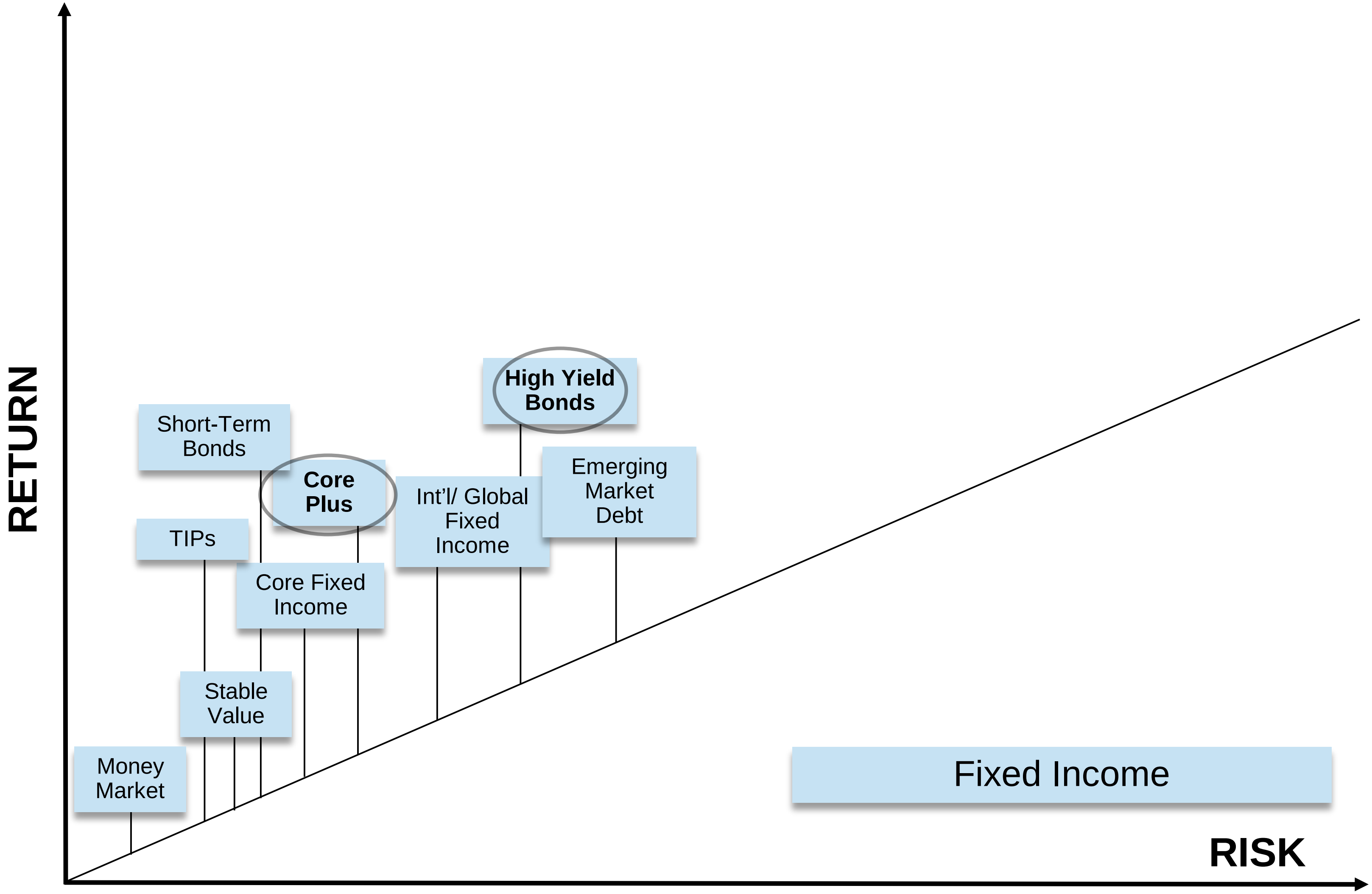
The box below represents the current offering.



- ***Core Bond or Core Plus***
  Most common bond offering
- ***Long Bonds***
  Higher yielding, volatile option
- ***International/Global***
  Provides diversification from US bonds
- ***Emerging Market Debt***
  Higher risk/return profile that provides diversification from US bonds
- ***TIPS***
  Provides investors with a haven from inflation, as well as a "real return" over inflation throughout the investment period.
- ***High Yield***
  Higher risk/return option
- ***Stable Value***
  most popular options favorable minimum guarantee rates.

