Defined Contribution Plan

Overview

December 10, 2020

State of Michigan Investment Board
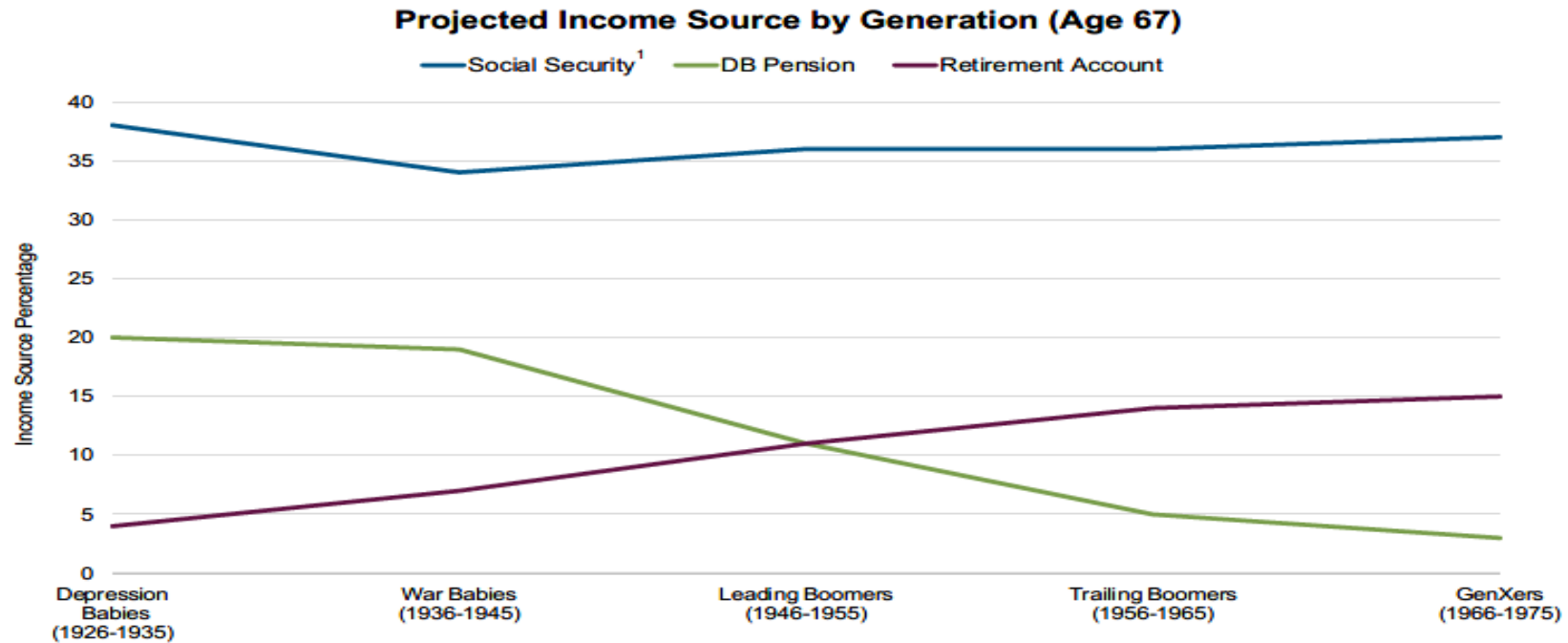
➢ **Defined Contribution Overview**
  Versions 1.0 to 3.0

➢ **Michigan's DC Plan**
  Office of Retirement Services

➢ **Michigan's DC Plan Investments**
  Bureau of Investments

➢ **Target Date Funds**
  State Street Global Advisors

DC has supplanted DB

New retirees rely on DC assets more than ever

Projected Income Source by Generation (Age 67)

Social Security[1] — DB Pension — Retirement Account

Y-axis: Income Source Percentage (0 to 40)

X-axis categories:
- Depression Babies (1926-1935)
- War Babies (1936-1945)
- Leading Boomers (1946-1955)
- Trailing Boomers (1956-1965)
- GenXers (1966-1975)

[1]Social Services Agency. SOURCE: Butrica, Barbara A., Karen E. Smith, and Howard M. Iams. 2012. "This Is Not Your Parents' Retirement: Comparing Retirement Income Across Generations." Social Security Bulletin 72(1): 37–58

PIMCO

- **1980s**
  - First 401(k) plan debuted in 1980
  - Viewed initially as a supplement to the DB plan
- **1990s**
  - Equity bull market helped drive modest participation in DC plans
  - However, many workers either didn't enroll or saved very small percentages of their salaries
- **2000s- retirement savings shift from DB to DC, faults in underlying assumptions appeared:**
  - Participants weren't joining DC plans on their own
  - Participants weren't saving enough
  - Participants weren't selecting appropriately diversified investments on their own

Research makes it clear many participants:

➤ Don't know how to invest

➤ Are concerned about saving

➤ Don't know how to draw on their savings in retirement

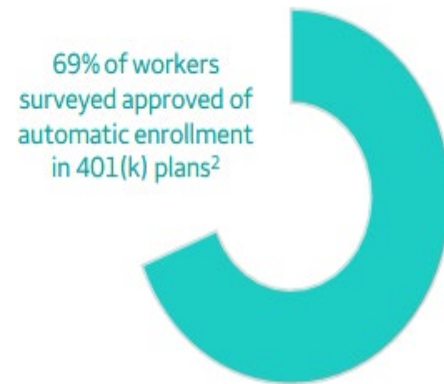|	Think it's important		Feel knowledgeable about it
How to select a **diverse mix** of investments	65%	⟵⟶	33%
How to adjust my **asset allocation** depending on my investment timeline	67%	⟵⟶	30%
How to determine how much I will **need to save** to have a secure retirement	78%	⟵⟶	33%
How to make my retirement savings **last a lifetime**	82%	⟵⟶	28%

Source: State Street analysis based on information provided by plan sponsor, as of April 2019. SSGA April 2012 DC Investor Survey

– **2000s- Behavioral economists began to look for ways to encourage greater DC plan participation and savings rates**

- Over time, their ground breaking research found that defaulting workers into better decisions about; **participation**, **contribution** and **investing** would significantly improve expected outcomes

– **2006- Pension Protection Act encouraged:**

- Automatic enrollment
- Automatic escalation of contributions
- Default investment options
- Professionally managed investment products like **Target Date Funds**
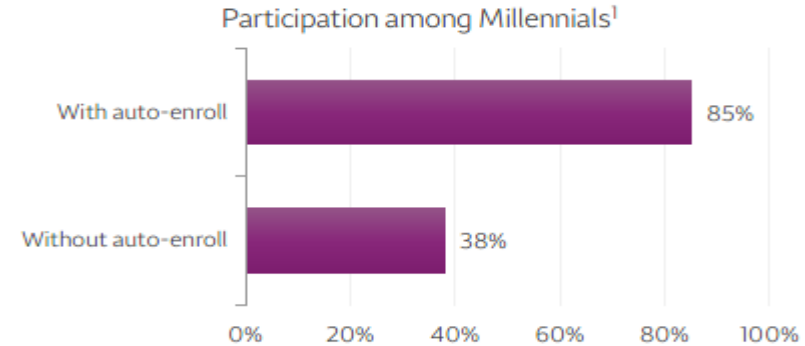
The autos are working:

➤**Auto-enrollment**

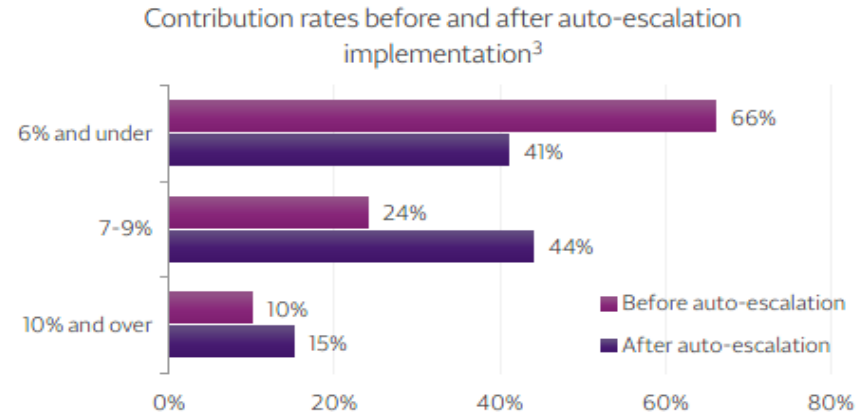➤**Auto-escalation**

➤**Auto-diversification**

Auto-enrollment is working:

Participation among Millennials[1]

With auto-enroll — 85%

Without auto-enroll — 38%

0% 20% 40% 60% 80% 100%

Participants approve:

69% of workers surveyed approved of automatic enrollment in 401(k) plans[2]

Auto-escalation is working:

Contribution rates before and after auto-escalation implementation[3]

