

TEXAS COUNTY & DISTRICT RETIREMENT SYSTEM

ANNUAL COMPREHENSIVE FINANCIAL REPORT

For the years ended December 31, 2022 & 2021



BUILT TO WEATHER STORMS

TCDRS' DISCIPLINED FUNDING, DIVERSIFIED INVESTMENTS AND SAVINGS-BASED BENEFITS PROMOTE STABILITY, FINANCIAL STRENGTH & LONG-TERM SUCCESS

Goose Island State Park, located near the town of Rockport, is home to an ancient giant. “The Big Tree,” as locals call it, is not the biggest Virginia live oak in the world, but at possibly more than 2,000 years old, it may well be the oldest.

In its lifespan, many other surrounding trees and structures fell to Civil War-era bombardments, numerous floods, droughts and wildfires, and 40–50 hurricanes that occurred in the area. But The Big Tree stood strong through it all, growing more than 45 feet tall and 35 feet wide, with a crown spread of 90 feet.

Like The Big Tree and the other famous Texas trees highlighted throughout this report, TCDRS has a long track record of strength and resilience. For more than half a century, our disciplined funding, diversified investments and savings-based benefits have helped us weather storms and kept the system anchored in stability and dependability for our members and employers.

TEXAS COUNTY & DISTRICT RETIREMENT SYSTEM

ANNUAL COMPREHENSIVE FINANCIAL REPORT

For the years ended December 31, 2022 & 2021

Prepared by the Actuarial Services, Communications,
Finance and Investments Divisions

Barton Oaks Plaza IV
901 MoPac Expy. South, Suite 500
Austin, Texas 78746



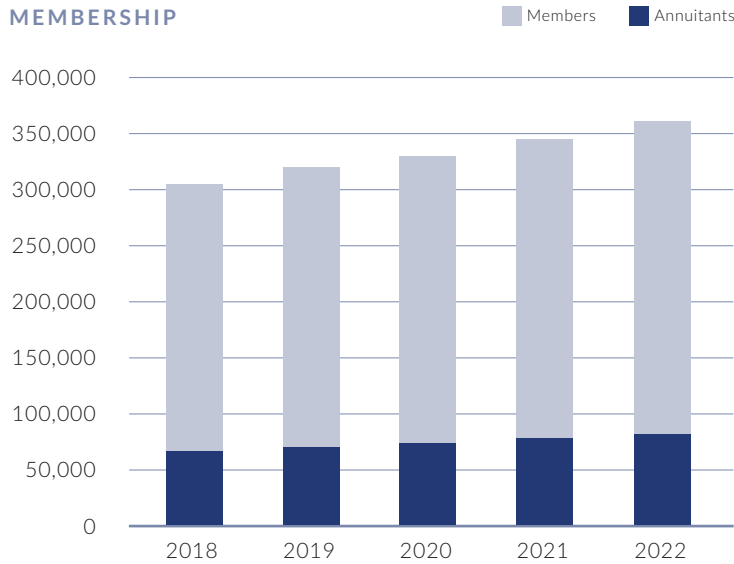
VIRGINIA LIVE OAK (QUERCUS VIRGINIANA)

TCDRS AT A GLANCE

All figures as of Dec. 31, 2022, except where noted.

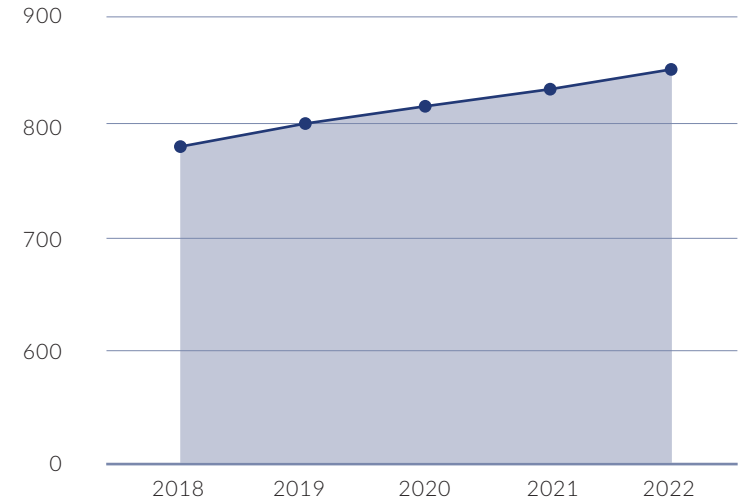
SERVING OUR MEMBERSHIP

MEMBERSHIP



We serve a membership of more than 360,000, including more than 82,000 retirees and beneficiaries.

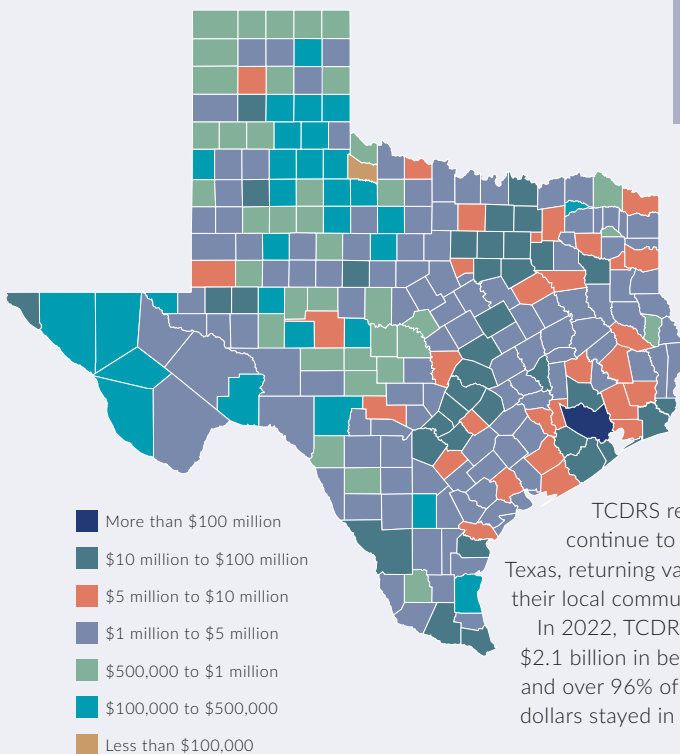
PARTICIPATING EMPLOYERS



Since 1967, the system has grown to include nearly 850 counties and districts.

BENEFITING TEXAS

TCDRS Payments to Retirees by Texas County



TCDRS retirees continue to live in Texas, returning value to their local communities. In 2022, TCDRS paid \$2.1 billion in benefits, and over 96% of those dollars stayed in Texas.

RETIREE PROFILE

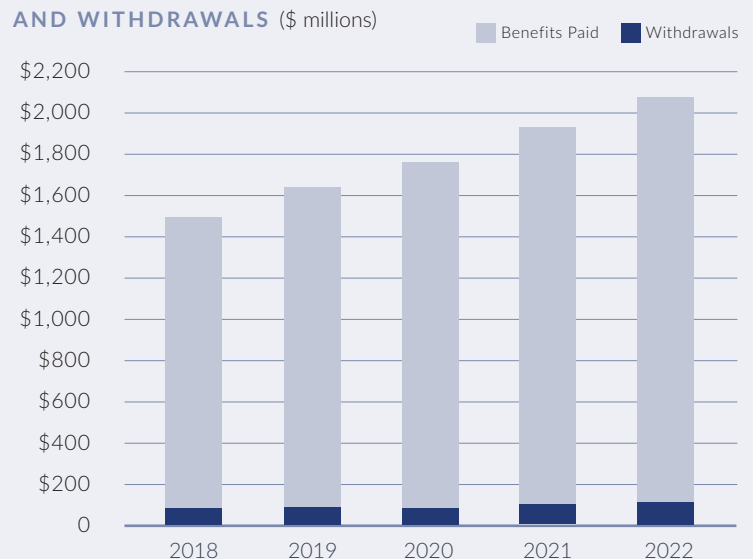
AVERAGE AGE AT RETIREMENT **61**

AVERAGE YEARS OF SERVICE **18**

AVERAGE ANNUAL BENEFIT **\$27,120**

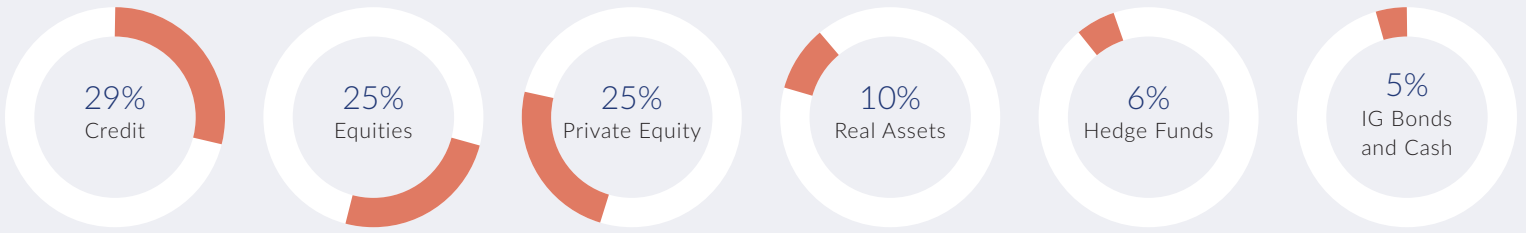
BENEFITS PAID

AND WITHDRAWALS (\$ millions)

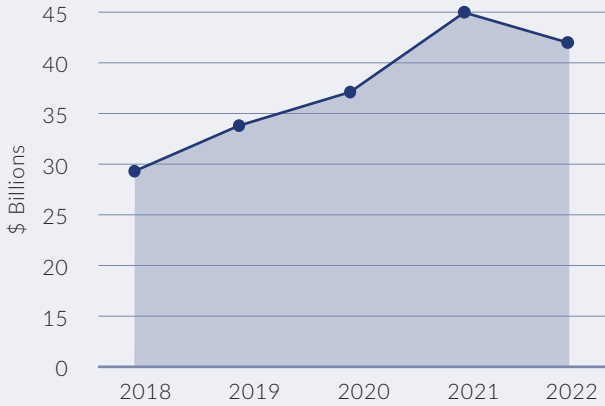


INVESTING FOR THE LONG TERM

ASSET ALLOCATION TARGETS AS OF MARCH 2022



FIDUCIARY NET POSITION



Fiduciary net position totaled \$42 billion in 2022.

TOTAL FUND ANNUALIZED RETURN—NET OF ALL FEES

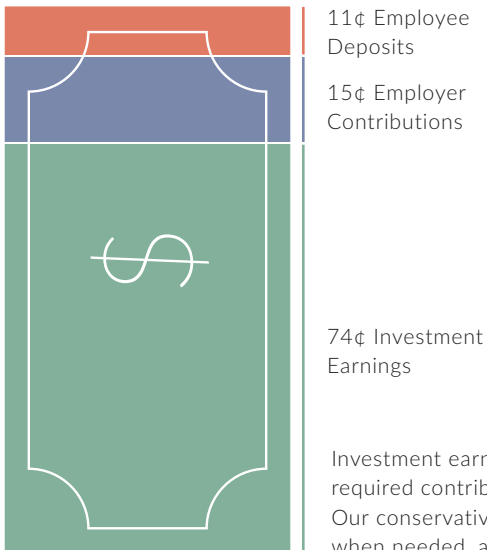
2022 **-5.8%**

5 YEAR **7.8%**
10 YEAR **8.3%**

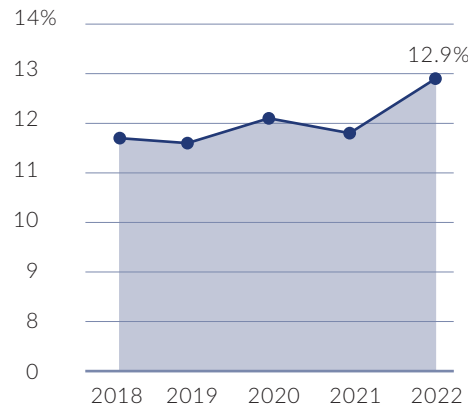
20 YEAR **7.8%**
30 YEAR **7.6%**

RESPONSIBLE PLAN FUNDING

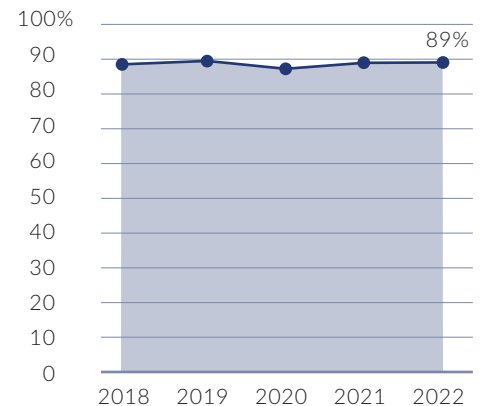
BENEFIT FUNDING



AVERAGE REQUIRED EMPLOYER CONTRIBUTIONS RATES



FUNDED RATIO



Investment earnings fund approximately 74¢ of every dollar of benefits. Employers must pay 100% of their required contributions every year. Each plan is funded independently by a county or district and its employees. Our conservative funding methods ensure any debt is paid down to zero within 20 years. This means money is there when needed, and debt is not pushed to future generations. *All figures as of Dec. 31, 2022, except where noted.*

