RECORDKEEPER BENCHMARKING

JUNE 2018

State of North Carolina



MAKE TOMORROW, TODAY MERCER



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1 INTRODUCTION

Mercer conducted a fee and service benchmarking review for the recordkeeping services being provided by Prudential for the North Carolina Supplemental Retirement Plans. This review included comparing the services and fees with other large defined contribution plans (comparison plans). A survey was prepared and sent to the comparison plans. This report summarizes the findings from the survey, as well as additional information recently gathered from recordkeeping companies, and some data from public surveys.

EXECUTIVE SUMMARY

The survey and other data collected reflect that the Supplemental Retirement Plans are currently receiving recordkeeping services and fees that are competitive to those provided to comparable government defined contribution plans. The following are observations regarding trends and best practices among jumbo plans in this market.

- Fees flat dollar fees are becoming more prevalent among jumbo plans to provide equitable fee structures and avoid charging higher fees to participants simply because they have higher account balances
- Local service on-site education service continues to be a valued service in the government market, even among plans that have adopted auto-enrollment; staffing levels vary among plans and generally reflect the perceived needs of each participant base

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Recordkeeping and processing – the timely investment of contributions and payment of distributions is a core service provided, and the trend among larger plans is to establish and monitor performance standards in this area, as is currently being performed by North Carolina

• Retirement readiness – the prevalence of calculating and tracking retirement readiness continues to grow among jumbo plan sponsors; several of the respondents that do not currently track retirement readiness indicated it was being discussed as a possible enhancement.

COMPARISON PLANS

Comparison plans were intended to include multiple recordkeeping companies, complex plan designs, as well as large plan size. Surveys were sent to and completed by the following plans:

- Missouri Deferred Compensation Plan (MO)
- New York City Deferred Compensation Plan (NYC)
- New York State Deferred Compensation Plan (NYS)
- Oregon Savings Growth Plan (OR)
- Tennessee Retire Ready TN Plan (TN)
- Texa\$aver Plan (TX)

Below are summary statistics for the comparison plans. Total assets and participants represented by these plans are \$65.5 billion and 1,160,000.

	NC	MO	NYC	NYS	OR	TN	TX
Plan types	457, 401(k), 403(b)	457, 401(a) match	457, 401(k), 401(a), deemed IRA	457	457	457, 401(k)	457, 401(k)
Total assets	\$11.3 B	\$2.1 B	\$20.1 B	\$23.4 B	\$2.2 B	\$3.3 B	\$3.1 B
Total participants*	273,800	63,809	223,436	227,000	31,244	133,032	207,962
TPA	Prudential	ICMA-RC	Empower	Nationwide	Voya	Empower	Empower

^{*}Unique SS#

COMPARISON PLAN DETAILS

	NC	MO	NYC	NYS	OR	TN	TX
457	EE elective; some have ER match	EE elective	EE elective	EE elective	EE elective	EE elective with ER match	EE elective
401(k)	EE elective; some have ER match		EE elective			EE elective and 5% ER (hybrid) contribution	EE elective
Other	403(b) EE elective	401(a) ER match - last budgeted in 2010	ER contributions to 401(a) and deemed IRA			Beginning oversight of higher education 403b and ORP	

EE = employee, ER = employer

PARTICIPANT DETAIL

	NC	MO	NYC	NYS	OR	TN	TX
457	53,837	61,283	165,188	227,000	31,244	10,204	30,356
401(k)	250,305		54,359			129,828	196,414
Other	1,204	35,107	8,447				
Overlap*	-31,546	-32,581	-4,558			-7,000	-18,808
Unique SS#	273,800	63,809	223,436	227,000	31,244	133,032	207,962

Overlap = number of participants with multiple accounts.