6% and under — 66% / 41%

7-9% — 24% / 44%

10% and over — 10% / 15%

0% 20% 40% 60% 80%

■ Before auto-escalation
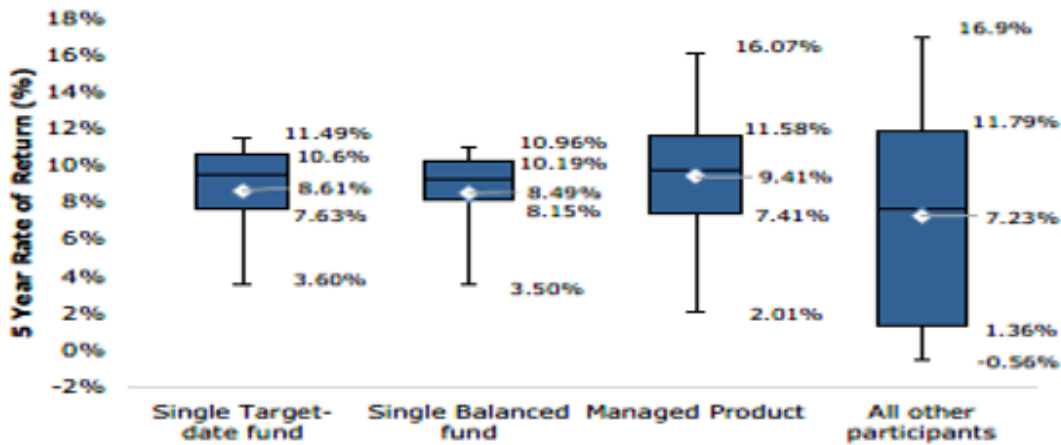■ After auto-escalation

Target Date Fund:

➢ **Low minimum investment-** allows for instant diversification
➢ **Low cost-** low cost indexed funds
➢ **Professionally managed portfolios-** offer a hassle-free investment
➢ **Glide path manages risk exposure-** manages risk exposure thru participants life-time

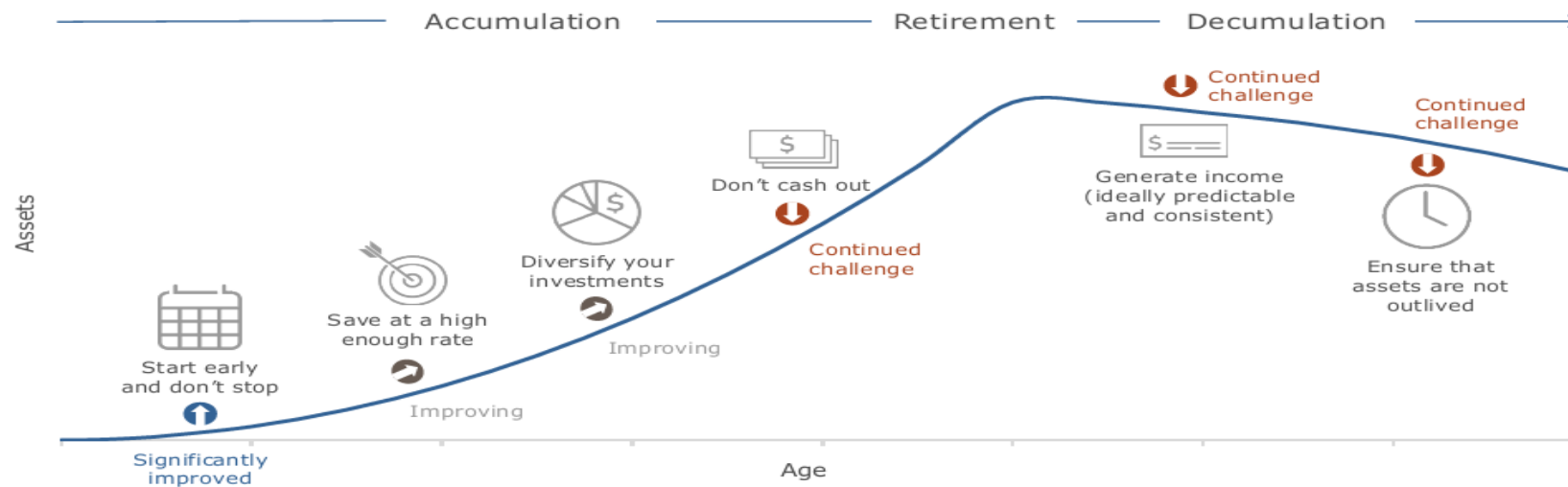Individual Return Calculations (period ending 12/2017)

Source: Wells Fargo IRT Record Keeping 2017

- Accumulation Phase- significant improvement
- Retirement Phase- a challenge
- Decumulation Phase- a major challenge

Evaluating the current state

Source: Wells Fargo Asset Management.

- **2020- SECURE Act (Setting Every Community Up for Retirement):**
  - Elimination of age limit for making traditional IRA contributions
  - Raised age for required minimum distributions (RMD) from age 70 ½ to 72
  - Increase automatic escalation safe harbor cap from 10% to 15%
  - Expanded plan eligibility for part-time workers
  - Lowered barriers for offering multiple employer plan (MEPs)
  - New employer protections for offering annuities
- **Annuities**
  - Due to lability concerns, many employers have been hesitant to offer annuity contracts as an investment option for plan participants. The SECURE Act provides a **safe harbor** for plan sponsors that will protect them from liability when selecting an insurer. However, very few participants have taken up annuities

- **Two major risks for DC plan participants:**
  - **Market Risk-** a major market drawdown could significantly reduce their retirement savings
  - **Longevity Risk-** the possibility a participant might outlive their retirement savings
- **SECURE Act provisions as possible solutions:**
  - Expands the existing safe harbor provision, easing liability concerns that have historically acted as a barrier for plan sponsors from selecting in-plan annuities inside of 401(k)s
  - Requires lifetime income disclosure as DC plans must now illustrate how much a given savings balance might generate in lifetime income.

"the nastiest, hardest problem in finance."

William Sharpe- on decumulation of savings in retirement

Four main ways to deliver retirement income:

- Managed payout funds
- Qualified minimum withdrawal benefits
- Longevity insurance
- Annuities

State of Michigan Investment Board

Anthony Estell, ORS Director
Allison Wardlaw, Plan Development and Compliance Director

December 2020

Our Purpose Statement

ORS is an innovative retirement organization driven to empower our customers for a successful today and a secure tomorrow.

Our Vision

ORS is an innovative retirement organization driven to empower our customers for a successful today and a secure tomorrow.

RANKING

20th largest public pension system in the U.S.

24th largest pension system in the U.S.
48th largest pension system in the world

ASSETS

$87.2 Billion

MEMBERS

555,981
all systems

PAID IN '19

$7.6 Billion
in pension and healthcare benefits

With over 550,000 customers, **1 in 14** Michigan adults

living in **1 in 9** Michigan household benefits from our services.

Serving:
- Public School employees
- State of Michigan employees
- Michigan State Police
- Judges
- Michigan National Guard
- Legislators in the Defined Contribution Plan

1. Good public policy promotes financial security in retirement.

2. Planning for healthcare is critical for financial security in retirement.

3. Retirement benefits are valuable for employers in providing a quality workforce.

- **68%** of the retirees stay in Michigan and spend their retirement income here.[1]

- **$12.2** billion is circulated through the state each year because of retiree spending.[2]

- **86,438** jobs in Michigan are supported because of retiree spending.[2]

- **$2.2** billion in federal, state and local tax revenues.[2]

Sources: 1 ORS Retiree Survey, 2020. 2 National Institute on Retirement Security, Pensionomics 2018: Measuring the Economic Impact of DB Pension Expenditures, Michigan (2018) www.nirsonline.org

We provide these benefits **cost-effectively** while achieving **high customer satisfaction** scores.
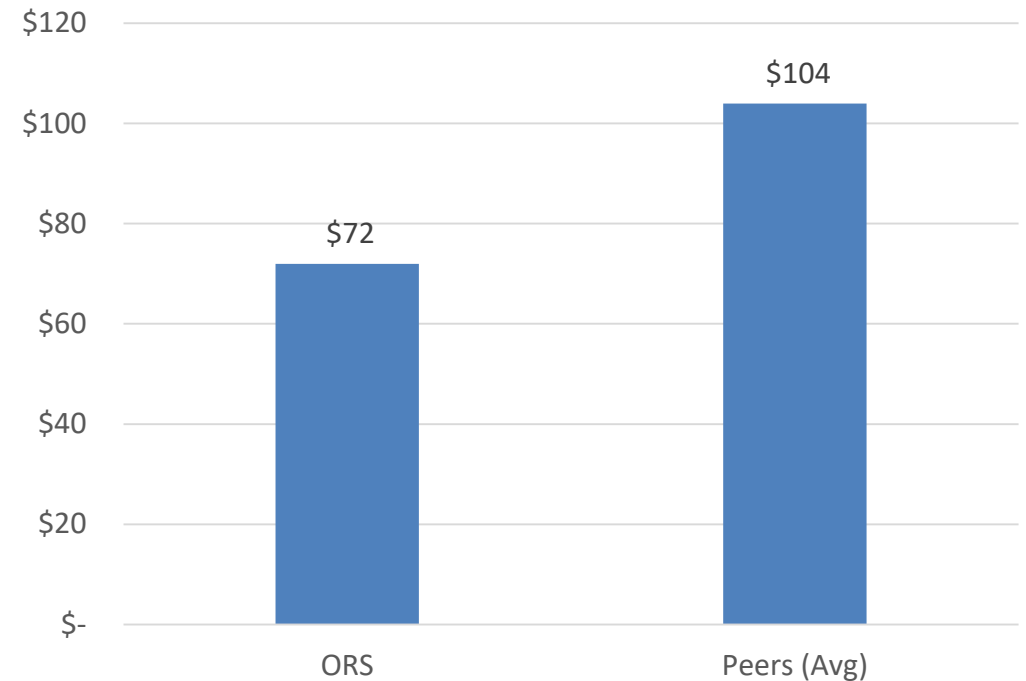
Total pension administration cost in 2019:

→ **$72** per active member and retiree

→ **$32 Below** the peer average of $104.