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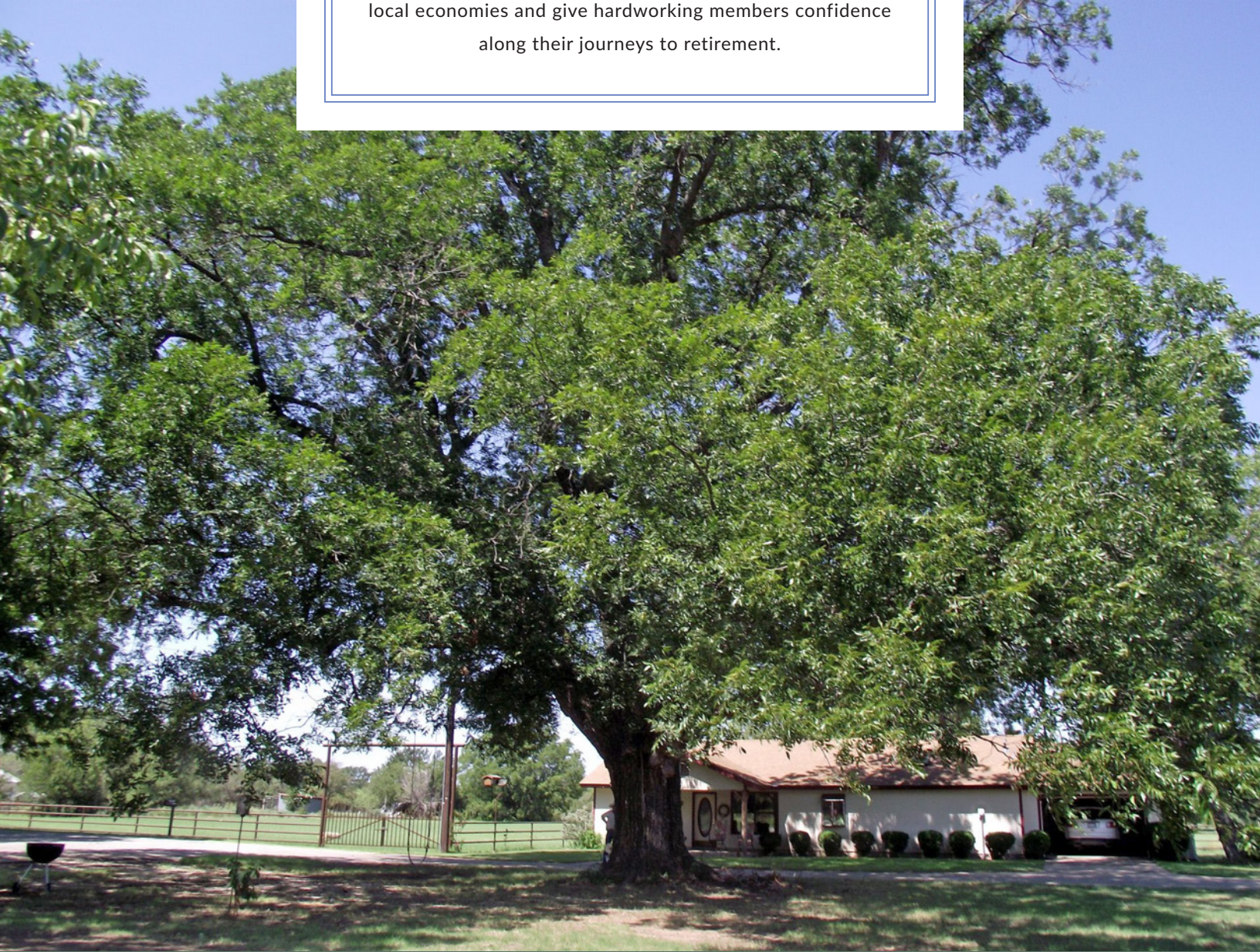
ONE

INTRODUCTORY

GOODNIGHT-LOVING PECAN, PALO PINTO COUNTY

A Texas-Sized Partnership

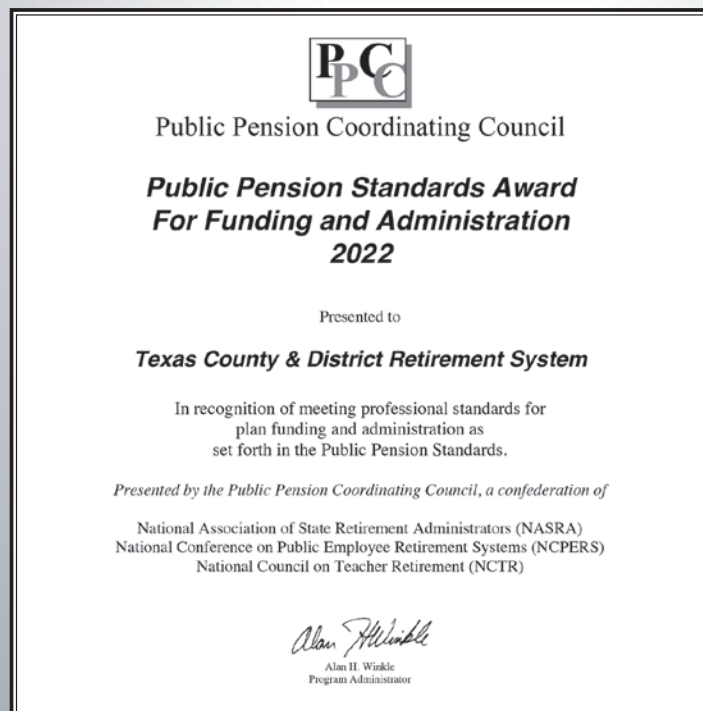
In 1866, two ranchers formed a partnership under the boughs of the Goodnight-Loving Pecan tree and started the primary cattle-driving route between Texas, New Mexico, Colorado and Wyoming. TCDRS partners with Texas employers to power local economies and give hardworking members confidence along their journeys to retirement.



PECAN (CARYA ILLINOINENSIS)



The Certificate of Achievement for Excellence in Financial Reporting was presented by the Government Finance Officers Association of the United States and Canada for the fiscal year ended Dec. 31, 2021. This was the 30th consecutive year that TCDRS has received this prestigious award, which recognizes comprehensive annual financial reports that have achieved the highest standards in government accounting and reporting.



TCDRS was awarded the Public Pension Coordinating Council's Public Pension Standards award for the 20th consecutive year. This award is in recognition of meeting professional standards for plan funding and administration as set forth in the Public Pension Standards.



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TCDRS.org

LETTER OF TRANSMITTAL

June 3, 2023

We are pleased to present the Annual Comprehensive Financial Report of the Texas County & District Retirement System (TCDRS) for the year ended Dec. 31, 2022.

The theme of our annual report this year is Texas trees. One native giant known as "The Big Tree" is a large live oak located in Rockport, Texas. This tree is estimated to be over 2,000 years old and is one of the largest live oaks in the United States. It has survived numerous natural disasters, including hurricanes and droughts, and has become a symbol of resilience and strength.

Like The Big Tree, TCDRS is designed to grow steadily over the long term and is built to weather storms. TCDRS has a strong foundation of roots to anchor our members' futures and support our growth over time. Our disciplined funding, diversified investments and savings-based benefits promote our stability, financial strength and long-term success.

TCDRS continues to be well-funded at 89%, with a reserves fund of \$2.1 billion that may be used to offset future adverse experience.

Since 1967, TCDRS has grown into a nearly \$42 billion trust. Today, we partner with nearly 850 counties and governmental districts to provide reliable retirement, disability and survivor benefits. Our employers value their TCDRS benefit plans in helping them recruit and retain quality staff. The number of participating employers continues to grow and, for the 10-year period ended Dec. 31, 2022, has increased by 32%.

Over the past decade, our membership has risen by 52% as well. We now serve over 360,000 Texans. These public servants make our Texas local communities better and safer places to live as they plan for one of the most important decisions of their life: retirement.

At TCDRS, we are committed to providing our members a secure benefit. Our unique features help make us one of the best-funded retirement systems in the nation. Savings-based benefits that are responsibly funded in advance, as well as flexibility and local control, contribute to the system's success.

The TCDRS Board of Trustees provides leadership for the system. Our nine-person board is appointed by the governor and confirmed by the Texas Senate. The board appoints an executive director, who is responsible for all day-to-day operations, and a chief investment officer, who manages investment operations.

WE DO RETIREMENT RIGHT

Our savings-based plan helps employers provide reliable benefits at a predictable cost. Members save for their own retirements over the length of their careers. At retirement, benefits are based on a member's final savings balance and employer matching.

In 2022, we paid \$2.1 billion in benefits to retirees and former members. Over 96% of these benefits went to Texas addresses. That income serves as an economic engine to our Texas local economies, creating jobs and generating economic activity.

On average, TCDRS retirees start their benefit payments at age 61 after working 18 years. The average annual benefit for current retirees is \$27,120, as of Dec. 31, 2022. The number of retirees has increased over the past decade by 75%.

INVESTMENTS

Because members and employers are saving in advance for retirement, they are getting the maximum power of investment earnings over time. Investment earnings fund approximately 74 cents of every benefit dollar our members receive.

LETTER OF TRANSMITTAL

TCDRS is a long-term investor with a fully diversified portfolio. The TCDRS Board of Trustees constructs the investment portfolio to maximize return within an acceptable level of risk. In 2022, the TCDRS portfolio returned -5.8%, net of all fees. This exceeded our benchmark of -8.8%. Our 30-year return was 7.6% for the period ended Dec. 31, 2022.

The board has adopted, and periodically reviews, an investment policy that defines and restricts investment authority. The policy also emphasizes the importance of a long-term investment philosophy with minimization of risk.

MAJOR INITIATIVES

In 2022, TCDRS delivered enhancements to our technology and services to further our digital transformation and our goal to go paperless by 2023. These efforts are allowing us to better serve our members and employers with fast and convenient account management and are making our processes more secure and efficient.

This past year, we:

- Designed and built technology to support the ability for members to make account updates by phone and complete transactions by providing electronic signatures via DocuSign. In addition, we completed the technical design and implementation of Co-Browse, a powerful feature that lets TCDRS call center representatives see exactly what customers see when providing technical support on the website.
- Made significant progress on information security objectives, including formalizing security policies, continuing implementation of an identity access management program, and developing a cloud access gateway program to better monitor and manage cloud data. Additionally, we continued to strengthen our security posture and conducted frequent security awareness training and penetration testing.
- Continued to modernize and customize our member communications to increase engagement. This included implementing enhanced e-newsletters tailored by career stage, customer journeys for new members and retirees, and a webinar series for members based on career stage.

FUNDING

88.6%

As of Dec. 31, 2022, TCDRS was 89% funded in aggregate. The actuarial value of assets and liabilities totaled \$40.92 billion and \$46.19

billion, respectively. The fiduciary net position for pension benefits at year end in 2022 and 2021 was \$41.97 billion and \$44.89 billion, respectively. This was a decrease of \$2.92 billion (-6.5%).

The system maintains a reserves position to help keep rates stable and offset future adverse experience. TCDRS' reserves are over 5% of assets. Considering the reserves, TCDRS is nearly 94% funded.

TCDRS does not receive funding from the State of Texas. Each plan is funded by our employers, members and investment earnings. TCDRS has one of the most conservative funding policies in the nation, ensuring that our employers fund their plans responsibly.

By paying 100% of their required contribution rate every year, employers are funding their current employees' future benefits and are on track to pay down any liabilities within 20 years.

The average employer contribution rate increased from 11.8% in 2021 to 12.9% in 2022, primarily due to the lowering of the investment return assumption from 8.0% to 7.5%.

In 2022, almost one-third of TCDRS' participating employers made additional contributions over the required amounts to prefund benefits, pay down liabilities faster or build up reserves within their plan. Each year, employers can adjust benefits and costs prospectively based on their local workforce needs and budgets. This level of flexibility and local control is unique among public pension plans.

Cash flow from deposits and contributions is slightly less than the amounts required to make benefit payments to retirees, withdrawals to former members and administrative expenses. Negative net cash flow is expected as the system matures. Investment returns and changes in employer plans also affect annual cash flow and the change in net position.

To help better understand TCDRS' financial strength, the recent history of net investment income, contributions and deposits, benefit payments and administrative costs is shown in the Statistical Section of this report, which begins on page 81. Information on funding progress for all employers as a group is located in the Actuarial Section within Table 6: Funding Progress (see page 71).

MANAGEMENT RESPONSIBILITY FOR FINANCIAL REPORTING

This report fulfills the requirements established by the Texas Government Code for public retirement systems to publish an annual financial report. TCDRS management is responsible for the accuracy of the data, as well as the completeness and fairness of its presentation, within this report.

The financial statements have been prepared in accordance with the principles of governmental accounting and reporting as set forth by the Governmental Accounting Standards Board (GASB).

We have implemented a comprehensive framework of internal controls to provide reasonable assurance regarding the safekeeping of assets and fair presentation of the financial statements and supporting schedules. Internal controls also provide reasonable, rather than absolute, assurance that the financial statements are free of any material misstatements. The concept of reasonable assurance recognizes that first, the cost of a control should not exceed the benefits likely to be derived; second, the valuation of the cost and benefits requires estimates and judgments by management.

KPMG LLP, Certified Public Accountants, has issued an unmodified (“clean”) opinion on TCDRS’ financial statements for the year ended Dec. 31, 2022. The independent auditor’s opinion is located at the front of the Financial Section of this report (see page 20).

Immediately following the independent auditor’s opinion, Management’s Discussion and Analysis

(MD&A) provides a narrative introduction, overview and analysis of the basic financial statements. The MD&A complements the Letter of Transmittal and should be read in conjunction with it.

AWARDS AND ACKNOWLEDGMENTS

For the 30th consecutive year, TCDRS proudly accepted a Certificate of Achievement for Excellence in Financial Reporting from the Government Finance Officers Association of the United States and Canada (GFOA) for the fiscal year ended Dec. 31, 2021. This prestigious award recognizes legible and efficiently organized annual comprehensive financial reports that satisfy accepted accounting principles and applicable legal requirements.

For 2022, TCDRS also received the Public Pension Coordinating Council’s (PPCC) Public Pension Standards Award for the 20th consecutive year. This award recognizes systems that meet professional standards for plan funding and administration.

SUMMARY

At TCDRS, we are proud to work on behalf of our members and employers to ensure that our system remains strong and sound for the future. Just as it takes effort and care to nurture and maintain a healthy tree, it takes hard work, dedication and perseverance to ensure TCDRS’ success for the future. We thank everyone who has helped to make TCDRS a model for retirement and a benefit that can be counted on by so many Texans.