Fixed Income Investment Asset Classes Available

Investment options should span the risk return spectrum and most asset classes should be represented.
Risk/return spectrum not drawn to scale.



Fixed Income Asset Classes

Asset Class	Currently in the Plan*	Comments
Stable Value	Yes	Popular option—favorable minimum rates
Core Bonds	Yes	Popular option— passive management low cost management fee
Core Plus Bonds	No	Riskier than Core Bonds due to the exposure to high yield, emerging markets debt and international bonds
TIPs	No	Current income and inflation hedge, timing of implementation
High Yield Bonds	No	Return enhancer and diversifier
International or Global Bonds	No	Diversifier—Global equities include US equities, International Equities do not
Emerging Market Debt	No	Return enhancer and diversifier

Fixed Income Asset Classes

Fixed Income Investment	Percent Offered	Participant Allocation
Domestic, Active	82.8%	7.3%
Domestic, Passive	57.0	2.5
International Active	12.9	0.6
TIPS	12.9	0.1
Money Market	40.9	2.5
Stable Value	63.4	10.4

PSCA 57th Annual Survey – Plans over 5,000 participants

The above table highlights for plans over 5,000 participants what percent of plans offer the investment option and how much participants have invest in those options. Biggest challenge is in the participant communication and education

Fixed Income

- **Core U. S. Bonds:** All fixed rate debt securities issued in the U.S., including government, corporate, agency, mortgage pass-through and asset-backed securities, that are rated investment grade (BBB) or higher. Duration comparable to Barclays Capital Aggregate.

- **Advantages**
  - With its income component, bonds provide stability in a diversified portfolio.
  - Large very liquid market with many derivative instruments to supplement exposures.

- **Disadvantages**
  - Bond value is sensitive to changes in interest rates, credit quality, and inflation.

Fixed Income

Core Plus Bonds: All fixed rate debt securities issued in the U.S., including government, corporate, agency, mortgage pass-through and asset-backed securities, that are rated investment grade (BBB) or higher. Core Plus Bonds enhances these features with the opportunistic value-added potential of exposure to three additional asset classes:

- ***High Yield*** - Higher expected long-term returns than investment grade bonds with a low correlation with every major asset class. Over 90% of the return is derived from the bonds' interest income.
- ***Emerging Markets Debt*** - High current income component and potential for enhanced returns.
- ***Developed Non U.S. Fixed Income*** – Features similar to domestic core portfolio, but a global opportunity set.

- **Advantages**
  - With its income component, bonds provide stability in a diversified portfolio.

- **Disadvantages**
  - Bond value is sensitive to changes in interest rates, credit quality, and inflation.
  - Higher volatility that Core Bond
  - Political and/economic instability of emerging market countries
  - Specialized management skills are needed to effectively invest in the asset class

Fixed Income

Developed Non-U.S. Fixed Income: Bonds that are issued by companies or governments in developed countries other than U.S.

- **Advantages**
  - Pays fixed coupon rate.
  - Diversification across multiple yield curves.

- **Disadvantages**
  - Exposure to currency exchange risk.
    - Funds can be hedged to eliminate currency risk.
  - Exposure to political or economic instability.

Fixed Income

High Yield: All corporate debt issued in the U.S. that is rated below investment grade, or is not rated. These securities have a higher yield than investment grade corporates, and are riskier, both in terms of price risk and default risk.

- **Advantages**
  - Offer higher expected long-term returns than investment grade bonds. 90% + of the return is derived from the bonds' interest income.
  - Increased diversification. High Yield has a low correlation with every major asset class.

Disadvantages

- Higher volatility than investment grade corporates.
- Higher default rate relative to traditional investments.
- Specialized management skills are needed to effectively invest in the asset class.

Fixed Income

Emerging Markets Debt: Emerging market debt includes debt securities in countries with less developed economies

Advantages

- High current income component.
- Potential for enhanced returns relative to core fixed income.

- **Disadvantages**
  - Higher default risk associated with lower quality issuers.
  - Interim volatility associated with political or economic instability of emerging market countries.

Fixed Income

Inflation Linked Bonds (TIPS): A special type of Treasury note or bond that offers protection from inflation. As with other Treasuries, when you buy an inflation-linked bond you receive interest payments every six months, which is continuously adjusted for inflation.