Percentage of customers satisfied
with our service: **88%**

Total Pension Administration Cost—2019

Source: CEM Benchmarking

Retirement plans are funded throughout an employee's career.

ORS provides three types of retirement plans:

1. Defined Benefit (DB) Plans

2. Defined Contribution (DC) Plans

3. Hybrid Plans

Defined Benefit (DB) Pension Plans

DB plans provide a specified monthly benefit for the retiree's life.

- The DB pension amount is calculated through a formula based on age, years of service, and compensation.

- The DB pension amount typically increases proportionately based on the years of service with the employer offering the plan.

- Pension plans accrue assets to provide pension benefits to retirees.

- Risk is carried by the employer.

ORS DB Pension Plans

- All of our legacy DB pension plans are **closed** to new members except for the Michigan National Guard plan.

- The pension benefits we provide are modest.
  - → The average annual pension amount is **$23,237**.

- Nearly **70 percent** of each system's funding comes from investment earnings.

Every dollar paid to a Michigan retiree comes from three sources:

67¢ Investment Earnings   **26¢** Employer Contributions   **7¢** Member Contributions

Source: National Institute on Retirement Security, *Pensionomics 2018: Measuring Impact of DB Pension Expenditures, Michigan* 2018 www.nirsonline.org.

Defined Contribution (DC) Plans

In a DC plan, individual accounts for each plan participant are established to accumulate assets for retirement.

- Individual may make voluntary contributions to the individual account.

- The employer makes contributions to the individual's account.

- The net retirement benefit is the amount in the account at the time of retirement.

- Risk is carried exclusively by the employee.

Hybrid Plans

A Hybrid plan offers guaranteed DB benefit paired with a DC benefit. The hybrid plan was introduced in 2010 for public school employees and in 2012 for state police troopers in conjunction with closing the DB plan to help lower risk associated with the retirement plans. Risk is shared between the employer and employee.

More than **47,000** members are enrolled in the Hybrid plans.

ORS Responsibilities
We handle the ministerial functions of the DB Plans, DC Plans, and Retiree Health Care plan, as well as the relationships with each retirement system's Board, who handle the discretionary duties.

- Plan administration tasks
- Administration of retiree healthcare for public school employees
- Contract and vendor relationship management
- Member and participant communications
- Employer relations
- Member and retiree payments and account maintenance

Public School Employees

Michigan Public School Employees' Retirement System (MPSERS)

174,189 Active Members

218,937 Retirees and Beneficiaries
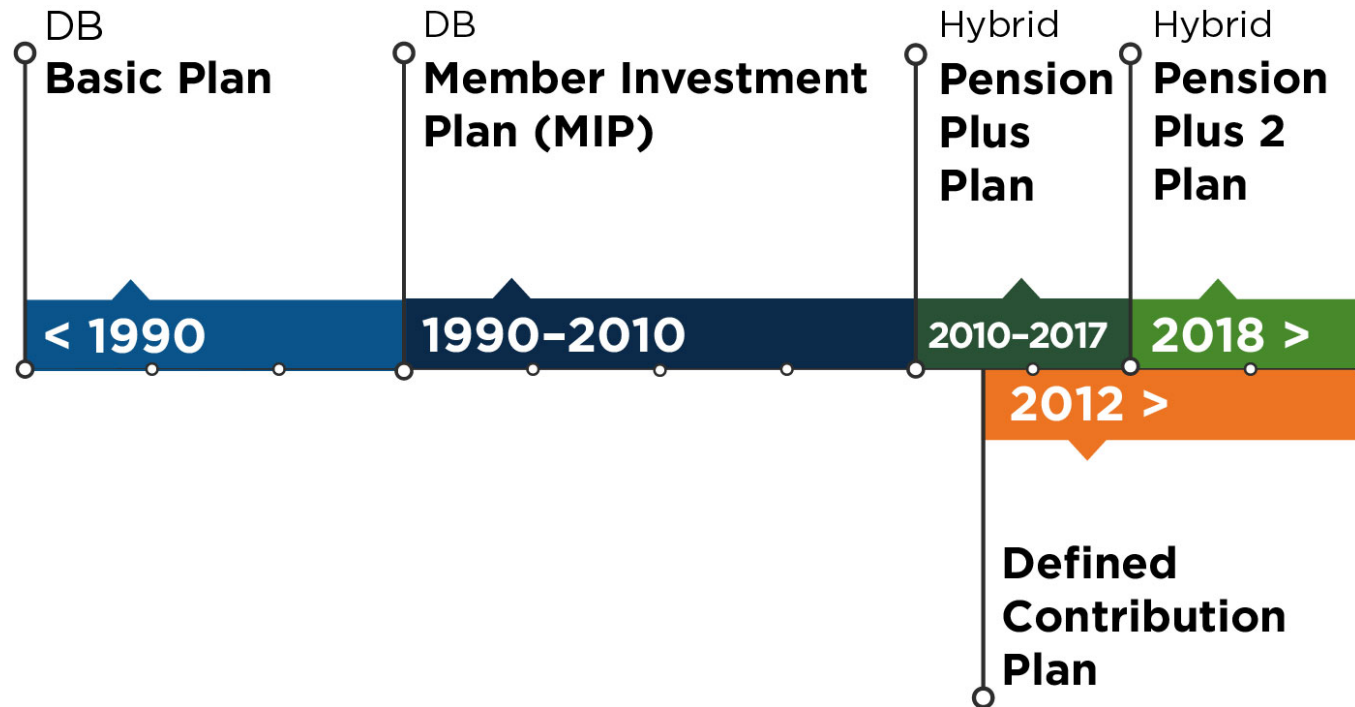
21,771 Inactive Members

Plan Types

→ Closed Defined Benefit (DB) Plan

→ Open Hybrid Plan

→ Open Defined Contribution (DC) Plan

→ Closed Retiree Healthcare Plan

→ Open Personal Healthcare Fund

Michigan Public School Retirement System

Members belong to each plan based on the date they first work for a Michigan public school.

DB
Basic Plan

DB
Member Investment Plan (MIP)

Hybrid
Pension Plus Plan

Hybrid
Pension Plus 2 Plan

< 1990 1990–2010 2010–2017 2018 >

2012 >

Defined Contribution Plan

In some cases benefits may be different based on reform elections that were made.

Public School Employees – Retiree Healthcare

The healthcare benefit for public school employees is based on the date they first worked for a Michigan public school.

Start of Subsidized Retiree Healthcare

Start of Graded Premium Subsidy

Start of Personal Healthcare Fund

1975 **2008** **2012 <**

In some cases benefits may be different based on reform elections that were made.

State Employees

State Employees' Retirement System (SERS)

49,247 Active Members
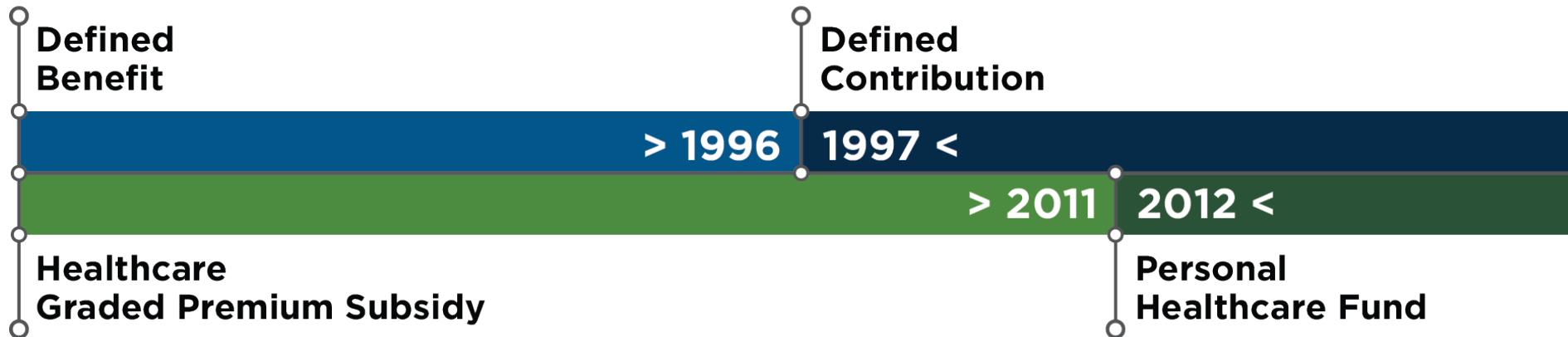
60,501 Retirees and Beneficiaries