Sincerely,



Mary Louise Nicholson
Chair

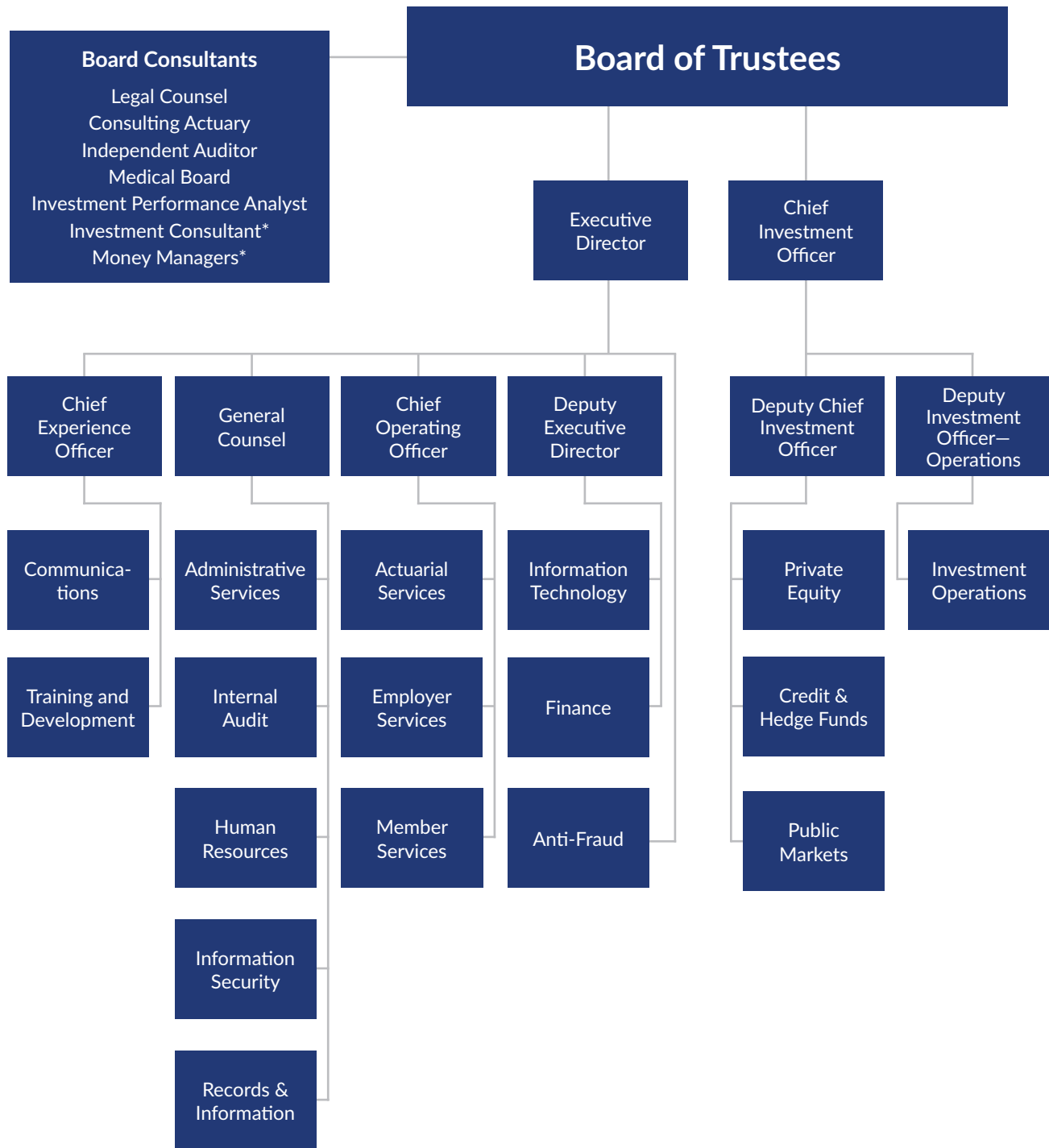


Amy Bishop
Executive Director



Casey Wolf
Chief Investment Officer

ORGANIZATION CHART



* For information regarding investment professionals' fees, see Tables 8–9 on pages 59–60 in the Investment Section.



Standing (l to r): Susan Fletcher, Holly Williamson, Sammy Farias, Chris Taylor, Tammy Biggar, Kara Sands
Seated (l to r): Chris Davis, Mary Louise Nicholson, Deborah Hunt

CHAIR

Mary Louise Nicholson
Tarrant County Clerk
Term expires Dec. 31, 2023

VICE-CHAIR

Deborah Hunt
Williamson County Tax
Assessor-Collector (retired)
Term expires Dec. 31, 2027

Tammy Biggar
Fannin County Clerk
Term expires Dec. 31, 2025

Chris Davis
Cherokee County Judge
Term expires Dec. 31, 2027

Sammy Farias
Bee County Commissioner
Term expires Dec. 31, 2027

Susan Fletcher
Collin County Commissioner
Term expires Dec. 31, 2023

Kara Sands
Nueces County Clerk
Term expires Dec. 31, 2023

Chris Taylor
District Judge, 48th Judicial
District—Tarrant County
Term expires Dec. 31, 2025

Holly Williamson
Harris County
Justice of the Peace
Term expires Dec. 31, 2025

EXECUTIVE STAFF AND PROFESSIONAL ADVISORS

INVESTMENT STAFF



Casey Wolf
Chief Investment Officer



Sandra Bragg
Deputy Investment
Officer – Operations



Jon Shoen
Deputy Chief
Investment Officer

ADMINISTRATIVE STAFF



Amy Bishop
Executive Director



Karen Correa
Deputy Executive
Director



Ann McGeehan
General Counsel

PROFESSIONAL ADVISORS

Investment Counsel

Vinson & Elkins LLP
Bradshaw & Bickerton PLLC
DLA Piper LLP
Reed Smith LLP
Foster Garvey P.C.
Chapman & Cutler LLP
Norton Rose Fulbright US LLP

Consulting Actuary

Milliman, Inc.

Investment Performance Analyst

Bank of New York Mellon

Investment Consultant

Cliffwater LLC

Independent Auditor

KPMG LLP

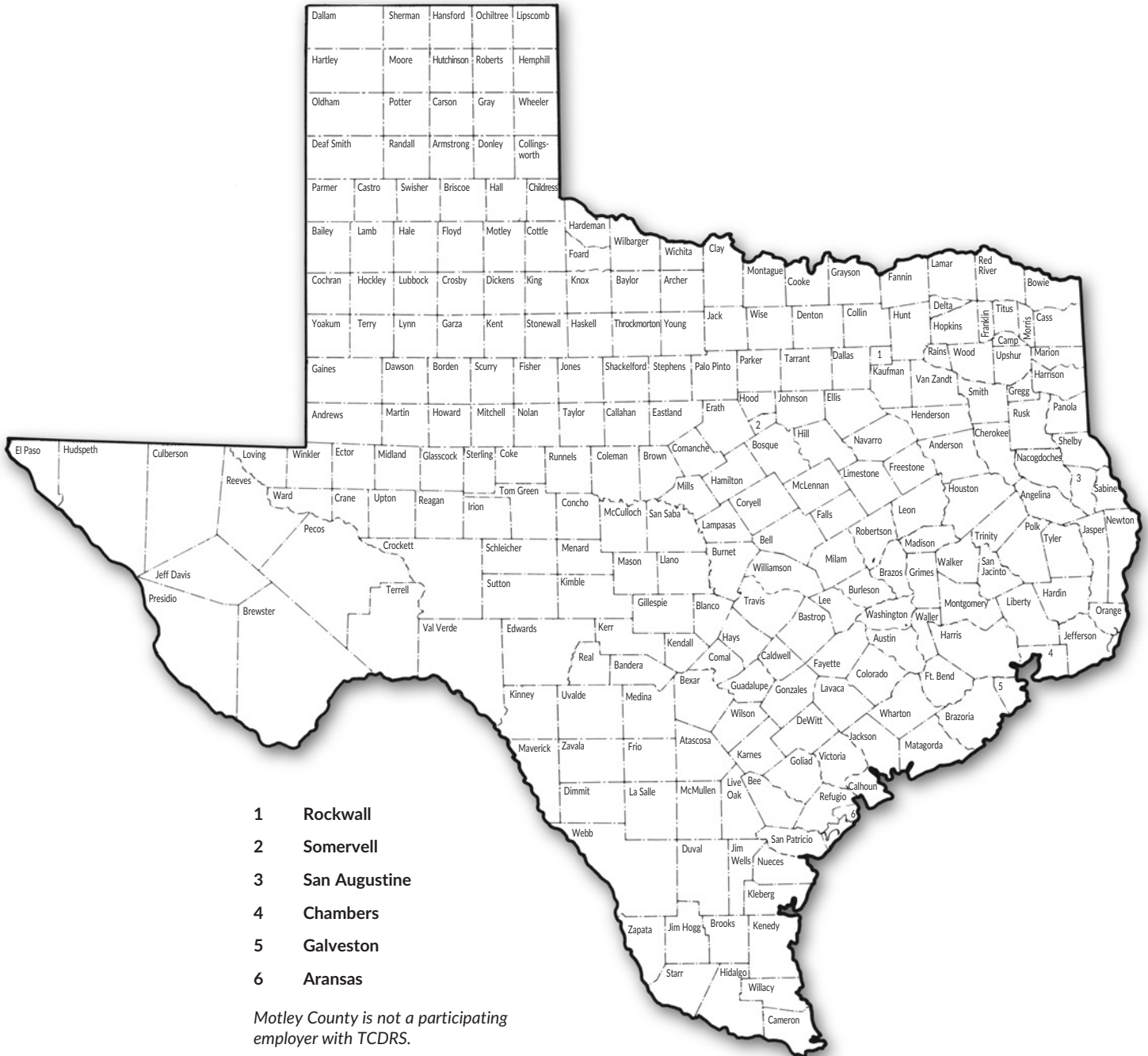
Fiduciary & Benefit Plan Administration Counsel

Jackson Walker LLP

Medical Board

Ace Alsup, M.D., Chairman
Shelby H. Carter, M.D.
Frank E. Robinson, M.D.

PARTICIPATING COUNTIES AND DISTRICTS As of Dec. 31, 2022



PARTICIPATING COUNTIES AND DISTRICTS As of Dec. 31, 2022

A

Acton Municipal Utility District
 Agua Poquita Soil and Water Conservation District
 Agua Special Utility District
 Alamo Area Council of Governments
 Alliance Regional Water Authority
 Anderson County
 Anderson County Central Appraisal District
 Andrews County
 Andrews County Appraisal District
 Angelina and Nacogdoches Counties WC & ID #1
 Angelina County
 Angelina County Appraisal District
 Angleton Drainage District
 Aquilla Water Supply District - Hill County
 Aransas County
 Aransas County Appraisal District
 Aransas County Navigation District
 Archer County
 Archer County Appraisal District
 Ark-Tex Council of Governments
 Armstrong County
 Armstrong County Appraisal District
 Atascosa Central Appraisal District
 Atascosa County
 Athens Municipal Water Authority
 Austin County
 Austin County Appraisal District
 Austin County Emergency Communications District
 Austin County Emergency Services District #2

B

Bacliff Municipal Utility District
 Bailey County
 Ballinger Memorial Hospital District
 Bandera County
 Bastrop Central Appraisal District
 Bastrop County
 Bastrop County Emergency Services District #1
 Bastrop County Emergency Services District #2
 Bastrop County Water Control and Improvement District 2
 Bastrop Travis Counties Emergency Services District #1
 Baylor County
 Baylor County Appraisal District
 Bayview Irrigation District #11
 Bayview Municipal Utility District
 Bee County
 Bee County Appraisal District
 Bell County
 Bell County Appraisal District
 Bell County Water Control and Improvement District #1
 Bell County Water Control and Improvement District 3
 Benbrook Water Authority
 Bexar Appraisal District
 Bexar County
 Bexar County Emergency Service District No. 2
 Bexar County Emergency Service District 5
 Bexar County Emergency Services District #6
 Bexar County Emergency Services District 7
 Bexar County Emergency Services District No. 8
 Bexar County Emergency Services District #10
 Bexar County Emergency Services District No. 11

Bexar County Emergency Services District #12
 Bexar County Water Control and Improvement District #10
 Bexar Metro 9-1-1 Network District
 Bexar-Medina-Atascosa WCID #1
 Bistone Municipal Water Supply District – Limestone County
 Blanco County
 Blanco County Emergency Services District No. 2
 Bluebonnet Groundwater Conservation District
 Borden County
 Borden County Appraisal District
 Bosque County
 Bosque County Central Appraisal District
 Bowie County
 Brazoria County
 Brazoria County Appraisal District
 Brazoria County Conservation and Reclamation District #3
 Brazoria County Drainage District #4
 Brazoria County Drainage District #5
 Brazoria County Emergency Services District No. 3
 Brazos Central Appraisal District
 Brazos County
 Brazos County Emergency Communications District
 Brazos Regional Public Utility Agency
 Brazos River Authority
 Brazos Transit District
 Brazos Valley Council of Governments
 Brazos Valley Groundwater Conservation District
 Brewster County
 Brewster County Appraisal District
 Bright Star-Salem Special Utility District
 Briscoe County
 Brookeland Fresh Water Supply District
 Brookesmith Special Utility District
 Brooks County
 Brookshire-Katy Drainage District
 Brookshire Municipal Water District
 Brown County
 Brownsville Irrigation District
 Brush Country Groundwater Conservation District
 Brushy Creek Municipal Utility District – Williamson County
 Burleson County
 Burleson County Appraisal District
 Burnet Central Appraisal District
 Burnet County

C

Caldwell County
 Caldwell County Appraisal District
 Calhoun County
 Calhoun County Appraisal District
 Calhoun County E911 Emergency Communications District
 Callahan County
 Callahan County Appraisal District
 Cameron County
 Cameron County Appraisal District
 Cameron County Drainage District #1
 Cameron County Drainage District #3
 Cameron County Drainage District #5
 Cameron County Emergency Communication District
 Cameron County Irrigation District #2

Cameron County Irrigation District #6
 Cameron County Regional Mobility Authority
 Camp Central Appraisal District
 Camp County
 Caney Creek Municipal Utility District
 Canyon Lake Community Library District
 Canyon Regional Water Authority
 Carson County
 Cass County
 Cass County Appraisal District
 Castro County
 Central Appraisal District of Bandera County
 Central Appraisal District of Johnson County
 Central Appraisal District of Taylor County
 Central Texas Groundwater Conservation District
 Central Texas Regional Mobility Authority
 Central Water Control and Improvement District – Angelina County
 Chambers County
 Chambers County Appraisal District
 Chambers County Public Hospital District
 Chambers-Liberty Counties Navigation District
 Cherokee County
 Childress County
 Childress County Appraisal District
 Childress County Hospital District
 Childress Housing Authority
 Chillicothe Hospital District
 Clay County
 Clay County Appraisal District
 Coastal Bend Groundwater Conservation District
 Coastal Plains Groundwater Conservation District
 Cochran County
 Cochran County Appraisal District
 Coke Central Appraisal District
 Coke County
 Coke County Soil and Water Conservation District #219
 Coleman County
 Collin County
 Collin County Central Appraisal District
 Collingsworth County
 Collingsworth County Appraisal District
 Colorado County
 Comal Appraisal District
 Comal County
 Comal County Emergency Services District #3
 Comanche Central Appraisal District
 Comanche County
 Combined Consumers Special Utility District
 Concho Central Appraisal District
 Concho County
 Concho County Hospital District
 Concho Valley Council of Governments
 Cooke County
 Cooke County Appraisal District
 Coryell County
 Cottle County
 Cow Creek Groundwater Conservation District
 Crane County
 Crane County Appraisal District
 Crane County Hospital District
 Crockett County
 Crockett County Appraisal District
 Crockett County Water Control and Improvement District #1