- **Advantages**
  - High Credit Quality
  - Principal and Interest are Protected against Inflation
  - Accrued Principal Value is Higher than its Face Value

- **Disadvantages**

  Due to the protection against inflation, these are some of the disadvantages:

  - Principal could Decline during Deflation.
  - Could have Higher Volatility than Core Bonds
  - Due to the protection against inflation, which guarantees a real rate of return, TIPS offer a low return.

Fixed Income

Long Term Fixed Income: Bond issues with maturities typically greater than 15 years

- **Advantages**
  - Higher interest rates than core fixed income.

- **Disadvantages**
  - Higher credit and inflation risk.
  - Higher overall volatility than core fixed income.

Fixed Income – Strong Case for Active Management

- Full replication of the Barclays Capital Aggregate Index is impossible. Only approximately 60% of the index is liquid and available for purchase, leaving passive managers to replicate the additional 40% by taking, often unintended, security specific risk. The passive management fees tend to be below 10 basis points.

- Optimization techniques are employed to best match the characteristics of the index, such as sector and quality weights, duration and convexity, duration contribution by sector and quality, and cash flow distribution.

- Certain sector are easier to replicate than others. For example, sovereign and mortgage sectors can be accessed, while the credit sector poses unique challenges. Indexers simply cannot own the entire credit index, they attempt to replicate through holding a diverse credit portfolio with risk exposures similar to the index.

- Corporate securities faced an increasingly volatile environment leading to increased in downgrade risk and defaults. Considerable manager skill is required in the corporate sector. Therefore a passive sampling approach to indexing is inherently and increasingly riskier.

- Issuer-specific risk is perhaps the largest risk present in index replication strategies, as many corporate securities represented in the index are not available for purchase.

- Hedge funds have added to the volatility and complexity of execution. Prices of “must own issues” are bid up. Subsequently, prices of downgraded issues are driven down. Indexers are forced to sell securities downgraded from investment grade to non-investment grade even if the fundamentals don’t necessarily support the downgrades.

Fixed Income – Strong Case for Active Management

- Active managers have a broad range of opportunities to add value through decisions, including duration and yield curve bets, sector allocation, security selection, and non-benchmark securities. Different types of mortgages, asset-backed notes, structured notes, high yield and non-dollar securities can all be incorporated into fixed income strategies to add to the opportunity set.

- Inefficiencies have always existed in the fixed income market because it is an over-the-counter market where prices for bonds are not readily and publicly available. Additionally, there are a vast number of securities with esoteric and complex structures which provide opportunity for research and analysts to add value.

- Many large investors, some mutual funds, insurance companies and CBO's who are buy and hold investors seeking yield, are not necessarily driven by total return. These investors buy bonds as spread widen or interest rates go up in order to capture higher yields. They sell securities as spreads are tightening in order to harvest capital gains for earnings management. This kind of mis-alignment of objectives by different types of investors creates opportunities for active management.

- We recommend identifying fixed income managers with an extensive range of capabilities and allowing them considerable flexibility to invest across the broad array of fixed income securities. Fixed income markets allow scale among active managers, permitting many of the largest managers to continue to add significant value despite their size.

Current Investment Structure

Voya

STYLE

CAPITALIZATION

	Value	Blend	Growth
Large	MFS VALUE FUND	Vanguard Institutional Index (passive)	T. Rowe Price Growth Stock
Medium	Vanguard Mid-Cap Value Index	Hartford Mid Cap HLS	-
SMID		Vanguard Extended Market Index (passive) Oppenheimer Main Street Mid Cap	Goldman Sachs Small/Mid Cap Growth

Additional Asset Categories within Investment Line-up

Fixed Income/Stable Value
Voya Fixed Account

Fixed Income/Bond
Vanguard Total Bond Market Index

International Equity
Vanguard Developed Markets Index (passive)

International Eq (w/ Emerging Markets exposure)
Dodge & Cox International Stock

Global Equity
Franklin Mutual Global Discovery A

Target Date/Lifecycle Funds
Vanguard Target Retirement Income Inv
Vanguard Target Retirement 2015 Inv
Vanguard Target Retirement 2025 Inv
Vanguard Target Retirement 2035 Inv
Vanguard Target Retirement 2045 Inv
Vanguard Target Retirement 2055 Inv
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Self Directed Brokerage
TD Ameritrade SDBA

Investment Structure Asset Classes Available

Investment options should span the risk return spectrum and most asset classes should be represented. Risk/return spectrum not drawn to scale.