Plan Types

→ Closed DB Plan

→ DC Plan

→ Closed Retiree Healthcare Plan
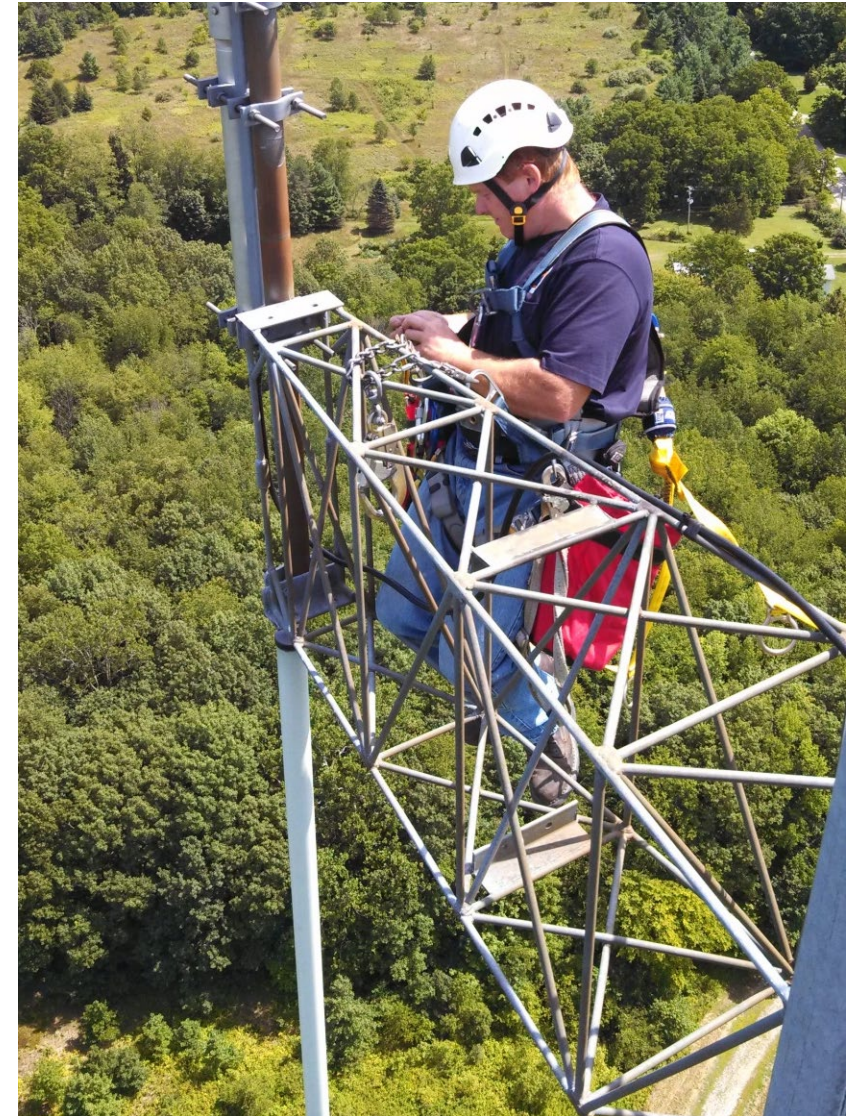
→ Personal Healthcare Fund

State Employees' Retirement System

Members belong to each plan based on the date they first work for the State of Michigan.

Defined
Benefit

Defined
Contribution

> 1996   1997 <

> 2011   2012 <

Healthcare
Graded Premium Subsidy

Personal
Healthcare Fund

In some cases benefits may be different based on reform elections that were made.

State Police

State Police Retirement System (SPRS)

2,047 Active Members

3,174 Retirees and Beneficiaries

Plan Types

→ Closed DB Plan

→ Hybrid Plan

→ Closed Retiree Healthcare Plan

→ Personal Healthcare Fund

State Police Retirement System

Members of this system are enlisted officers who completed recruit school and subscribed to the constitutional oath of office. They receive benefits based on the completion date of recruit school.

Defined Benefit		Pension Plus
> 2011	2012 <	
> 2011	2012 <	
Subsidized Retiree Healthcare		Personal Healthcare Fund

Judges

Judges Retirement System (JRS)

493 Active Members

546 Retirees and Beneficiaries

Plan Types

→ Closed DB Plan

→ DC Plan

→ Retiree Healthcare Plan
(for some judges)

Judges Retirement System
Members belong to each plan based on the date they were
first elected or appointed.

**Defined
Benefit**

**Defined
Contribution**

> 1996   1997 <

Subsidized Retiree Healthcare
(Elected Officials, Supreme Court Justices and Appellate Judges only)
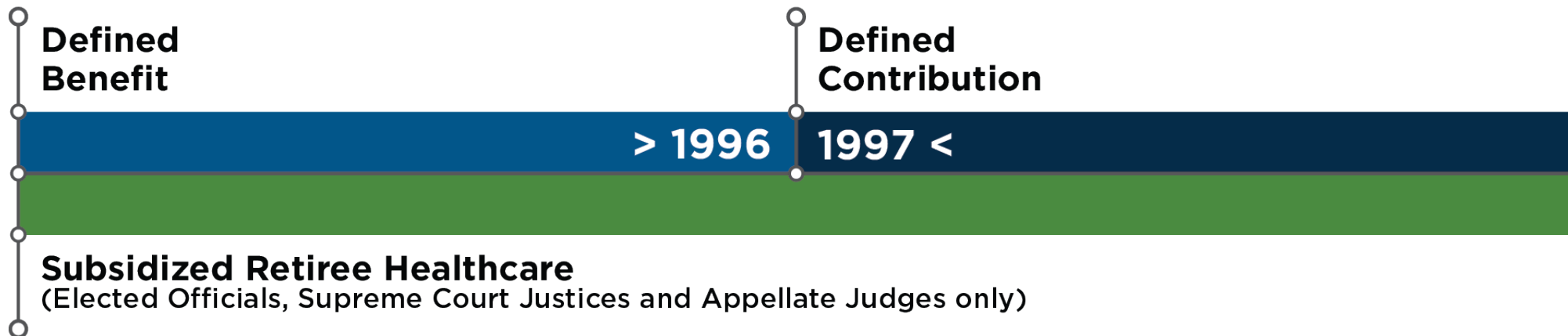
Michigan National Guard
Military Retirement Provisions (MRP)