PARTICIPATING COUNTIES AND DISTRICTS As of Dec. 31, 2022

Crosby County
 Crosby County Appraisal District
 Crosby Municipal Utility District
 Cross Roads Special Utility District
 Crystal Clear Special Utility District
 Culberson County
 Cypress Springs Special Utility District

D

Dallam County
 Dallam County Appraisal District
 Dallas Central Appraisal District
 Dallas County
 Dallas County Park Cities Municipal Utility District
 Dawson County
 Dawson County Central Appraisal District
 Deaf Smith County
 Deaf Smith County Hospital District
 Deep East Texas Council of Governments
 Delta County
 Delta County Appraisal District
 Delta County Municipal Utility District
 Delta Lake Irrigation District
 Denco Area 9-1-1 District – Denton County
 Denton Central Appraisal District
 Denton County
 Denton County Transportation Authority
 DeWitt County
 DeWitt County Appraisal District
 Dickens County
 Dickens County Appraisal District
 Dimmit County
 Donley County
 Duval County
 Duval County Appraisal District
 Duval County Groundwater Conservation District

E

East Central Special Utility District
 East Fork Special Utility District
 East Harris County Emergency Services Joint Powers Board
 East Medina County Special Utility District
 East Texas Council of Governments
 East Texas Municipal Utility District of Smith County
 Eastland County
 Eastland County Appraisal District
 Ector County
 Ector County Appraisal District
 Ector County Hospital District
 Edwards Aquifer Authority - Bexar County
 Edwards Central Appraisal District
 Edwards County
 El Paso Central Appraisal District
 El Paso County
 El Paso County 9-1-1 District
 El Paso County Emergency Services District #1
 El Paso County Emergency Services District #2
 El Paso County Hospital District
 El Paso County Water Improvement District No. 1
 El Paso Mental Health and Mental Retardation
 Electra Housing Authority
 Ellis Appraisal District
 Ellis County
 Elm Ridge Water Control and Improvement District of Denton County

Emerald Bay Municipal Utility District
 Emergency Communication District of Ector County
 Erath County
 Erath County Appraisal District

F

Falls County
 Falls County Appraisal District
 Fannin Central Appraisal District
 Fannin County
 Fayette County
 Fern Bluff Municipal Utility District
 Fisher County
 Fisher County Appraisal District
 Fisher County Hospital District
 Floyd County
 Foard County
 Foard County Appraisal District
 Fort Bend Central Appraisal District
 Fort Bend County
 Fort Bend County Emergency Services District 2
 Fort Bend County Emergency Services District #4
 Fort Bend County Emergency Services District #7
 Fort Bend County Water Control and Improvement District #2
 Fort Clark Municipal Utility District
 Fort Griffin Special Utility District
 Four Way Special Utility District
 Franklin County
 Freer Water Control & Improvement District
 Freestone County
 Freestone County Appraisal District
 Frio County
 Frio County Appraisal District

G

Gaines County
 Gaines County Appraisal District
 Galveston Central Appraisal District
 Galveston County
 Galveston County Consolidated Drainage District
 Galveston County Drainage District #1
 Galveston County Drainage District #2
 Galveston County Emergency Communication Dist.
 Galveston County Fresh Water Supply District #6
 Galveston County Health District
 Galveston County Water Control and Improvement District #1
 Galveston County Water Control & Improvement District No. 8
 Garza Central Appraisal District
 Garza County
 Garza County Health Care District
 Gillespie Central Appraisal District
 Gillespie County
 Gillespie County Soil and Water Conservation District
 Glasscock County
 Glasscock County Appraisal District
 Goliad County
 Gonzales Central Appraisal District
 Gonzales County
 Gonzales County Emergency Services District #1
 Graham Regional Medical Center
 Gray County
 Gray County Appraisal District

Grayson Central Appraisal District
 Grayson County
 Greater Harris County 9-1-1 Emergency Network
 Greenbelt Municipal & Industrial Water Authority – Donley County
 Gregg County
 Grimes County
 Grimes County Appraisal District
 Guadalupe Appraisal District
 Guadalupe County
 Guadalupe County Groundwater Conservation District
 Guadalupe-Blanco River Authority
 Gulf Coast Protection District
 Gulf Coast Water Authority – Galveston County

H

Hale County
 Hall County
 Hall County Appraisal District
 Hamilton County
 Hamilton County Appraisal District
 Hansford County
 Hansford County Hospital District
 Hardeman County
 Hardin County
 Hardin County Appraisal District
 Hardin County Emergency Services District #2
 Harlingen Irrigation District Cameron County #1
 Harris Central Appraisal District
 Harris County
 Harris County Emergency Services District No 6
 Harris County Emergency Services District #7
 Harris County Emergency Services District No. 8
 Harris County Emergency Services District 9
 Harris County Emergency Services District 10
 Harris County Emergency Services District No. 11
 Harris County Emergency Services District 12
 Harris County Emergency Services District No. 13
 Harris County Emergency Services District No. 16
 Harris County Emergency Services District 17
 Harris County Emergency Services District #24
 Harris County Emergency Services District #29
 Harris County Emergency Services District No. 46
 Harris County Emergency Services District #48
 Harris County Emergency Services District #50
 Harris County Fresh Water Supply District 61
 Harris County Housing Authority
 Harris County Sports & Convention Corporation
 Harris County Water Control and Improvement District #1
 Harris County Water Control and Improvement District #36
 Harris County Water Control and Improvement District #50
 Harris Fort Bend Emergency Services District #100
 Harrison County
 Hartley County
 Hartley County Appraisal District
 Haskell County
 Haskell Memorial Hospital District
 Hays County
 Hays County Emergency Services District #4
 Hays County Emergency Services District #5
 Hays County Emergency Services District #6
 Hays County Emergency Services District #8

PARTICIPATING COUNTIES AND DISTRICTS As of Dec. 31, 2022

Heart of Texas Council of Governments
 Hemphill County
 Hemphill County Appraisal District
 Hemphill County Hospital District
 Hemphill County Underground Water Conservation District
 Henderson County
 Henderson County 9-1-1 Communications District
 Henderson County Appraisal District
 Hickory Creek Special Utility District
 Hidalgo and Cameron Counties Irrigation District #9
 Hidalgo County
 Hidalgo County Appraisal District
 Hidalgo County Drainage District #1
 Hidalgo County Irrigation District #1
 Hidalgo County Irrigation District #2
 Hidalgo County Irrigation District #6
 Hidalgo Municipal Utility District #1
 High Plains Underground Water Conservation District #1
 High Point Special Utility District
 Hill County
 Hockley County
 Hockley County Appraisal District
 Hood Central Appraisal District
 Hood County
 Hopkins County
 Hopkins County Appraisal District
 Housing Authority of Starr County
 Housing Authority of the City of Edinburg Texas
 Housing Authority of the City of Kirbyville
 Housing Authority of the City of Knox City
 Housing Authority of the City of Mercedes Texas
 Housing Authority of the City of Mission
 Housing Authority of the City of Munday
 Housing Authority of Travis County
 Houston County
 Houston County Appraisal District
 Howard County
 Howard County Appraisal District
 Hudspeth County
 Hunt County
 Hunt County Appraisal District
 Hurst Creek Municipal Utility District
 Hutchinson County
 Hutchinson County Appraisal District

I

Iraan General Hospital District
 Irion County
 Irion County Appraisal District

J

Jack County
 Jack County Appraisal District
 Jackson County
 Jackson County Appraisal District
 Jackson County County-Wide Drainage District
 Jackson County Emergency Services District No. 3
 Jasper County
 Jasper County Appraisal District
 Jasper County Water Control and Improvement District #1
 Jeff Davis County
 Jefferson Central Appraisal District

Jefferson County
 Jefferson County Drainage District #3
 Jefferson County Drainage District #6
 Jefferson County Drainage District #7
 Jefferson County Water Control and Improvement District #10
 Jim Hogg County
 Jim Hogg County Appraisal District
 Jim Hogg County Emergency Services District #1
 Jim Hogg County Water Control and Improvement District #2
 Jim Wells County
 Johnson County
 Johnson County Emergency Services District #1
 Jonah Water Special Utility District
 Jones County
 Jones County Appraisal District

K

Karnes County
 Karnes County Appraisal District
 Karnes County Hospital District
 Kaufman County
 Kaufman County Appraisal District
 Kendall Appraisal District
 Kendall County
 Kendall County Water Control and Improvement District #1
 Kenedy County
 Kenedy County Central Appraisal District
 Kenedy County Fire & Emergency Services District No. 1
 Kent County
 Kent County Tax Appraisal District
 Kerr County
 Kerr County Soil and Water Conservation District
 Kerr Emergency 9-1-1 Network
 Kimble Central Appraisal District
 Kimble County
 King County
 King County Appraisal District
 Kinney County
 Kinney County Appraisal District
 Kleberg County
 Knox County

L

La Salle County
 La Salle County Appraisal District
 Laguna Madre Water District – Cameron County
 Lake Cities Municipal Utility Authority
 Lake Fork Special Utility District
 Lake Kiowa Special Utility District
 Lakeway Municipal Utility District – Travis County
 Lamar County
 Lamar County Appraisal District
 Lamb County
 Lampasas Central Appraisal District
 Lampasas County
 Lavaca County
 Lavaca-Navidad River Authority – Jackson County
 Lee Central Appraisal District
 Lee County
 Leon County
 Leon County Central Appraisal District
 Liberty County

Liberty County Central Appraisal District
 Limestone County
 Limestone County Appraisal District
 Lipscomb County
 Live Oak County
 Live Oak County Appraisal District
 Llano Central Appraisal District
 Llano County
 Loving County
 Loving County Appraisal District
 Lower Trinity Groundwater Conservation District
 Lower Valley Water District
 Lubbock Central Appraisal District
 Lubbock County
 Lubbock County Water Control and Improvement District #1
 Lubbock Emergency Communication District
 Lubbock Reese Redevelopment Authority
 Lumberton Municipal Utility District
 Lynn County
 Lynn County Appraisal District
 Lynn County Hospital District

M

Macedonia-Eylau Municipal Utility District – Bowie County
 Mackenzie Municipal Water Authority – Briscoe County
 Madison County
 Madison County Appraisal District
 Marion County
 Marion County Appraisal District
 Marion-Cass Soil and Water Conservation District
 Marshall-Harrison County Health District
 Martin County
 Martin County Appraisal District
 Mason County
 Mason County Soil & Water Conservation District #223
 Matagorda County
 Matagorda County Appraisal District
 Matagorda County Drainage District
 Matagorda County Hospital District
 Matagorda County Navigation District #1
 Maverick County
 Maverick County Hospital District
 Maverick County Water Control and Improvement District #1
 McCamey County Hospital District
 McCulloch County
 McCulloch County Appraisal District
 McLennan County
 McLennan County 9-1-1 Emergency Assistance District
 McLennan County Appraisal District
 McLennan County Water Control and Improvement District #2
 McMullen Central Appraisal District
 McMullen County
 Medical Arts Hospital – Dawson County
 Medina County
 Medina County 911 District
 Medina County Appraisal District
 Medina County Emergency Services District #1
 Memorial Medical Center – Calhoun County
 Menard County
 Menard County Hospital District

PARTICIPATING COUNTIES AND DISTRICTS As of Dec. 31, 2022

Menard County Underground Water District
 Mesa Underground Water Conservation District
 Middle Rio Grande Development Council
 Midland Central Appraisal District
 Midland County
 Midland Emergency Communication District
 Milam Appraisal District
 Milam County
 Mills Central Appraisal District
 Mills County
 Mitchell County
 Mitchell County Appraisal District
 Monahans Housing Authority
 Montague County
 Montague County Tax Appraisal District
 Montgomery Central Appraisal District
 Montgomery County
 Montgomery County Emergency Communication District
 Montgomery County Emergency Service District No. 3
 Montgomery County Emergency Services District #4
 Montgomery County Emergency Services District 7
 Montgomery County Emergency Services District #8
 Montgomery County Emergency Services District 9
 Montgomery County Emergency Services District No. 10
 Montgomery County ESD 1
 Montgomery County Hospital District
 Montgomery County Housing Authority
 Moore County
 Moore County Appraisal District
 Moore County Hospital District
 Morris County
 Morris County Appraisal District
 Mustang Special Utility District

N

Nacogdoches Central Appraisal District
 Nacogdoches County
 Navarro Central Appraisal District
 Navarro County
 Newton Central Appraisal District
 Newton County
 Nolan County
 Nortex Regional Planning Commission
 North Blanco County Emergency Services District No. 1
 North Central Texas Municipal Water Authority
 North East Texas Regional Mobility Authority
 North Hunt Special Utility District
 North Plains Groundwater Conservation District
 North Texas Emergency Communication Center
 North Texas Tollway Authority
 Northeast Gaines County Emergency Services District #1
 Northeast Texas Municipal Water District
 Northeast Texas Public Health District
 Northern Trinity Groundwater Conservation District
 Nueces County
 Nueces County Appraisal District
 Nueces County Drainage District #2
 Nueces County Emergency Services District #2

Nueces County Water Control and Improvement District #3
 Nueces County Water Control and Improvement District #4

O

Ochiltree County
 Ochiltree County Appraisal District
 Oldham County
 Oldham County Appraisal District
 Orange County
 Orange County Appraisal District
 Orange County Drainage District
 Orange County Emergency Services District #1
 Orange County Emergency Services District #2
 Orange County Navigation and Port District
 Orange County Water Control and Improvement District #1

P

Palo Duro Water District
 Palo Pinto Appraisal District
 Palo Pinto County
 Panola County
 Parker County
 Parker County Appraisal District
 Parker County Emergency Services District No. 1
 Parker County Hospital District
 Parker County Special Utility District
 Parmer County
 Parmer County Appraisal District
 Pecan Valley Groundwater Conservation District
 Pecos County
 Pecos County Appraisal District
 Pecos County Water Control & Improvement District #1
 Permian Basin Regional Planning Commission
 Permian Regional Medical Center
 Pineywoods Groundwater Conservation District
 Polk Central Appraisal District
 Polk County
 Polk County Fresh Water Supply District #2
 Port of Bay City Authority
 Port of Beaumont Navigation District
 Port of Corpus Christi Authority
 Port of Port Arthur Navigation District
 Post Oak Savannah Groundwater Conservation District
 Potter County
 Potter-Randall County Emergency Communication District
 Prairielands Groundwater Conservation District
 Presidio Appraisal District
 Presidio County