ASSETS DETAIL

(billions)	NC	MO	NYC	NYS	OR	TN	TX
457	\$1.4	\$1.5	\$16.8	\$23.4	\$2.2	\$0.4	\$0.8
401(k)	\$9.9		\$2.9			\$2.9	\$2.3
Other	\$0.01	\$0.6	\$0.4				
Total	\$11.3	\$2.1	\$20.1	\$23.4	\$2.2	\$3.3	\$3.1

OBSERVATIONS

- Employer match contributions are in place only in TN, which automatically enrolls employees into the 457 plan at 2% and has a match up to \$50; TN also uses the 401(k) as a hybrid DC plan which receives a 5% employer contribution (MO allows for matching contributions, but they were last funded in 2010)
- Average account size varies widely (see below); the 2017 NAGDCA survey of governmental DC plans indicates the average participant account balance is approximately \$48,416

	NC	MO	NYC	NYS	OR	TN	TX
457	\$26,004	\$24,477	\$101,702	\$103,084	\$70,414	\$39,200	\$26,354
401(k)	\$39,552		\$53,349			\$22,337	\$11,710
Other	\$11,047	\$17,091	\$47,354				
Total/Unique SS	\$41,271	\$32,911	\$89,959	\$103,084	\$70,414	\$24,806	\$14,907

2 SERVICE LEVEL REVIEW

A key deliverable of this review is to evaluate different aspects of service provided by Prudential. This section of the review includes data provided by the comparison plans and also processing statistics gathered from information submitted during RFP projects.

ON-SITE EDUCATION REPRESENTATIVES

Most large governmental DC plans have dedicated on-site education counselors available to participants.

	NC	MO	NYC	NYS	OR	TN	TX
On-site education reps	18 reps	6 reps	10 reps	17 reps	5 reps	15 reps	6 reps
		(all internal)	(not RK)				
Participants*	273,800	63,809	223,436	227,000	31,244	133,032	207,962
Participant/rep ratio (1 rep per xxx participants)	15,211	10,635	22,343	13,353	6,249	8,869	34,660

Note: MO and TX automatically enroll participants in the DC plan at 1% contribution; TN automatically enrolls into the 457 plan at 2% contribution and match up to \$50 *Participant counts reflect number of unique SS#, not total accounts.

- The number of representatives varies widely among the comparison plans; Mercer's experience is that the level of service needed is typically plan specific, and can be impacted by geography, participant needs, and also plan design (e.g. prevalence of auto-enrollment)
- Missouri moved all field education specialists to internal positions in July 2017 and negotiated a fee reduction with their recordkeeper.
- New York City has the recordkeeper staff a local office to service walk-ins, but the field-based financial education services are provided by a separate company, and are separate from the recordkeeping agreement.
- Numerically, North Carolina has the most reps with 18 and Oregon has the fewest with 5
- Considered as a ratio to the number of participants, Oregon has one rep for every 6,249 participants, while Texas has one rep for every 34,660 participants (Texas participants are auto-enrolled into the 401(k) plan)
- TN has three local offices in Nashville, Knoxville and Jackson

CALL CENTER

The information below reflects the services reported by Prudential compared to standards and services provided by other large recordkeeping companies active in this market. Information from other vendors was gathered during RFP projects.

	NC	Vendor 1	Vendor 2	Vendor 3
Average speed to answer standard	80% of calls within 20 seconds	No set standard	80% of calls within 20 seconds	Average 0:30
Average speed to answer actual 2017	0:19	0:32	0:26	0:56
Call abandonment standard	Less than 3%	Less than 5%	Less than 3%	Less than 3%
Call abandonment actual 2017	0.8%	1.4%	2.2%	3.9%

- Prudential call center statistics are better than the comparison vendors both in speed to answer and in call abandonment rates.
- Vendor 1 indicated that it does not currently have a standard for speed to answer, but has previously indicated the standard used was 80% of calls answered within 20 seconds.
- Vendor 3 did not meet its internal standards for speed to answer in 2017, and has since hired additional phone representatives in 2018

PROCESSING

Below are the processing standards for each company. Prudential did not miss any of the standards in 2017.