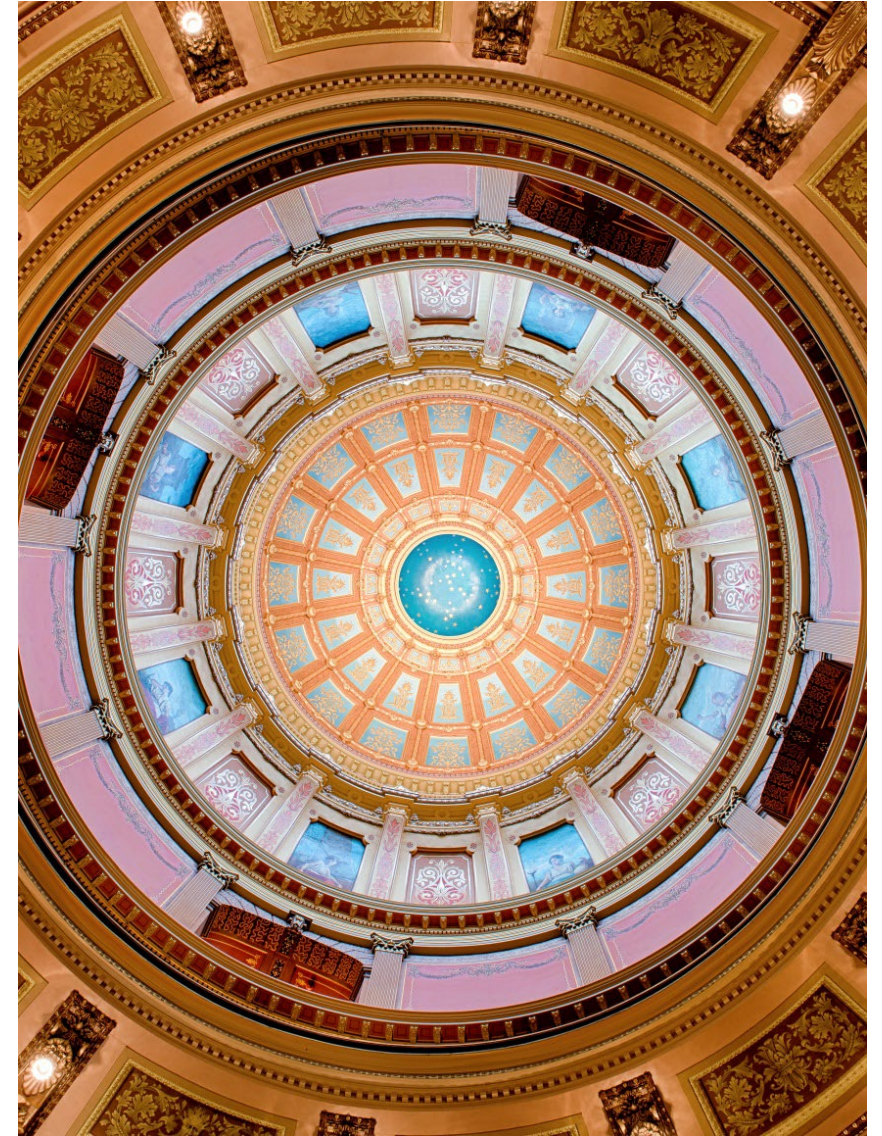10,717 Active Members

4,524 Retirees and Beneficiaries

Plan Types

→ DB Plan

Michigan Legislators

148 Active Members

Plan Types

→ DC Plan

→ DB Plan administered by the Michigan Legislative Retirement System

Recent Retirement Reforms

Pension and retiree healthcare reforms have reduced risk, implemented cost-sharing initiatives, and reduced unfunded long-term liabilities by **more than $20 billion** since 2012.

Year	System	Reform
1997	State Employees, Judges, Legislators	• Closed DB plan and introduced DC plan for new employees.
2008	Public Schools	• Retiree healthcare premium subsidy based on career length.
2010	Public Schools	• Closed DB plan and introduced 1/3 less risky Hybrid Plan.
2012	State Employees	• Closed retiree healthcare plan and began prefunding existing healthcare liabilities. New hires enroll in Personal Healthcare Fund. • Employees given option of increasing contributions for DB pension or converting to DC plan.
2012	State Police	• Closed DB plan and introduced 1/3 less risky Hybrid Plan.
2012	Public Schools	• Closed retiree healthcare plan. New hires enroll in Personal Healthcare Fund. • New hires given choice of Hybrid Plan or DC. • Employees given option of increasing contributions for DB pension or reducing their multiplier for future service or converting to DC plan.
2013	Public Schools	• Began prefunding existing retiree healthcare liability.
2016	Military	• Began prefunding pension liability.
2018	Judges	• Began prefunding existing retiree healthcare liability.
2017	Public Schools	• Closed Pension Plus Hybrid Plan, Opened Pension Plus II Hybrid Plan and this plan will close if it becomes less than 85% funded for two years in a row.
2018	Public School, State Police	• Implemented a phased-in reduction of the payroll growth assumption for UAAL amortization to 0%.

Benefit Structure Complexity

Judges

- District Court
- Probate Court Judge 3%
- Probate Court Judge 3.5%
- Probate Court Judge Population
- State Officials
- Trial Judges
- Upper Judiciary

Military

- Executive Staff
- National Guard
- Percent Members

State Police

- Officer
- Officer – 2012 Reform
- Officer – Elected
- Sergeant
- Transferred – SERS to SPRS
- Trooper
- Trooper – 2012 Reform
- DB Healthcare
- Personal Healthcare Fund

Legislative

- Plan 1
- Plan 2

Public School Employees

- MIP Fixed
- MIP Graded
- Basic
- Limited Member – MIP
- Limited Member – Basic
- Transferred – SERS to MPSERS
- MIP Plus
- Pension Plus
- Basic 4%
- MIP 7%
- Basic DC Converted
- MIP DC Converted
- DC
- Graded Premium
- Personal Healthcare Fund

State Employees

- Community Health Facility Closure
- Conservation Officer
- Conservation Officer Converted
- DB Classified
- DB Converted
- DB Unclassified
- DB-DC Transfer Classified
- DB-DC Transfer Unclassified
- DC Classified
- DC Unclassified
- Supplemental Converted
- Supplemental Member – Covered Position
- Transferred – MPSERS to SERS
- DB Healthcare
- Graded Premium
- Personal Healthcare Fund
- Personal Healthcare Fund with HRA

The complexity of the benefit structures leads to an increased need for customer service.

Member Communication

Each month we take calls and answer Message Board questions from members related to their benefit, insurance enrollment, demographic updates, death reporting and more. On average, our Customer Service process handles over **16,000** calls, **3,500** Message Board requests, and **16,000** workflows each month.

Employer Communication

The nearly 700 employers routinely have questions about how to report wages, validate member data, collect and validate member payments and more. On average our Employer Reporting process handles over **1,000** calls and **1,500** workflows each month.

Partnership with Voya Financial

We partner with Voya Financial® to provide our State of Michigan 401(k) and 457 Plans. Our plans offer a wide range of low-cost investment options and access to the Advisor Service and other resources.

- Our plan design helps set up participants for success.
  - →Automatic enrollment
  - →Small Steps Program
  - →Target Date Funds

- **96%** of our participants are taking full advantage of employer matching contributions.

Small Steps Program

Increases in participant savings and meeting the match are in due in large part to our Small Steps Program.

This program is an effort to improve participant retirement readiness by gradually increasing employee contributions to their State of Michigan 401(k) and 457 Plans by 1% each year (up to 15%).

Small Steps Program

	SERS	MPSERS	Total	% of Total Increased
Retained Small Steps Increase	27,514	72,506	100,020	92.5%
Increased	1,958	756	2,714	2.5%
			102,734	95.0%
Decreased	2,509	1,160	3,669	3.4%
Stopped	475	230	705	0.7%
Removed (SSN Merge, Suspended, Termed)	987	6	993	0.9%

Notes:
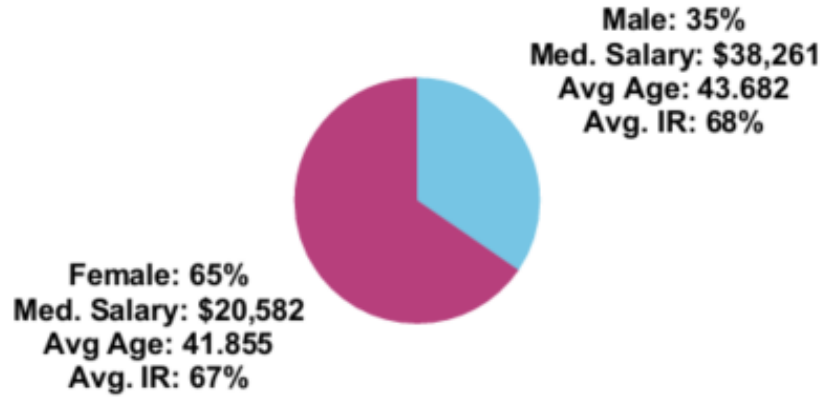108,101 participants received the increase

SERS: For the period of 4/1/20 – 6/30/20: Overall average deferral increase was 3.66%. Overall average decrease was 3.71%. During this time period, 13 participants increased to 15% or greater. Overall, 199 participants increased to 15% or greater.

MPSERS: For the period of 4/1/20 – 6/30/20: Overall average deferral increase was 5.00%. Overall average decrease was 3.22%. During this time period, 10 participants increased to 15% or greater. Overall, 174 participants increased to 15% or greater.
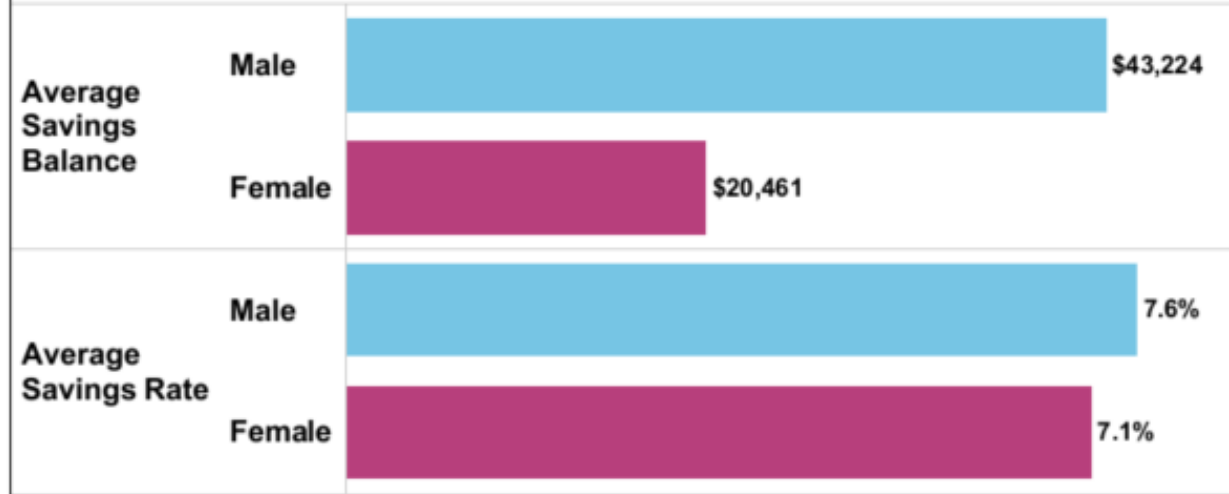
Increased Retirement Savings and Forecasted Income