R

Rains County
 Rains County Appraisal District
 Randall County
 Randall County Appraisal District
 Rankin County Hospital District – Upton County
 Rayburn Country Municipal Utility District
 Reagan County
 Reagan Hospital District
 Real County
 Real County Appraisal District

Red Bluff Water Power Control District – Reeves County
 Red River Appraisal District
 Red River Authority
 Red River County
 Red River County Soil and Water Conservation District
 Reeves County
 Reeves County Appraisal District
 Reeves County Emergency Service District No. 1
 Reeves County Emergency Service District No. 2
 Reeves County Hospital District
 Refugio County
 Refugio County Drainage District #1
 Refugio County Water Control & Improvement District #1
 Regional Public Defender Office Local Government Corporation
 Rio Grande Council of Governments
 Riverside Special Utility District
 Roberts County
 Robertson County
 Robertson County Appraisal District
 Robertson County Emergency Services District
 Rockwall Central Appraisal District
 Rockwall County
 Runnels County
 Rusk County
 Rusk County Appraisal District
 Rusk County Groundwater Conservation District

S

Sabine County
 Sabine County Appraisal District
 Sabine Pass Port Authority
 Sabine-Neches Navigation District of Jefferson County Texas
 San Augustine County
 San Jacinto County
 San Jacinto County Central Appraisal District
 San Jacinto County Emergency Services District
 San Jacinto Special Utility District
 San Marcos Housing Authority
 San Patricio County
 San Patricio County Appraisal District
 San Patricio County Drainage District
 San Patricio County Navigation District #1
 San Patricio Municipal Water District
 San Saba County
 Santo Special Utility District
 Schleicher County
 Scurry County
 Scurry County Appraisal District
 Scurry County Hospital District
 Seis Lagos Utility District
 Shackelford County
 Shackelford County Appraisal District
 Shelby County
 Shelby County Appraisal District
 Sherman County
 Sherman County Appraisal District
 Smith County
 Smith County 9-1-1 Communications District
 Smith County Appraisal District
 Smith County Emergency Services District #2
 Somervell County
 Somervell County Central Appraisal District

PARTICIPATING COUNTIES AND DISTRICTS As of Dec. 31, 2022

Somervell County Water District
 South Plains Association of Governments
 South Rains Special Utility District
 South Texas Development Council
 Southeast Texas Groundwater Conservation District
 Southwest Fannin Special Utility District
 STAR Transit
 Starr County
 Starr County Appraisal District
 Stephens County
 Stephens County Tax Appraisal District
 Sterling County
 Sterling County Appraisal District
 Stonewall County
 Stonewall County Appraisal District
 Stonewall Memorial Hospital District
 Stratford Hospital District – Sherman County
 Sutton County
 Sutton County Hospital District
 Swisher County
 Swisher County Appraisal District

T

Talty Special Utility District
 Tarrant Appraisal District
 Tarrant Co. 9-1-1 Emergency Assistance District
 Tarrant County
 Tax Appraisal District of Cottle County
 Taylor County
 Terrell County
 Terrell County Water Control & Improvement District #1
 Terry County
 Terry Memorial Hospital District
 Texas Association of Counties
 Texas County & District Retirement System
 Texas Eastern 9-1-1 Network
 The City of Quanah Housing Authority
 The Housing Authority of the City of Abilene
 The Housing Authority of the City of Huntington
 The Housing Authority of the City of Pharr Texas
 The Housing Authority of the County of Hidalgo Texas
 Throckmorton Central Appraisal District
 Throckmorton County
 Titus County
 Titus County Appraisal District
 Titus County Fresh Water Supply District
 Tom Green County
 Travis Central Appraisal District
 Travis County
 Travis County Emergency Services District #1
 Travis County Emergency Services District #2
 Travis County Emergency Services District #5
 Travis County Emergency Services District #8
 Travis County Emergency Services District 12
 Travis County Emergency Services District No. 11
 Tri-County Special Utility District
 Trinity Bay Conservation District
 Trinity County
 Trinity County Appraisal District
 Trinity Glen Rose Groundwater Conservation District
 Trophy Club Municipal Utility District No. 1
 Two Way Special Utility District

Tyler County
 Tyler County Appraisal District

U

United Irrigation District – Hidalgo County
 Upper Brushy Creek Water Control and Improvement District
 Upper Leon River Municipal Water District
 Upper Sabine Valley Solid Waste Management District
 Upper Trinity Groundwater Conservation District
 Upshur County
 Upton County
 Upton County Appraisal District
 Uvalde County
 Uvalde County Appraisal District

V

Val Verde County
 Valley Municipal Utility District #2 – Cameron County
 Valwood Improvement Authority – Dallas County
 Van Zandt County
 Van Zandt County Appraisal District
 Velasco Drainage District – Brazoria County
 Verona Special Utility District
 Victoria County
 Victoria County Drainage District #3
 Victoria County Groundwater Conservation District

W

Walker County
 Walker County Appraisal District
 Walker County Emergency Service District #2
 Walker County Special Utility District
 Waller County
 Waller County Appraisal District
 Waller-Harris County Emergency Services District 200
 Ward County
 Ward County Central Appraisal District
 Ward Memorial Hospital
 Washington County
 Webb County
 Webb County Appraisal District
 West Central Texas Council of Governments
 West Central Texas Municipal Water District
 West Jefferson County Municipal Water District
 West Nueces-Las Moras Soil and Water Conservation District #236
 West Travis County Public Utility Agency
 Wharton County
 Wharton County Central Appraisal District
 Wharton County Water Control and Improvement District #1
 Wharton County Water Control and Improvement District No. 2
 Wheeler County
 Wheeler County Appraisal District
 White River Municipal Water District – Dickens County
 Wichita Appraisal District
 Wichita County
 Wichita County Water Improvement District #2
 Wichita-Wilbarger 9-1-1 District
 Wickson Creek Special Utility District – Brazos County

Wilbarger County
 Wilbarger County Appraisal District
 Wilbarger County Hospital District
 Willacy County
 Willacy County Appraisal District
 Willacy County Housing Authority
 Williamson Central Appraisal District
 Williamson County
 Williamson County Emergency Services District #3
 Williamson County Emergency Services District #5
 Williamson County Emergency Services District #7
 Williamson County Emergency Services District No. 4
 Wilson County
 Wilson County Appraisal District
 Wilson County Emergency Services District #1
 Wilson County Emergency Services District #3
 Winkler County
 Winkler County Appraisal District
 Winkler County Hospital District
 Wintergarden Groundwater Conservation District
 Wise County
 Wise County Appraisal District
 Wood County
 Wood County Appraisal District
 Woodbine Special Utility District
 Wylie Northeast Special Utility District

Y

Yoakum County
 Yoakum County Appraisal District
 Young Central Appraisal District
 Young County

Z

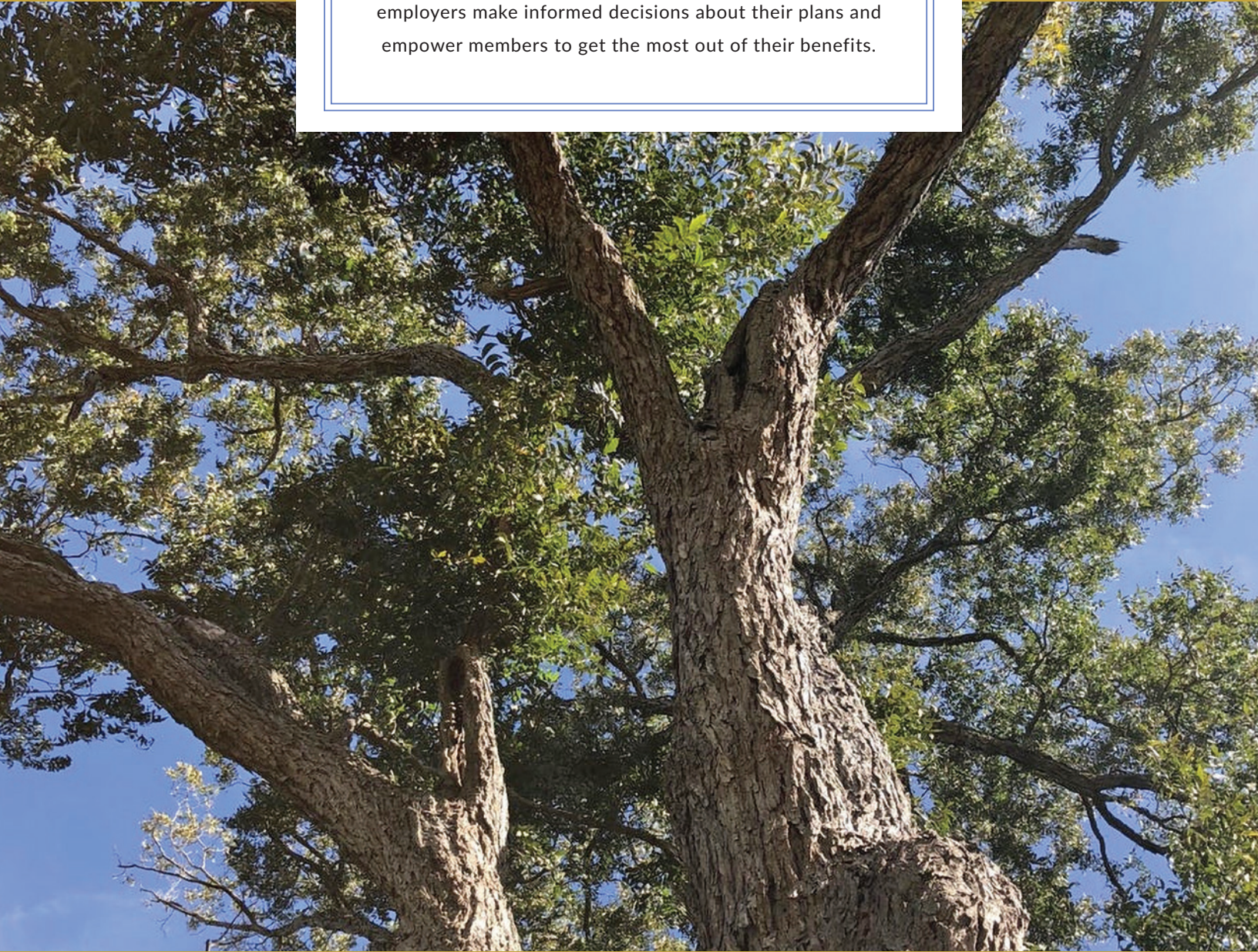
Zapata County
 Zapata County Appraisal District
 Zapata Soil and Water Conservation District
 Zavala County
 Zavala County Appraisal District

TWO FINANCIAL

LA BAHIA PECAN, WASHINGTON COUNTY

Resources on the Road

Since the late 1800s, the La Bahia Pecan tree in Washington County has served as a resting place and food source for weary travelers and traders between Texas and Louisiana. Similarly, TCDRS strives to provide resources and education to help employers make informed decisions about their plans and empower members to get the most out of their benefits.



PECAN (CARYA ILLINOINENSIS)



KPMG LLP
Suite 1900
111 Congress Avenue
Austin, TX 78701-4091

Independent Auditors' Report

The Board of Trustees
Texas County & District Retirement System:

Opinion

We have audited the financial statements of the Texas County & District Retirement System (TCDRS), as of and for the years ended December 31, 2022 and 2021, and the related notes to the financial statements, which collectively comprise TCDRS' basic financial statements for the years then ended as listed in the table of contents.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the fiduciary net position of Texas County & District Retirement System as of December 31, 2022 and 2021, and the changes in its fiduciary net position for the years then ended, in accordance with U.S. generally accepted accounting principles.

Basis for Opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of TCDRS and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with U.S. generally accepted accounting principles, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about TCDRS' ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditors' Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of TCDRS' internal control. Accordingly, no such opinion is expressed.

KPMG LLP, a Delaware limited liability partnership and a member firm of the KPMG global organization of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee.



- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about TCDRS' ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control related matters that we identified during the audit.

Required Supplementary Information

U.S. generally accepted accounting principles require that the Management's Discussion and Analysis and the Schedule of Money-Weighted Rates of Return be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with GAAS, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audits of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary Information

Our audit for the year ended December 31, 2022 was conducted for the purpose of forming an opinion on the financial statements that collectively comprise TCDRS' basic financial statements for the year ended December 31, 2022. The Other Supplementary Information – Changes in Fiduciary Net Position by Fund and Interfund Transfers, Changes in Endowment Fund, Changes in Income Fund, Administrative Revenues and Expenses, Investment Expenses, and Professional and Consulting Services for the year ended December 31, 2022 are presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements for the year ended December 31, 2022 and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with GAAS. In our opinion, the Other Supplementary Information – Changes in Fiduciary Net Position by Fund and Interfund Transfers, Changes in Endowment Fund, Changes in Income Fund, Administrative Revenues and Expenses, Investment Expenses, and Professional and Consulting Services are fairly stated, in all material respects, in relation to the basic financial statements as a whole for the year ended December 31, 2022.

Other Information

Management is responsible for the other information included in the annual comprehensive financial report. The other information comprises the Introductory Section, the Investment Section, the Actuarial Section, and the Statistical Section but does not include the basic financial statements and our auditors' report thereon. Our opinion on the basic financial statements does not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audits of the basic financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the basic financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

KPMG LLP

Austin, Texas
June 2, 2023

MANAGEMENT’S DISCUSSION AND ANALYSIS

INTRODUCTION

This section provides an overview and analysis of the system’s financial position and performance, focusing on the current year’s results, changes in those results (including three-year trends), and other currently known information. Readers are encouraged to consider this information in conjunction with information provided in other areas of the Financial Section, as well as information presented in the Letter of Transmittal in the Introductory Section.

OVERVIEW OF THE FINANCIAL STATEMENTS

The basic financial statements consist of the Statements of Fiduciary Net Position, Statements of Changes in Fiduciary Net Position and the Notes to the Financial Statements. Required Supplementary Information and Other Supplementary Information are also presented.