	NC	Vendor 1	Vendor 2	Vendor 3
Payroll processing standard	99% within 1 business day	1 business day	99% within 1 business day	2 business days
Payroll processing actual 2017	100% within 1 business day	1 business day	99.99% within standard	2 business days
Distributions standard	99% within 2 business days	2 business days	99% within 2 business days	2 business days
Distributions actual 2017	100% within 2 business days	2 business days	99.99% within standard	2 business days
Statements mailed standard	99% within 10 business days	15 business days	15 business days	15 business days
Statements mailed actual 2017	100% within 5 business days	15 business days	100% within standard	15 business days

- Processing times for distributions and contributions are in line with industry standards.
- Statement delivery standards and actual delivery for North Carolina statements are faster than other vendors' standards.

MANAGED ACCOUNTS

	NC	MO	NYC	NYS	OR	TN	TX
Managed accounts	No	No	No	No	Rolling out in Q3 2018 Financial Engines	Advised Asset Group with Morningstar	Advised Asset Group with Morningstar

- The adoption of managed accounts by plan sponsors has been slow, but it continues to grow. The 2017 NAGDCA survey indicated 49% of plans offer a managed account product (survey included 37 plan sponsors representing \$120 billion in assets).
- The 2018 PlanSponsor Defined Contribution Survey indicates that among 457 plans, 44% offer managed account services (prevalence among "all industries" was 34%)

RETIREMENT READINESS

	NC	MO	NYC	NYS	OR	TN	TX
Track retirement readiness	80% of pre- retirement income at age 62	Track, but do not set a goal	Do not track	Do not track	Do not track	Do not track	70% of pre- retirement income
Annual benefit statement (ABS)	Includes pension, DC and Social Security projections	Includes pension and DC projections (not Social Security)	Do not provide, but quarterly statements include DC income projection	Do not provide	Do not provide	Do not provide, but quarterly statements added DB benefit starting Q1 2018	Do not provide, but quarterly statements include DB an DC income projection
Add outside assets to ABS	Outside assets input by participant into Retirement Income Calculator are imported into ABS	Not to MOSERS ABS, but can on website projection	No ABS, but considering new website feature that would allow participant to add outside assets to web projection	No ABS, but website includes a retirement calculator that can include outside assets, Social Security and pensions	No ABS, but Personal Financial Dashboard allows participants to add outside assets	No ABS, but website includes a retirement calculator that can include outside assets	No ABS, but website includes a retirement calculator that can include outside assets
Data aggregation agent capability	Participant must input	Adding (2018) functionality to establish links to outside assets	Not currently	Participant must input	Can link with Personal Financial Dashboard	Participant must input	Participant must input

Observations

• The prevalence of tracking of overall retirement readiness (considering assets beyond just in the DC plans) continues to grow. Among the comparison plans that do not currently track, several indicated it is under discussion or being considered for a future enhancement.

• While none of the comparison plans issue an annual benefit statement, some of them include defined benefit and defined contribution income projections on quarterly statements, which is perceived to be a means toward a similar goal.

- The 2018 Plan Sponsor Survey of 457 Plans indicates that among plans with \$1 billion or more, 29% of plans calculate the percentage of participants projected to meet an income replacement ratio goal, and use that calculation as a measurement to gauge the success of the plan.
- Some recordkeepers have data aggregation tools that allow participants to input user identification and passwords that will enable the tool to capture and regularly update data from other sources such as other DC plans and IRA's which can enable a more accurate projection of retirement income for the participants. One recordkeeper not currently providing a data aggregation tool is planning to add it as a future enhancement.

MOBILE DEVICE APPLICATIONS

The prevalence of mobile applications has grown in recent years. The table below outlines capabilities of Prudential to other recordkeepers.