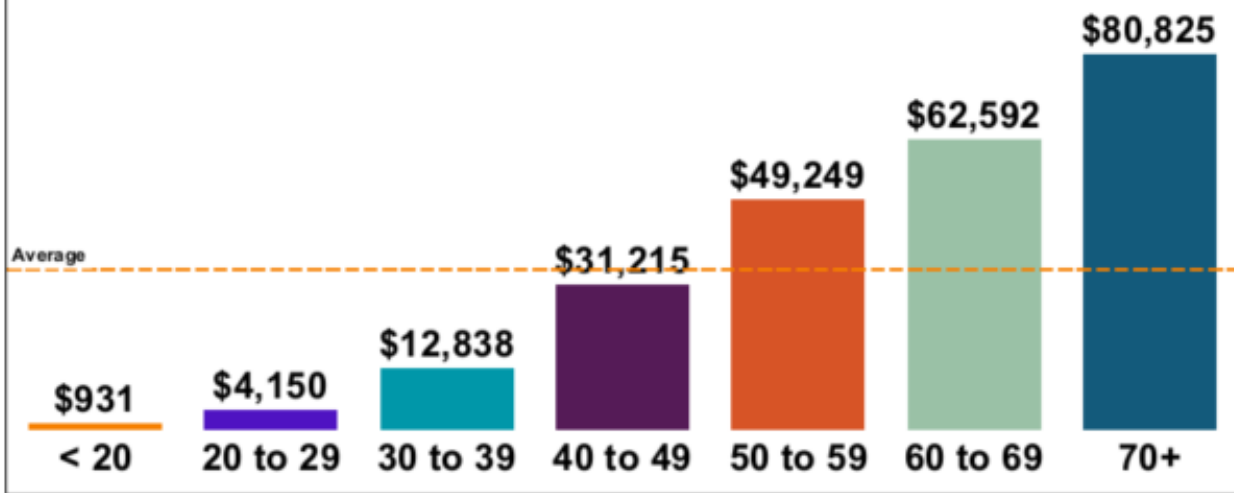| Q1-2015 | 64 | 22 | 14 |

147% increase in participants saving at least to the match (or at least 5%)

| Q1-2020 | 12 | 77 | 12 |

| Q1-2015 | 64 | 15 | 21 |

126% increase in participants forecast to replace at least 70% of pre-retirement income

| Q1-2020 | 38 | 14 | 47 |

Gender View for Plan

Male: 35%
Med. Salary: $38,261
Avg Age: 43.682
Avg. IR: 68%

Female: 65%
Med. Salary: $20,582
Avg Age: 41.855
Avg. IR: 67%
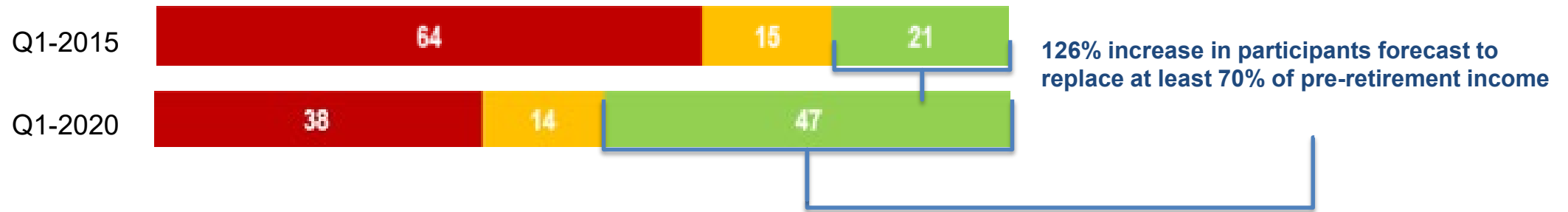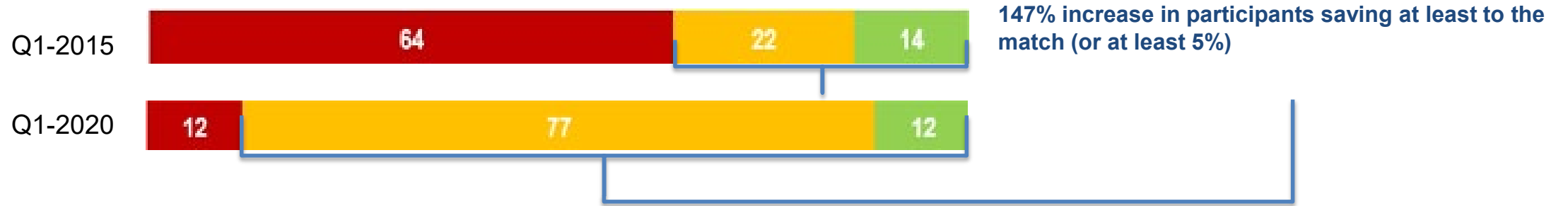
Plan Average Savings by Gender

Average Savings Balance
- Male: $43,224
- Female: $20,461

Average Savings Rate
- Male: 7.6%
- Female: 7.1%

Average Savings Balance by Age Group

< 20	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70+
$931	$4,150	$12,838	$31,215	$49,249	$62,592	$80,825

Average Savings Rate by Age Group

< 20	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70+
5.2%	6.4%	6.9%	7.2%	8.0%	8.5%	7.8%
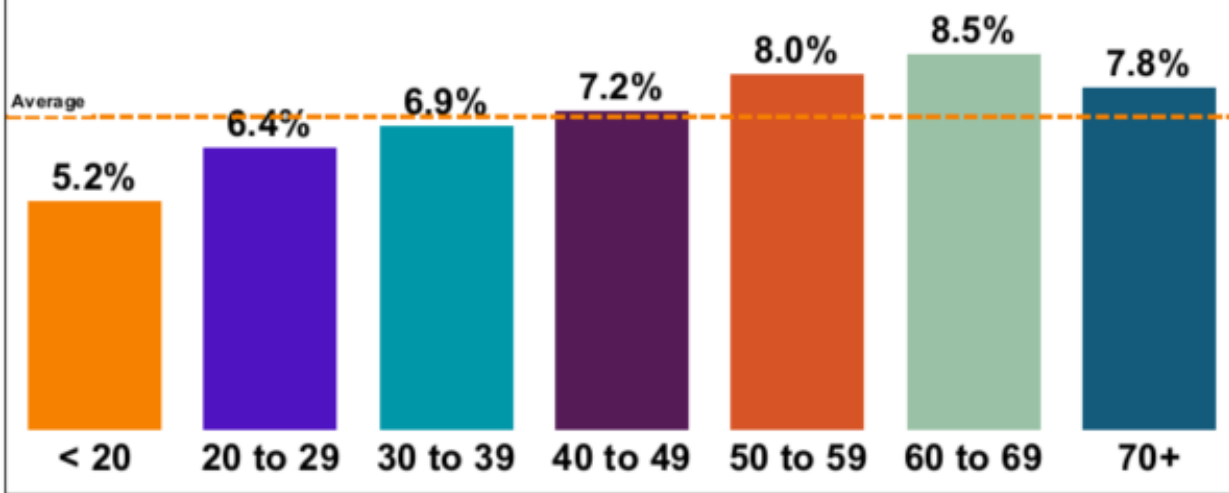
Income Replacement

On average participants are on track to replace approximately 67% of their income in retirement
40% of participants are on track to generate at least 70% of income in retirement

On Track vs. Not On Track

40%

60%

■ On Track ■ Not On Track

Income Replacement

67%
98,034
participants
No Outside Assets Provided

73%
2,464
participants
Outside Assets Provided

Income Replacement by Age

86%
70%
61% 60%
69%
89%
47%

28,806
24,696
21,954
14,623
9,508
45
856
< 20   20 to 29   30 to 39   40 to 49   50 to 59   60 to 69   70+

Income Replacement by Age (Outside Assets Provided)

116%
80%
73%
66%   71%
82%

848
640
419
431
104
22
20 to 29   30 to 39   40 to 49   50 to 59   60 to 69   70+

Data as of 6/30/2020

Anthony Estell, Director
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DTMB – Office of Retirement Services
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Michigan's DC Plan Investments

Presented by: Bureau of Investments

We interact and maintain a continuous dialogue with the Office of Retirement Services (ORS) and investment managers.

➤ Keep up to date on 401K regulation, guidelines and industry trends

➤ Recommend investment design and lineup

➤ Continuous review of managers in investment lineup

➤ Research potential additions/ consolidation of funds

➤ Annual review of fees

DC plans are participant led investments. The investment lineup offers a sufficient range of investment options to allow the Participants to diversify their individual retirement accounts and construct portfolios that reasonably span the risk/return spectrum.