- The Statements of Fiduciary Net Position report the assets less liabilities and the resulting net position restricted for pension or insurance benefits at the end of 2022, compared to 2021.
- The Statements of Changes in Fiduciary Net Position report the transactions that occurred during 2022 and 2021 for which additions less deductions equal the net increase or decrease in fiduciary net position.
- Notes to the Financial Statements include additional information not readily evident in the statements themselves. The notes are considered essential to a full understanding of the information provided in the financial statements.
- Required Supplementary Information provides the money-weighted rate of return information.
- Other Supplementary Information provides detailed information, including activity by fund, administrative and investment expenses, and professional and consultant fees and services. These schedules support summary data presented in the basic financial statements.

TCDRS operates two trusts, both of which are accounted for as fiduciary funds. The Pension Trust Fund accounts for and provides retirement, disability and survivor benefits to the employees of participating employers. The Group Term Life Fund (GTLF or Group Term Life) provides a program of group term life insurance for the employees and, if covered, retirees of electing employers. No assets of the Pension Trust Fund may be used to pay any insurance benefit due from the GTLF, nor may assets

of the GTLF be used to pay any benefit due from the Pension Trust Fund. Discussion and analysis is provided separately for each of the two trusts.

The Statements of Fiduciary Net Position and Statements of Changes in Fiduciary Net Position show financial information for both the Pension Trust Fund and the GTLF.

FINANCIAL ANALYSIS: PENSION TRUST FUND

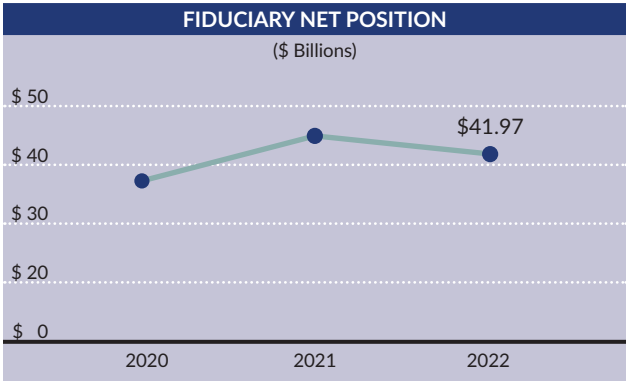
The Pension Trust Fund is comprised of six individual funds, each with a specific operational purpose. Note A in the Notes to the Financial Statements has additional information about each of these funds.

Summary information about fiduciary net position and the changes in fiduciary net position showing comparative detail for 2022, 2021 and 2020 is presented on page 23.

Net position (the amount that assets exceed liabilities) restricted for pensions at year end 2022 totaled \$41.97 billion. The 2021 amount was \$44.89 billion and for 2020 was \$37.11 billion. In 2022, the fiduciary net position decreased by \$2.92 billion, in 2021 it increased by \$7.78 billion, and in 2020 it increased by \$3.28 billion.

The decrease in 2022 fiduciary net position was primarily due to a net investment loss of \$2.60 billion, a -5.8% overall return, net of all fees. Net investment results for 2022 consist of the depreciation in fair value of investments of \$2.74 billion, plus \$180 million in interest and dividends, net income from securities-lending activity of \$1.9 million, less \$49 million of investment activity expenses. Net investment gain in 2021 was \$8.12 billion and in 2020 was a gain of \$3.50 billion.

2022 was a weak year for investment markets with most major asset classes decreasing in value. Central banks across the globe increased interest



MANAGEMENT'S DISCUSSION AND ANALYSIS

SUMMARY INFORMATION ABOUT FIDUCIARY NET POSITION

	Pension Trust Fund (\$ Millions)			2022 - 2021		2021 - 2020	
	Dec. 31,			\$ Change	% Change	\$ Change	% Change
	2022	2021	2020				
Assets							
Investments, at Fair Value	\$ 41,840	\$ 44,784	\$ 37,004	\$ (2,944)	(6.6%)	\$ 7,780	21.0%
Invested Securities-Lending Collateral	297	447	303	(150)	(33.6)	144	47.5
Receivables, Cash and Cash Equivalents, Other	202	179	166	23	12.8	13	7.8
Capital Assets, Net	15	15	16	0	0.0	(1)	(6.3)
Total Assets	42,355	45,425	37,489	(3,070)	(6.8)	7,936	21.2
Liabilities							
Securities-Lending Collateral	297	447	303	(150)	(33.6)	144	47.5
Other Liabilities	90	86	78	4	4.7	8	10.3
Total Liabilities	386	533	381	(147)	(27.6)	152	39.9
Net Position Restricted for Benefits	\$ 41,969	\$ 44,892	\$ 37,108	\$ (2,923)	(6.5%)	\$ 7,784	21.0%

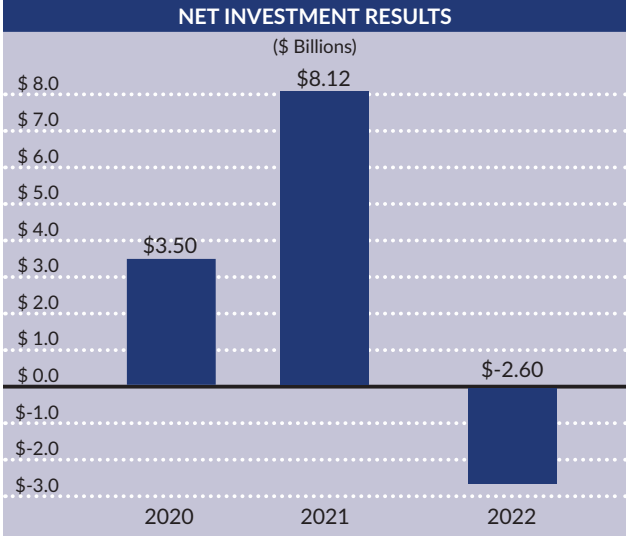
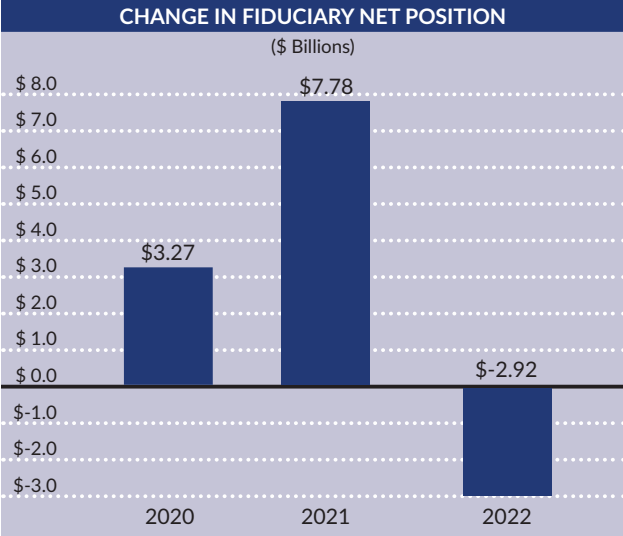
Due to rounding, totals and detail may not equal. Percentages shown are based on rounded amounts and may differ slightly from actual.

SUMMARY INFORMATION ABOUT CHANGES IN FIDUCIARY NET POSITION

	Pension Trust Fund (\$ Millions)			2022 - 2021		2021 - 2020	
	Dec. 31,			\$ Change	% Change	\$ Change	% Change
	2022	2021	2020				
Additions							
Employee Deposits	\$ 588	\$ 550	\$ 536	\$ 38	6.9%	\$ 14	2.6%
Employer Contributions	1,200	1,073	1,034	127	11.8	39	3.8
Net Investment Results	(2,605)	8,117	3,497	(10,722)	(132.1)	4,620	132.1
Other Income	2	2	2	0	0.0	0	0.0
Total Additions	(815)	9,742	5,069	(10,557)	(108.4)	4,673	92.2
Deductions							
Benefits Paid	1,963	1,827	1,678	136	7.4	149	8.9
Withdrawals	116	103	85	13	12.6	18	21.2
Administrative Expenses	25	24	27	1	4.2	(3)	(11.1)
Other Expenses	5	5	5	0	0.0	0	0.0
Total Deductions	2,109	1,959	1,795	150	7.7	164	9.1
Net Increase (Decrease) in Fiduciary Net Position	(2,924)	7,784	3,274	(10,708)	(137.6)	4,509	137.7
Net Position Restricted for Benefits	\$ 41,969	\$ 44,892	\$ 37,108	\$ (2,923)	(6.5%)	\$ 7,784	21.0%

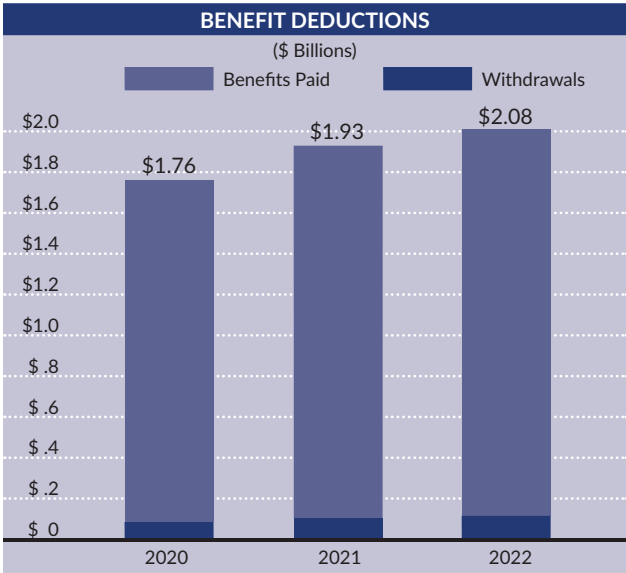
Due to rounding, totals and detail may not equal. Percentages shown are based on rounded amounts and may differ slightly from actual.

MANAGEMENT'S DISCUSSION AND ANALYSIS



rates to combat inflation. The increased interest rates triggered bond prices to fall. Further, the rising interest rates increased the risk of a global slowdown and potentially declining profits which caused equities to fall alongside bonds. The results from investing activities for all asset classes, net of all fees, are presented on page 57.

Additions to fiduciary net position in 2022 included \$588 million in employee deposits and \$1.20 billion in employer contributions. Employee deposits increased \$38 million and employer contributions rose \$127 million over 2021 amounts. In 2021, employee deposits increased by \$14 million and employer contributions rose by \$39 million. Together, employee deposits and employer contributions increased during 2022 by 10.2% and in 2021 by 3.4% over the previous year's amounts.



Deductions for benefits paid and withdrawals for 2022 were \$2.08 billion, a 7.8% increase over the previous year. These deductions for 2021 were \$1.93 billion, a 9.5% increase over 2020, and in 2020, these deductions were \$1.76 billion, a 7.3% increase over 2019. Higher deductions in 2022 and 2021 were due to several factors, including increases in the number of retiree and beneficiary accounts in 2022 (a 4.9% increase) and in 2021 (a 4.8% increase) along with higher average benefits. Withdrawals increased by \$13 million in 2022 and increased by \$18 million in 2021.

FINANCIAL ANALYSIS: GROUP TERM LIFE FUND (GTLF)

The GTLF provides an optional program of group term life insurance for the employees and, if covered, retirees of electing employers. An actuarial valuation is performed annually to determine employers' premium rates and to maintain adequate funding over the long term. Based on actuarial analysis, the amount of fiduciary net position is expected to be sufficient to cover any adverse experience that may occur.

OTHER CURRENTLY KNOWN INFORMATION: PENSION TRUST FUND

TCDRS' investment return for 2022 was -5.8% net of fees, outperforming its benchmark return of -8.8% by 3.0%.

Summary information about fiduciary net position and the changes in fiduciary net position showing comparative detail for 2022, 2021 and 2020 is presented on page 25.

MANAGEMENT'S DISCUSSION AND ANALYSIS

SUMMARY INFORMATION ABOUT FIDUCIARY NET POSITION

	Group Term Life Fund							
	Dec. 31,			2022 - 2021		2021 - 2020		
	2022	2021	2020	\$ Change	% Change	\$ Change	% Change	
Total Assets	\$ 47,310,752	\$ 44,625,324	\$ 43,810,954	\$ 2,685,428	6.0%	\$ 814,370	1.9%	
Total Liabilities	983,716	1,033,943	1,191,274	(50,227)	(4.9)	(157,331)	(13.2)	
Net Position Restricted for Benefits	\$ 46,327,036	\$ 43,591,381	\$ 42,619,680	\$ 2,735,655	6.3%	\$ 971,701	2.3%	

SUMMARY INFORMATION ABOUT CHANGES IN FIDUCIARY NET POSITION

	Group Term Life Fund							
	Dec. 31,			2022 - 2021		2021 - 2020		
	2022	2021	2020	\$ Change	% Change	\$ Change	% Change	
Additions								
Employer Premiums	\$ 4,967,995	\$ 4,778,158	\$ 4,647,511	\$ 189,837	4.0%	\$ 130,647	2.8%	
Income Allocation from Pension Trust Fund	2,999,561	2,892,692	2,856,996	106,869	3.7	35,696	1.2	
Total Additions	7,967,556	7,670,850	7,504,507	296,706	3.9	166,343	2.2	
Deductions								
Insurance Benefits	5,231,901	6,699,149	6,279,423	(1,467,248)	(21.9)	419,726	6.7	
Total Deductions	5,231,901	6,699,149	6,279,423	(1,467,248)	(21.9)	419,726	6.7	
Net Increase in Fiduciary Net Position	2,735,655	971,701	1,225,084	1,763,954	181.5	(253,383)	(20.7)	
Net Position Restricted for Benefits	\$ 46,327,036	\$ 43,591,381	\$ 42,619,680	\$ 2,735,655	6.3%	971,701	2.3%	

The net position restricted for insurance benefits at year end 2022 was \$46.3 million, an increase of \$2.7 million (6.3%) over the 2021 amount. The increase is due to an interest allocation of \$3.0 million, along with a \$0.3 million decrease in operating income (lower employer premiums than insurance benefits).

For the year ended 2022, employer premiums increased \$0.2 million (4.0%), while insurance benefits decreased by \$1.5 million (-21.9%) related to fewer active members and retirees having claims (down 31.3% and 14.0%, respectively), offset by an increase in average claim amounts by active members of 9.3%.

At year end 2021, the net position restricted for insurance benefits was \$43.6 million, which was an increase of \$1.0 million (2.3%) over the 2020 amount.

For the year ended 2021, employer premiums increased \$0.1 million while insurance benefits rose \$0.4 million.