	NC	Vendor 1	Vendor 2	Vendor 3
Availability of mobile application	Available since 2016; can download from App store for iOS devices	Available since 2016; can download from App store for iOS devices	Mobile responsive website, but no mobile application	Available since 2012; can download from App Store or Google Play Store
Transaction functionality	Change contribution rates	Enrollment, deferral and investment allocation changes	Described website	Change contribution rates and investment allocation
Notifications sent via application?	Not at this time	Not at this time	Described website	Push alerts to complete enrollment or use for password resets
Future developments	Allocation changes, transfers, notifications, and fingerprint login	Android application	Described website	Fingerprint login, and updating websites to be mobile responsive

- First generation mobile applications generally focused on allowing participants to view information, such as balances, performance, contributions, etc. The next evolution in development is generally to enable transaction capabilities, such as enrollments and transfers.
- Some providers (such as vendor 2) have taken the position that a mobile responsive website is preferable to a mobile application; one of
 the reasons cited is that mobile applications need periodic updates to be downloaded, while a website can be maintained current by the
 provider.

OTHER INNOVATIONS

The table below outlines innovations noted or observed at each of the comparison plans.

	MO	NYC	NYS	OR	TN	TX
Enrollment focused	Auto-enroll new employees at 1%	Custom enrollment video on enrollment and rolling money into plans	"Tell a Friend" prompts participants to e- mail a coworker encouraging them to enroll	Promote ease of online enrollment	Auto enroll new employees at 2% and match 100% up to \$50/month	Auto-enroll new employees at 1%
Other observations	Added an auto- increase election Savings testimonials from participants on website/YouTube RealizeRetirement® Adventure is a mobile escape room that tests retirement knowledge	10 reps provide financial planning services (separate from RK) NYCE IRA is a deemed IRA product used to attract rollovers in On-site call center and processing staff (85+ staff) provides heightened oversight and quality control	Retirement Planner now includes pension and Social Security estimator	Personal Financial Dashboard can organize accounts in retirement, savings, mortgage, insurance, college needs, etc. "Ask Kathy" program invites terminated employees to submit questions	Adding TN pension data to income projection tool on website Rebranded under Retire Ready Tennessee financial wellness initiative	Income projection tool on website Texa\$IZE campaign aimed at increasing contibutions

3 FEE REVIEW

RECORDKEEPING FEES

The table below reflects the recordkeeping fees for each organization. Several plans collect both recordkeeping and administrative fees, while the second row identifies the portion allocated strictly to recordkeeping (shaded).

TX flat fee structure					
Account Size	Monthly Fee	Annual Fee			
\$10 or less	no fee	no fee			
\$10 - \$1,000	\$1.18	\$14.16			
\$1,000 - \$16,000	\$3.99	\$47.88			
\$16,000 - \$32,000	\$6.00	\$72.00			
\$32,000 - \$48,000	\$8.17	\$98.04			
\$48,000 - \$64,000	\$10.89	\$130.68			
\$64,000 or more	\$13.62	\$163.44			

	NC	MO	NYC	NYS	OR	TN	TX
Recordkeeping and administration	\$31.00/year per account + 0.025% (2.5 bp)	\$15.00/year per participant + 0.09% (9 bp)	\$80/year per participant + 0.04% (4 bp)	\$20/year per + 0.04% (4bp) on accounts \$20,000 to \$200,000m (\$80 cap)	0.12% (12 bp)	0.23% (23 bp)	Flat fee based on account size
Recordkeeping fee	\$31.00/year per account	\$34.00/year per participant	Not disclosed	\$38.00/year per account or \$35.50/year if using electronic communications	0.049% (4.9 bp)	0.20%	Same flat fee schedule
Loan fees	\$60 loan initiation	No loans	\$50 loan initiation	\$40 loan initiation	\$60 loan initiation	\$50 loan initiation	\$50 loan initiation
			\$35/year loan maintenance	\$50/year loan maintenance		\$25/year loan maintenance	\$25/year loan maintenance