Michigan DC Plan Efficient Frontier
Target Date & Select Core Funds Plotted
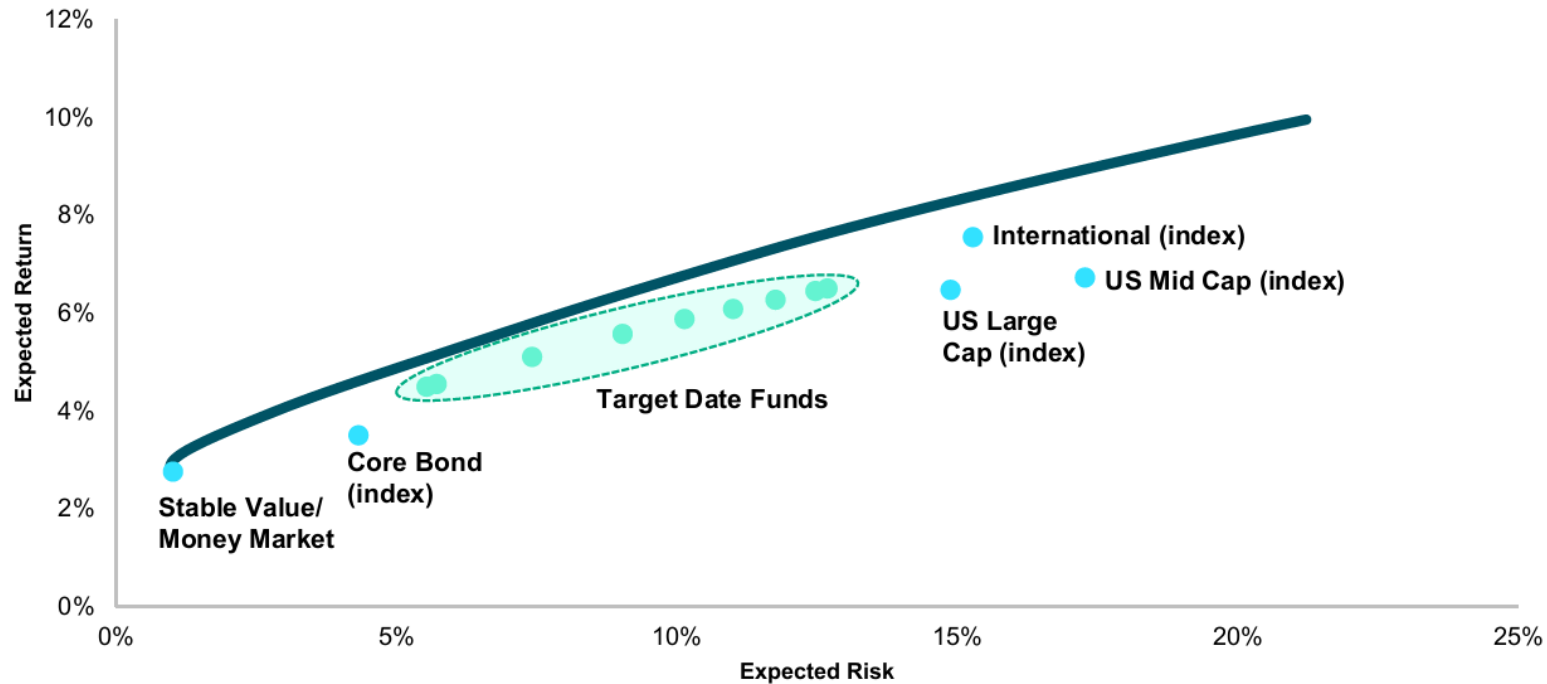
Source: State Street analysis based on information provided by plan sponsor, as of April 2019.

Plan Overview

19 Investment options across 3 tiers.

Tier I Funds

BlackRock Government Short-Term Investment Fund	State Street Bond Market Index Fund	State Street S&P 500 Index Fund	State Street S&P Mid Cap Index Fund	BlackRock S&P Small Cap 600 Equity Index Fund
State Street Global All Cap Equity ex-U.S. Index Fund	BlackRock Emerging Markets Index Fund	State Street Target Retirement Funds		

Tier II Funds

|				
Stable Value Fund	PIMCO Total Return I Fund	Prudential High Yield Fund	Dodge & Cox Stock	Jennison Large Cap Growth Equity Fund
T. Rowe Price Mid-Cap Value Fund	Artisan Mid Cap Fund	Virtus Ceredex Small-Cap Value Eq I	Voya Small Cap Growth Equity Fund	American Funds Euro Pacific Growth R6

Self-Directed Brokerage Account

SDBA

Target date funds include investments across a broad range of asset classes and gradually de-risk as a participant ages into retirement.
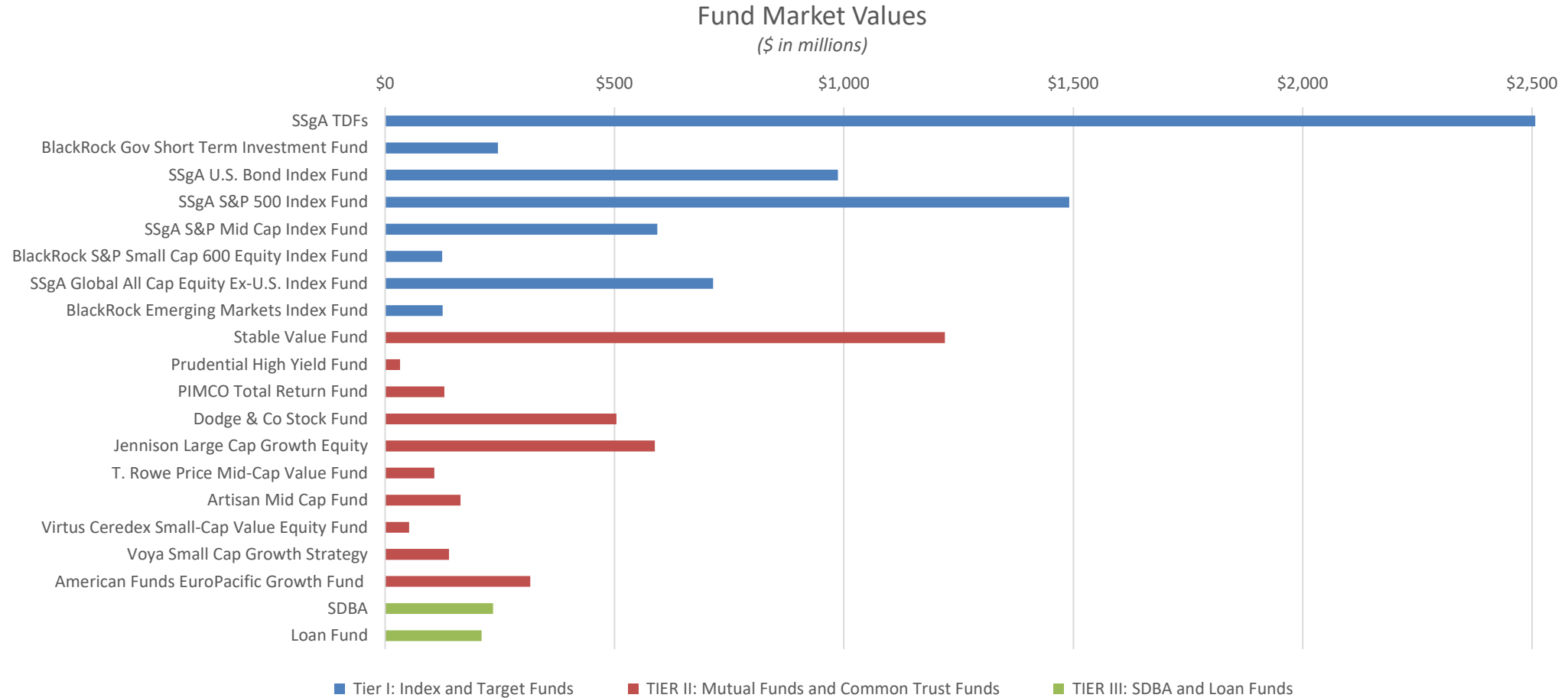