REQUESTS FOR INFORMATION

This annual report is designed to provide a general overview of TCDRS' finances. Questions concerning any of the information provided in this report or requests for additional information should be addressed to TCDRS, Finance Division, Barton Oaks Plaza IV, Ste. 500, 901 S. MoPac Expy., Austin, TX 78746 or you can send an email to openrecords@TCDRS.org.

BASIC FINANCIAL STATEMENTS

STATEMENTS OF FIDUCIARY NET POSITION

	Dec. 31, 2022			Dec. 31, 2021		
	Pension Trust Fund	Group Term Life Fund	Total	Pension Trust Fund	Group Term Life Fund	Total
ASSETS						
Cash and Cash Equivalents	\$ 27,030,080	\$ —	\$ 27,030,080	\$ 28,650,849	\$ —	\$ 28,650,849
Receivables:						
Contributions	150,943,739	—	150,943,739	131,741,218	—	131,741,218
Investment Interest and Dividends	17,487,284	—	17,487,284	12,733,436	—	12,733,436
Securities-Lending Interest	175,649	—	175,649	133,076	—	133,076
Foreign Currency & Exchange Contracts	132,175	—	132,175	6,544	—	6,544
Employer Premiums	—	302,555	302,555	—	272,786	272,786
Other	243,200	—	243,200	285,628	—	285,628
Total Receivables	168,982,047	302,555	169,284,602	144,899,902	272,786	145,172,688
Prepaid Expenses and Other Assets	6,273,318	—	6,273,318	5,137,265	—	5,137,265
Investments, at Fair Value:						
U.S. Equities	5,130,427,791	—	5,130,427,791	6,369,760,673	—	6,369,760,673
International Equities	3,941,840,747	—	3,941,840,747	4,704,428,239	—	4,704,428,239
Global Equities	1,276,083,629	—	1,276,083,629	1,553,628,407	—	1,553,628,407
Hedge Funds	2,568,415,590	—	2,568,415,590	2,908,697,362	—	2,908,697,362
Credit	12,085,973,636	—	12,085,973,636	11,145,569,641	—	11,145,569,641
Private Equity	11,558,996,580	—	11,558,996,580	11,415,342,893	—	11,415,342,893
REITs	762,232,420	—	762,232,420	1,447,140,636	—	1,447,140,636
Master Limited Partnerships	383,195,096	—	383,195,096	1,143,833,192	—	1,143,833,192
Private Real Estate Partnerships	2,185,772,991	—	2,185,772,991	1,958,964,452	—	1,958,964,452
Investment-Grade Bonds	913,722,295	—	913,722,295	1,045,376,299	—	1,045,376,299
Cash and Cash Equivalents	1,033,775,695	—	1,033,775,695	1,091,369,443	—	1,091,369,443
Total Investments	41,840,436,470	—	41,840,436,470	44,784,111,237	—	44,784,111,237
Invested Securities-Lending Collateral	296,835,432	—	296,835,432	447,175,132	—	447,175,132
Funds Held by Pension Trust Fund	—	47,008,197	47,008,197	—	44,352,538	44,352,538
Capital Assets, net	15,307,470	—	15,307,470	15,127,841	—	15,127,841
Total Assets	42,354,864,817	47,310,752	42,402,175,569	45,425,102,226	44,625,324	45,469,727,550
LIABILITIES						
Accounts and Investments Payable	42,503,471	—	42,503,471	41,299,025	—	41,299,025
Insurance Benefits Payable	—	983,716	983,716	—	1,033,943	1,033,943
Funds Held for Group Term Life Fund	47,008,197	—	47,008,197	44,352,538	—	44,352,538
Securities-Lending Collateral	296,835,432	—	296,835,432	447,175,132	—	447,175,132
Total Liabilities	386,347,100	983,716	387,330,816	532,826,695	1,033,943	533,860,638
Net Position Restricted for Benefits	\$ 41,968,517,717	\$ 46,327,036	\$ 42,014,844,753	\$ 44,892,275,531	\$ 43,591,381	\$ 44,935,866,912

See accompanying Notes to the Financial Statements.

BASIC FINANCIAL STATEMENTS

STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION

	Year Ended Dec. 31, 2022			Year Ended Dec. 31, 2021		
	Pension Trust Fund	Group Term Life Fund	Total	Pension Trust Fund	Group Term Life Fund	Total
ADDITIONS						
Contributions and Deposits						
Employee Deposits	\$ 588,035,367	\$ —	\$ 588,035,367	\$ 550,152,286	\$ —	\$ 550,152,286
Employer Contributions	1,200,119,263	—	1,200,119,263	1,073,415,093	—	1,073,415,093
Employer Premiums	—	4,967,995	4,967,995	—	4,778,158	4,778,158
Total	1,788,154,630	4,967,995	1,793,122,625	1,623,567,379	4,778,158	1,628,345,537
Investment Income						
<i>From Investment Activities</i>						
Net Appreciation (Depreciation) in Fair Value of Investments	(2,737,305,388)	—	(2,737,305,388)	8,026,537,482	—	8,026,537,482
Interest and Dividends	179,562,186	—	179,562,186	146,100,686	—	146,100,686
Total Investment Activity Income (Loss)	(2,557,743,202)	—	(2,557,743,202)	8,172,638,168	—	8,172,638,168
Less Investment Activity Expenses	49,164,361	—	49,164,361	56,823,837	—	56,823,837
Net Income (Loss) from Investment Activities	(2,606,907,563)	—	(2,606,907,563)	8,115,814,331	—	8,115,814,331
<i>From Securities-Lending Activities</i>						
Securities-Lending Income	7,693,374	—	7,693,374	1,865,264	—	1,865,264
Less Securities-Lending Expenses:						
Borrower Rebates and Agent Fees	5,757,993	—	5,757,993	314,822	—	314,822
Net Income from Securities-Lending Activities	1,935,381	—	1,935,381	1,550,442	—	1,550,442
Total Net Investment Income (Loss)	(2,604,972,182)	—	(2,604,972,182)	8,117,364,773	—	8,117,364,773
Building Operations and Miscellaneous Income	2,203,583	—	2,203,583	1,765,526	—	1,765,526
Income Allocation from Pension Trust Fund	—	2,999,561	2,999,561	—	2,892,692	2,892,692
Total Additions	(814,613,969)	7,967,556	(806,646,413)	9,742,697,678	7,670,850	9,750,368,528
DEDUCTIONS						
Benefits Paid	1,963,053,430	—	1,963,053,430	1,827,090,449	—	1,827,090,449
Withdrawals	116,292,898	—	116,292,898	102,520,668	—	102,520,668
Terminating Employers SAF Refunds	—	—	—	63,568	—	63,568
Interest Allocation to Group Term Life Fund	2,999,561	—	2,999,561	2,892,692	—	2,892,692
Insurance Benefits	—	5,231,901	5,231,901	—	6,699,149	6,699,149
Administrative Operations Expenses	24,767,172	—	24,767,172	24,016,031	—	24,016,031
Building Operations Expenses	2,030,784	—	2,030,784	2,036,680	—	2,036,680
Total Deductions	2,109,143,845	5,231,901	2,114,375,746	1,958,620,088	6,699,149	1,965,319,237
Net Increase (Decrease) in Net Position	(2,923,757,814)	2,735,655	(2,921,022,159)	7,784,077,589	971,701	7,785,049,290
Net Position Restricted for Benefits:						
Beginning of Period, Jan. 1	44,892,275,531	43,591,381	44,935,866,912	37,108,197,942	42,619,680	37,150,817,622
End of Period, Dec. 31	\$41,968,517,717	\$ 46,327,036	\$ 42,014,844,753	\$44,892,275,531	\$ 43,591,381	\$ 44,935,866,912

See accompanying Notes to the Financial Statements.

NOTES TO THE FINANCIAL STATEMENTS

A: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Reporting Entity

The Texas County & District Retirement System (TCDRS or system) was created in 1967 by the Texas Legislature. The system partners with Texas counties and districts to provide their employees with retirement, disability and survivor benefits. TCDRS is governed by the Texas Legislature and overseen by an independent board of trustees, which is responsible for the administration of the system. TCDRS does not receive state funding. Each plan is funded independently by the county or district, its employees and by investment earnings.

The TCDRS Board of Trustees provides leadership for the system, which serves more than 360,000 TCDRS members and retirees. Our independent, nine-member board is comprised of system members and retirees appointed by the governor and confirmed by the Texas Senate. TCDRS trustees serve staggered six-year terms and have oversight of all system operations, including the annual budget, policy determination, legislative proposals and investment policy. The board appoints an executive director to manage the day-to-day operations of TCDRS and chief investment officer to manage TCDRS investments.

The financial statements of TCDRS have been prepared to conform to generally accepted accounting principles as prescribed by the Governmental Accounting Standards Board (GASB). The accompanying financial statements report the operations of TCDRS, which consists of two fiduciary funds: the Pension Trust Fund and the Group Term Life Fund (GTLF). The Pension Trust Fund is used to provide retirement, survivor, disability and withdrawal benefits and to pay the operating expenses of the system. The GTLF is used to operate a voluntary program of group term life insurance benefits.

New Accounting Pronouncements

In June 2017, GASB issued Statement No. 87, Leases, whose objective is to better meet the informational needs of financial statement users by improving accounting and financial reporting for leases by governments. The statement increases the usefulness of governments' financial statements by requiring recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes

a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under this statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources, thereby enhancing the relevance and consistency of information about governments' leasing activities. The requirements of this statement will be implemented for fiscal years beginning after June 15, 2021. Management has determined that the implementation of GASB 87 has no material impact.

Basis of Accounting

The system's funds are maintained on the accrual basis of accounting. Revenues are recorded when earned and expenses are recorded when incurred, regardless of when payment is made. Employee deposits and employer contributions are recognized in the period the employer reports compensation for its employees pursuant to statutory requirements. Benefit payments are recognized when due and payable in accordance with the plans' terms.

The preparation of financial statements in accordance with accounting principles generally accepted in the United States requires management to make estimates and assumptions. These estimates and assumptions affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

The system invests in a diversified portfolio of assets. Investments, in general, are exposed to various risks, such as interest rate, credit and market volatility. It is possible that changes in the values of investments will occur in the near term and that such changes could materially affect the amounts reported in the financial statements.

Basis of Presentation

TCDRS maintains separate funds and accounts in accordance with the TCDRS Act. This is done to help ensure observance of limitations and restrictions on the use of resources available to TCDRS.

In the Pension Trust Fund, the assets of all employer plans are pooled for investment purposes. However, each employer's plan is accounted for separately, so that each employer's assets are used only for the funding of its individual plan.

The costs of administering TCDRS are paid from investment earnings and general reserves of the pooled assets of all plans.

The TCDRS Act requires that all assets of the retirement system be credited to one of the following funds and accounts, according to the purpose for which they are held:

Employees Saving Fund

The Employees Saving Fund (ESF) contains an account for each member. Each account is increased as a member makes deposits and earns interest. Accounts are reduced due to withdrawals and retirement transfers.

Subdivision Accumulation Fund

The Subdivision Accumulation Fund (SAF) receives employer contributions and contains an account for each participating employer to fund retirement benefits. An account is increased as an employer makes contributions and by transfers from members' ESF accounts at retirement. An account is decreased as employers pay benefits. Annually, the board decides on the income allocation to each employer's account based on investment earnings and the employer's plan assets. Employer accounts increase if there is a positive allocation of earnings; accounts decrease if there is a negative allocation.

Closed Subdivision Annuity Reserve Fund

The Closed Subdivision Annuity Reserve Fund (CSARF) is used to pay benefits to retirees of terminated plans. When a member retires from an employer that is terminated, amounts are transferred from the member's account to the CSARF to fund the member's retirement annuity.

Endowment Fund

The Endowment Fund contains accounts that hold the general reserves of the system, inactive accounts from the ESF and reserves to transfer to the Expense Fund for subsequent year operating expenses. Refer to the schedule of Changes in Endowment Fund on page 48.

General reserves are maintained in the Endowment Fund and have been used to keep rates stable and to help offset future adverse experience. The Endowment Fund may increase or decrease based on income allocation decisions by the board of trustees.

Income Fund

All investment income is credited to the Income Fund. It accounts for investment earnings and expenses, and annual allocations to other funds. The fund is reduced by investment expenses and by the statutory allocation of interest to the ESF, CSARF and GTLF. In addition, the board makes an allocation to the SAF.

If any excess exists after all allocations are made, the remainder is transferred to the Endowment Fund. Refer to the Changes in Income Fund schedule on page 49 for additional information.

Expense Fund

TCDRS pays administrative operating expenses from this fund. As mentioned in the Endowment Fund and the Income Fund, operating expenses are financed from general reserves at the beginning of the year, and the Income Fund finances the investment expenses.

The Group Term Life Fund reports the net position available to pay insurance benefits for covered participants. Premiums paid by employers and an annual income allocation are added to the fund, while insurance benefits are paid from the fund.

Investments

Investments consist of a diversified portfolio, including equities, hedge funds, credit investments, private equity, real assets and investment-grade bonds along with cash and cash equivalents. The portfolio is further diversified within each of the asset classes.

Investment purchases and sales are recorded as of their trade dates. Separately managed fixed income, equity and debt securities are reported at fair value, and are primarily valued using ICE Data Services. U.S. and international commingled funds, hedge fund investments, real estate funds or similar private limited partnership investment vehicles that do not actively trade through established exchange mechanisms are valued at net asset value by a general or managing partner. Security transactions and any resulting gains or losses are accounted for by the specific identification method on a trade-date basis.

For the years ended Dec. 31, 2022 and 2021, the annual money-weighted rate of return on investments, net of investment expenses, was -5.82% and 22.02%, respectively. The money-weighted rate of return expresses investment performance, net of investment expenses, adjusted for the changing amounts actually invested. In the Required

NOTES TO THE FINANCIAL STATEMENTS

Supplementary Information is a table of the annual money-weighted rates of return for the 10-year period ended Dec. 31, 2022.

Capital Assets

Capital assets, which consist of land, building and improvements, software, and equipment and furniture are reported at historical cost and are depreciated on a straight-line basis over the estimated useful lives. TCDRS has elected to capitalize items that individually exceed \$5,000 and have a useful life of greater than one year. The estimated useful lives for building and improvements range from 5 to 40 years, for furniture, fixtures and equipment 3 to 10 years, and for leasehold improvements 3 to 40 years.