Observations

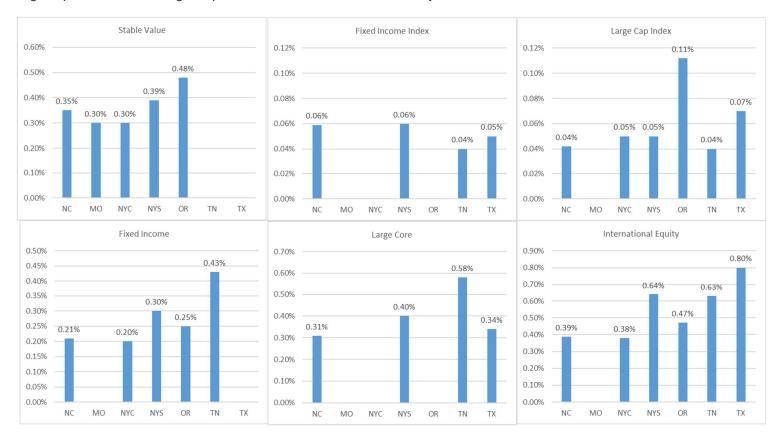
The chart below demonstrates recordkeeping fees for each plan that provided them.



- OR fees reflect 4.9 basis point for average OR account value (\$70,414)
- TN fees reflect 20 basis point for average TN account value (\$24,806)
- TX fees reflect flat dollar fee for average TX account value (\$14,907)
- MO has internal field education counselors; NYC does not use the recordkeeper for field education counseling
- Loan maintenance fees are charged by NYS, TN, and TX
- OR, TN and TX have managed account programs with user fees

INVESTMENT FEES

Plans contain investment options in different asset classes (complete lineups in Appendix), but the following categories represent asset classes with higher prevalence among the plans. Fees below include custody and administrative asset fees in NC, NYC, NYS and OR.



Note that fees listed include administrative and custody fees where applicable. For example, the NC Large Cap Index fee includes investment management (0.5 bp), custody (1.2 bp), and administrative fees (2.5 bp) for a total of 4.2 bp.

RECORDKEEPER BENCHMARKING

4APPENDIX

INVESTMENTS

North Carolina

Tier I	Tier II - A	Tier II - B	Tier III
Asset Allocation	Passive Core Options	Active Core Options	Specialty Options
		Stable Value Fund Galliard	
	Fixed Income BlackRock Debt Index	Fixed Income Fund TCW Core Plus Prudential Core Plus	
	TIPS Coming soon	Inflation Responsive Fund PIMCO IRMAF	
GoalMaker	Large Cap Equity BlackRock Equity Index	Large Cap Core Fund Hotchkis & Wiley Large Value Macquarie Large Cap Value Sands Capital Mgmt Large Growth Loomis Large Growth Russell 1000 index	
	Small – Mid Cap Equity BlackRock Russell 2500 Index	Small – Mid Cap Core Fund Hotchkis & Wiley SMID Value Earnest Partners SMID Value Wedge SMID Value TimesSquare SMID Growth Brown Advisory SMID Growth Russell 2500 Index	
	International Equity BlackRock ACWI ex US Index	International Equity Ballie Gifford ACWI ex US Growth Mondrian ACWI ex US Value	

Note: Investments are generally custom, multi-manager white-label portfolios.

Missouri

Tier I	Tier II - A	Tier II - B	Tier III
Asset Allocation	Passive Core Options	Active Core Options	Specialty Options
		Missouri Stable Income	
		Voya	

Target Date Funds
Custom portfolios managed by
Alliance Bernstein
Investment managers are
SSGA, Vanguard, and
BlackRock

Self-Directed Brokerage
TD Ameritrade

Note: Target date funds are generally custom, multi-manager white-label portfolios.

New York City

Tier I	Tier II - A	Tier II - B	Tier III
Asset Allocation	Passive Core Options	Active Core Options	Specialty Options
		Stable Value Fund	
		ICMA	
		Fiduciary Capital Management	
		NISA Investment Advisors	
		BlackRock	
		Goldman Sachs	
		JP Morgan	
		Fixed Income Fund	
		BlackRock (Active)	
		BlackRock (Passive)	
Target Date Funds	Large Cap Equity		
Custom portfolios using core funds	Bank of NY Mellon		
Turius	Clobal Socially Boonspoible		
	Global Socially Responsible BlackRock		
	Mid Cap Equity	Small Cap Core Fund	
	State Street Global Advisors	State Street Global Advisors	
		(Passive)	
		Dimensional Fund Advisors Value	
		T Rowe Price Growth	
		Wellington Management	Colf Directed Duckeys
		International Equity	Self-Directed Brokerage
		State Street Global Advisors (Passive)	TD Ameritrade
		Ballie Gifford Growth	
		Mondrian Value	
		Copper Rock	

Note: Investments are generally custom, multi-manager white-label portfolios.