Glide Path
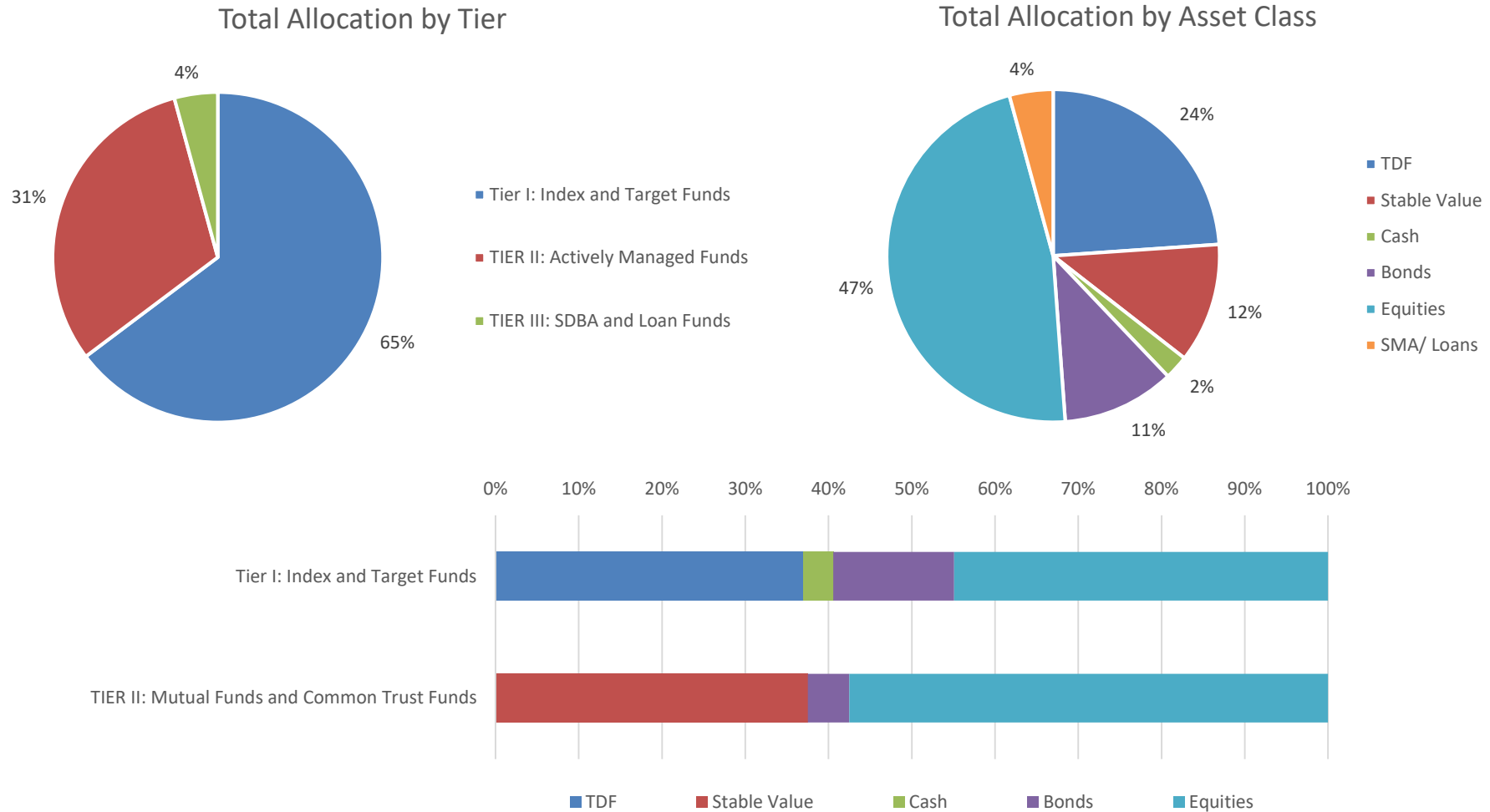Investments become more conservative over time
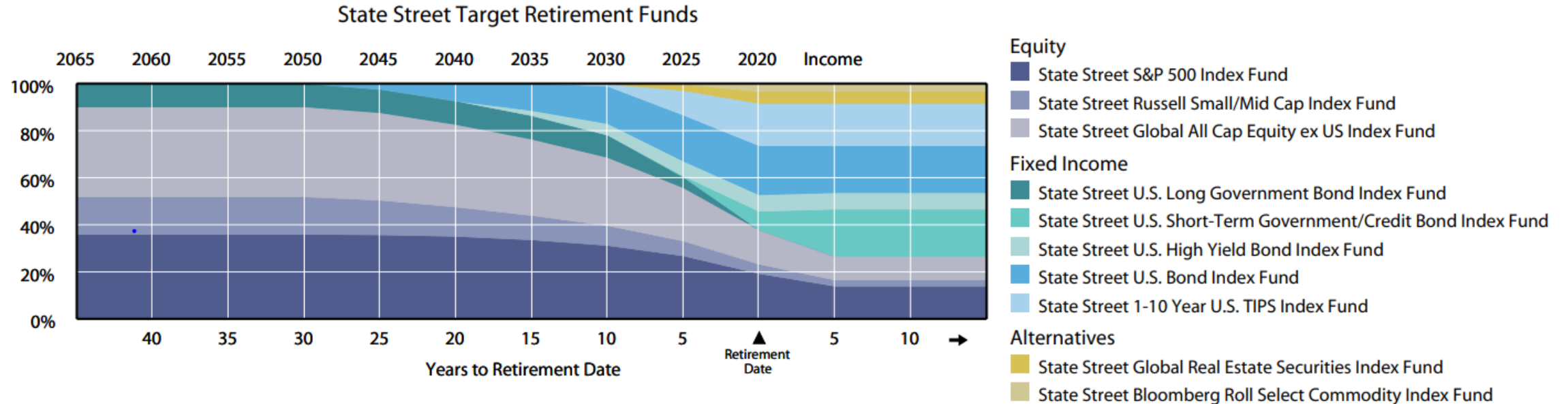
State Street Target Retirement Funds

With over $10 billion in total assets, target date funds have over $2.5 billion in AUM.

Fund Market Values
($ in millions)

Increase in use of target date funds as overall assets increase.

Historical Aggregate Asset Allocation
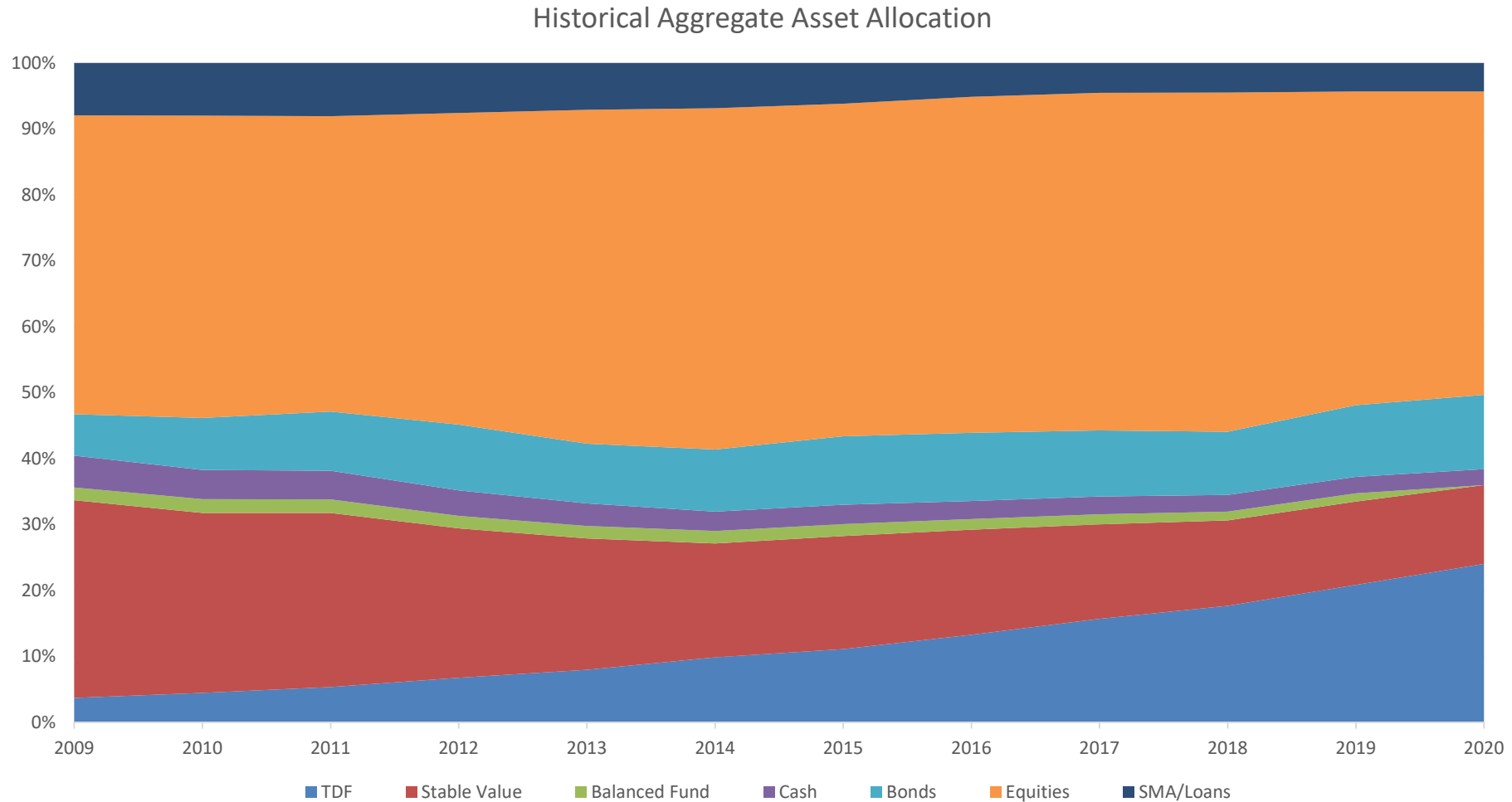
Presented by: State Street Global Advisors