New York State

HOW FORK State			
Tier I	Tier II - A	Tier II - B	Tier III
Asset Allocation	Passive Core Options	Active Core Options	Specialty Options
		Stable Value Fund	
		GSAM Stable Value	
	Fixed Income	Fixed Income Fund	
	BlackRock	Voya Core Plus	
	Large Cap Equity	Large Cap Core Funds	
	BlackRock	Davis New York Venture	
		Hartford Capital Appreciation	
Target Date Funds		Large Cap Value Funds	
T Rowe Price Retirement Funds		T Rowe Price Equity Income	
		Boston Partners Large Cap Value	
Balanced Funds		Large Cap Growth Fund	Socially Responsible
Pax World Balanced Fund		Fidelity OTC Portfolio	Pax Global Environmental
Vanguard Wellington Fund		Principal Large Cap Growth	Markets
		Vanguard PRIMECAP Fund	
	SMID Cap Equity	SMID Cap Funds	
	BlackRock	Vanguard Strategic Equity	
	Small Cap Equity	Small Cap Funds	
	Vanguard Small Cap Index	T Rowe Price QM US Small Growth	
	Fund	Delaware Small Cap Value	
	International Equity Portfolio Northern Trust	International Equity Portfolio	
	Northern Trust	MFS, DFA, Wellington, Manning & Napier, Northern Trust Index	
		Emerging Markets	Self-Directed Brokerage
		MSIF Emerging Markets Fund	Schwab PCRA
		Wolf Emerging Markets Fund	- Schwab F CIXA

Note: Investments are generally mutual funds or collective trusts.

Oregon

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Tennessee

10111100000			
Tier I	Tier II - A	Tier II - B	Tier III
Asset Allocation	Passive Core Options	Active Core Options	Specialty Options
		Fixed Voya Fixed Fund	
		Nationwide Bank Account	
	Fixed Income Vanguard Total Bond Index	Fixed Income Western Asset Core Plus Bond	
Target Date Funds Vanguard Target Retirement	Large Cap Equity Vanguard Institutional Index	Large Cap Equity Allianz NFJ Large Value Fidelity Contrafund Fidelity OTC Portfolio Voya Growth & Income	
Balanced Funds Fidelity Puritan Tennessee Treasury Managed Fund		Mid Cap Equity Columbia Mid Cap Value Janus Henderson Enterprise	
		Small Cap Equity Brown Capital Small Company Invesco Van Kampen Small Value	
		International Equity DFA International Value Fidelity International Discovery	Self-Directed Brokerage TD Ameritrade

Note: Investments are generally mutual funds.

Texas

CAUS			
Tier I	Tier II - A	Tier II - B	Tier III
Asset Allocation	Passive Core Options	Active Core Options	Specialty Options
		Money Market BlackRock	
	Fixed Income BlackRock 1-3 Yr. Gov't Index BlackRock Bond Index		
		Inflation Responsive Alliance Bernstein Real Asset Strategy	
Target Date Funds BlackRock LifePath	Large Cap Equity Vanguard Institutional Index Vanguard Growth Index	Large Cap Equity Davis New York Venture	
Balanced Funds Vanguard Wellington		Mid Cap Equity First Eagle Fund of America Victory Munder Mid-Cap Growth	
		Small Cap Equity Lord Abbett Small Value	
		International Equity Fidelity Diversified International	Self-Directed Brokerage Schwab PCRA

Note: Investments are generally mutual funds or collective trusts.

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