B: PLAN DESCRIPTION

Pension Trust Fund

TCDRS is a statewide, agent multiple-employer, public-employee retirement system. The system serves nearly 850 participating counties and districts throughout Texas. Each employer maintains its own customized plan of benefits. Plan provisions are adopted by the governing body of each employer, within the options available in the TCDRS Act. Employers have the flexibility and local control to adjust benefits annually and pay for those benefits based on their needs and budgets. Each employer has a defined benefit plan that functions similarly to a cash balance plan. The assets of the plans are pooled for investment purposes, but each employer's plan assets may be used only for the payment of benefits to the members of that employer's plan. In accordance with Texas law, it is intended that the pension plan be construed and administered in a manner that the retirement system will be considered qualified under Section 401(a) of the Internal Revenue Code. All employees (except temporary staff) of a participating employer must be enrolled in the plan. Membership in TCDRS as of Dec. 31, 2022 and 2021 is summarized in Table 1, on page 31.

Benefits

A percentage of each employee's paycheck is deposited into his or her TCDRS account.

That percentage (from 4% to 7%) is set by the employer.

The employee's savings grow, by law, at a rate of 7%, compounded annually. The employer selects a matching rate — at least "dollar for dollar," up to \$2.50 per \$1.00 in the employee's account.

At retirement, the employee's account balance is combined with employer matching and converted into a lifetime monthly benefit.

Employees receive a month of service time for each month that they make a deposit into their account. The amount of service an employee needs to earn a future benefit is called the vesting requirement. When an employee is vested, he or she has the right to a monthly benefit, which includes employer matching, at age 60 or older. Employers may choose 5-, 8- or 10-year vesting. In addition, employees may retire before age 60 if they meet one of the following requirements, set by the employer:

- **"Rule of" eligibility:** Under these rules, a vested employee can retire if their age plus years of service time add up to at least 75 or 80.
- **20-year or 30-year retirement at any age:** This lets employees retire when they have at least 20 or 30 years of service time.

Retirees elect to receive their lifetime benefit by choosing one of seven actuarially equivalent payment options, which are detailed on page 75.

Employers may elect to provide other optional benefits. Prior service gives employees monetary credit for time worked for an organization before it joined the system. Buybacks allow current employees to re-establish a closed TCDRS account from previous service with an employer. Partial lump-sum payments at retirement allow employees to withdraw part or all of their TCDRS account balance as a lump sum at retirement with a reduced monthly benefit.

In addition, an employer may choose to adopt a cost-of-living adjustment (COLA) for its retirees. This adjusts retiree benefits to restore purchasing power lost due to the effects of inflation.

Contributions

A combination of three elements funds each employer's plan: employee deposits, employer contributions and investment income.

- The deposit rate for employees is 4%, 5%, 6% or 7% of compensation, as adopted by the employer's governing body.
- Participating employers are required, by law, to contribute at a minimum the actuarially required rates, which are determined annually. Employers have the option of paying more than the required contribution rate each year. Extra contributions

NOTES TO THE FINANCIAL STATEMENTS

TABLE 1: MEMBERSHIP

Dec. 31,		
Pension Trust Fund:	2022	2021
Retirees and Beneficiaries		
Currently Receiving Benefits	82,031	78,206
Inactive Plan Members Entitled to But Not Yet Receiving Benefits:		
Vested Accounts	31,112	28,552
Nonvested Accounts	103,270	94,200
Total	134,382	122,752
Active Plan Members:		
Vested Accounts	67,801	67,479
Nonvested Accounts	77,425	76,628
Total	145,226	144,107
Number of Plans:		
Counties	253	253
Districts	595	577
Inactive Plan	1	1
Total	849	831
Group Term Life Fund:		
Retirees	10,126	9,378
Terminated Employees:		
Vested	8,947	8,301
Current Employees:		
Vested	17,130	16,985
Nonvested	20,039	19,577
Total	37,169	36,562
Number of Plans:		
Counties	127	127
Districts	255	238
Total	382	365

can help employers “pre-fund” benefit increases, such as a cost-of-living adjustment to retirees, and they can be used to help offset or mitigate future increases in the required rate due to negative plan experience. There are two approaches for making extra contributions: (a) paying an elected contribution rate that is higher than the required rate and (b) making an additional elective contribution as a lump sum.

- Investment income funds a large part of the benefits employees earn.

Administrative costs of TCDRS are financed through the system’s general reserves, which are part of the Endowment Fund.

Group Term Life Fund (GTLF)

TCDRS also administers the Group Term Life program, a group term life insurance. The fund for this benefit is a separate trust administered by the board. The fund receives monthly premiums from participating employers and pays benefits when due. The obligations of the program are payable only from this fund, and are not an obligation of, or a claim against, the TCDRS Pension Trust Fund. The fund’s assets are pooled with those of the Pension Trust Fund under provisions of the TCDRS Act and annually receive an allocation of income based on the fund value. The Group Term Life program is voluntary and employers can annually begin, change or cease participation. This program provides group term life insurance coverage to currently employed members, and if elected by employers, to retirees. Participation in the Group Term Life program as of Dec. 31, 2022 and 2021 is summarized in Table 1.

Benefits

Current employees of participating employers are insured for an amount equivalent to the employee’s current annual compensation. Employers may also optionally choose to cover retirees. Retirees are insured for \$5,000. Life insurance proceeds are payable as a lump sum. The coverage provided to retirees is an Other Post Employment Benefit (OPEB).

Contributions

Each participating employer contributes to the Group Term Life program at a contractually required rate. An annual actuarial valuation is performed and the contractual rate is equal to the cost of providing one-year term life insurance. The premium rate is expressed as a percentage of the covered payroll of members employed by the participating employer. There is a one-year delay between the actuarial valuation that serves as the basis for the employer contribution rate and the calendar year when the rate goes into effect. Contributions are not intended to pre-fund retiree term life insurance during employees’ careers.

C: TCDRS AS EMPLOYER

Pension Trust Fund

TCDRS, as an employer, participates in the Texas County & District Retirement System. A brief description of benefit terms:

1. All full- and part-time employees in a non-temporary position participate in the plan, regardless

NOTES TO THE FINANCIAL STATEMENTS

of the number of hours they work in a year. Employees in a temporary position are not eligible for membership.

2. The plan provides retirement, disability and survivor benefits.
3. TCDRS is a savings-based plan. For TCDRS, as an employer, 7% of each employee's pay is deposited into his or her TCDRS account. By law, employee accounts earn 7% interest on the beginning of year balances annually. At retirement, the account is matched at an employer-set percentage (current match is 200%) and is then converted to a monthly benefit.
4. There are no automatic COLAs. Each year, TCDRS, as an employer, may elect an ad hoc COLA for its retirees.
5. Benefit terms are established under the TCDRS Act. They may be amended effective Jan. 1 each year within parameters set forth in the Act.

TCDRS, as an employer, has a contribution rate that is calculated annually on an actuarial basis, although TCDRS may elect to contribute at a higher rate. The contribution rate is based on the TCDRS funding policy adopted by the TCDRS Board of Trustees and must conform with the TCDRS Act. Contributions to the pension plan from TCDRS, as an employer, for 2022, were based on the elected rate of 13.5%, plus a one-time lump-sum amount of \$240,000.

TCDRS' contributions, as an employer, to the Pension Trust Fund for the years ended Dec. 31, 2022 and 2021 were \$2.2 million and \$2.4 million, respectively.

Group Term Life Fund

TCDRS participates in the Group Term Life program. For a general explanation of the Group Term Life program, turn to page 31. TCDRS provides coverage to current eligible employees and to retired employees.

TCDRS, as an employer, contributes to the Group Term Life program at an actuarially determined rate.

TCDRS' contributions, as an employer, to the Group Term Life program for the years ended Dec. 31, 2022 and 2021 were \$36,383 and \$32,806, respectively, which equaled the required contributions each year.

TCDRS Bridge Program Health Reimbursement Arrangement

TCDRS adopted the TCDRS Bridge Program Health Reimbursement Arrangement (Bridge Program) for its employees. The program is open to all former TCDRS employees who meet all three conditions: (a) employed with TCDRS on or after Jan. 1, 2007;

(b) accumulated at least 10 years of full-time employment with TCDRS; and (c) an active TCDRS employee on or after attaining age 58½.

The Bridge Program is a self-insured medical expense reimbursement plan that provides a maximum credit of \$550 per month for 60 consecutive months. Coverage begins on the first day of the month immediately after the eligible former employee reaches age 60 or has separated from employment with TCDRS, whichever occurs later.

As of Dec. 31, 2021, the measurement date, the Bridge Program OPEB (Other Post Employment Benefit) liability was \$1,197,804. The plan is unfunded and the discount rate at Dec. 31, 2021, was 2.06% with 137 active members. TCDRS' contributions as an employer pays the benefits under the Bridge Program by reimbursing eligible expenses. For the years ended Dec. 31, 2022 and 2021, benefits paid were \$86,361 and \$68,366, respectively.

Deferred Compensation

The employees of TCDRS may participate in a deferred compensation plan created in accordance with Internal Revenue Code Section 457. This plan, available to all employees of TCDRS, permits the deferral of a portion of their salary until future years. The deferred compensation is not available to the employees until termination, retirement, death or certain unforeseeable emergencies. All compensation deferred under the plan is held by a custodian for the exclusive benefit of participants and beneficiaries.

D: CASH AND CASH EQUIVALENTS

Cash and cash equivalents consist of funds on deposit with a financial institution in interest-bearing demand deposit accounts. They are invested on an overnight basis (sweep) in a U.S. dollar-denominated investment under a repurchase agreement. The funds are collateralized at 102% using U.S. Treasury, government or agency securities. Cash held in (1) demand deposit accounts, (2) the overnight sweep, and (3) the JPMorgan U.S. Government Money Market Fund (an open-end institutional money market fund) is available to pay benefits, operational expenses and funds awaiting transfer to investment management.

Custodial credit risk is the risk that in the event of a bank failure, the system's deposits may not be returned to it. A discussion of custodial credit risk pertaining to cash and cash equivalents can be found in Note G, beginning on page 35.

E: INVESTMENTS

Investment decisions of the board are subject to Section 67, Article XVI of the Texas Constitution, and to the applicable statutory provisions of the Texas Trust Code that provide for a “prudent person” standard of care. Investment authorization is restricted by the investment policy adopted by the board that emphasizes the importance of a long-term investment philosophy with minimization of risk while targeting an attractive risk-adjusted return. The board has determined that a diversified portfolio will offer the best opportunity to produce the desired risk-adjusted return. Accordingly, the TCDRS investment portfolio includes investments in the following asset classes:

Equity Holdings

The system’s U.S. equities and a portion of its developed international and emerging market equities are passively managed in commingled index funds designed to replicate the performance of broad market indices. The remaining developed international, emerging market and global equities are actively managed in commingled funds or limited partnerships.

Hedge Funds

The vehicles for hedge fund investments are typically commingled vehicles, such as limited partnerships, limited liability companies or offshore corporations. At Dec. 31, 2022, the system’s hedge fund portfolio consisted of 16 partnerships with a fair value totaling \$2.6 billion. In comparison, at Dec. 31, 2021, the system’s hedge fund portfolio consisted of 19 partnerships with a fair value totaling \$2.9 billion.

Credit Investments

The board has divided the credit asset class into three portions.

- The strategic credit portfolio is driven primarily by credit risk and includes a combination of traded

non-investment-grade bonds and private credit opportunities. These assets provide potential for high returns and exhibit low correlation to the broader credit markets. As the market environment changes, various credit strategies move in and out of favor. TCDRS alters investment concentration among strategies to optimize the opportunity set for any given market environment.

- Distressed debt partnerships invest in securities of companies whose debt has declined in value because they are experiencing financial stress. Typical holdings are senior and subordinated debt instruments.
- Direct lending partnerships consist of privately originated debt made to small and medium-sized companies or to real estate investors in order to take advantage of dislocations in the capital markets.

Table 2 lists the committed and unfunded capital to private strategic credit, distressed debt and direct lending investments at Dec. 31, 2022. During the first quarter of 2023, there were no additional commitments to strategic credit, direct lending or distressed debt funds.

Private Equity

TCDRS’ private equity investments consist of partnerships that (a) take public companies private in order to improve their operations and then resell them in the future; (b) invest in start-up companies with new ideas or technologies; and (c) invest in companies seeking to discover, produce, and transport energy products.

Table 2 lists the committed and unfunded capital to private equity investments at Dec. 31, 2022. During the first quarter of 2023, an additional \$450 million has been committed to private equity partnerships.

Real Assets

- Real estate investment trusts (REITs) are companies

TABLE 2: SCHEDULE OF UNFUNDED COMMITMENTS

Investment Category	Dec. 31, 2022		
	Total Commitment	Unfunded Commitment	Fair Value
Strategic Credit	4,587,411,719	287,924,143	4,401,966,102
Distressed Debt	3,007,519,607	832,586,399	1,627,628,322
Direct Lending	9,023,153,366	3,487,626,729	5,924,041,616
Private Equity	16,678,878,550	5,632,279,428	11,558,996,580
Private Real Estate	4,856,725,607	2,230,944,091	2,185,772,991
Total Commitments	\$ 38,153,688,849	\$ 12,471,360,790	\$ 25,698,405,611

NOTES TO THE FINANCIAL STATEMENTS

that own and operate income-producing real estate, such as commercial office buildings, apartments, malls, warehouses and storage facilities. Under provisions of the U.S. tax law, if REITs pay out most of their income in dividends, they are not required to pay income taxes. Consequently, substantial amounts of income can be received from investing in REITs.

- Private real estate partnerships acquire and operate commercial properties including office buildings, apartments, hotels, malls and residential real estate. Private real estate investments are illiquid and typically have expected holding periods of 10 to 12 years. As reported in Table 2, on page 33, at Dec. 31, 2022, TCDRS had committed \$4.9 billion to 65 private real estate partnerships. There were no additional commitments made during the first quarter of 2023 to private real estate partnerships.
- Master Limited Partnerships (MLPs) are publicly traded partnership interests authorized by Congress to encourage investment in domestic energy infrastructure. At the entity level, these interests are tax free provided that 90% of their income comes from natural resources such as oil, natural gas, coal, timber and other depletable resources.

Investment-Grade Bonds

The investment-grade bond portfolio consists of debt instruments issued by the United States Treasury and governmental agencies, asset-backed securities, and corporate bonds that are rated investment grade by the major ratings agencies. Additionally, this portfolio may contain minimal investments in short-term instruments, non-rated securities, private placement securities, convertible bonds and preferred stock.

The portfolio should exhibit an overall dollar-weighted average quality rating of AA with no investment rated lower than BBB- or equivalent as rated by Standard & Poor's (S&P), Moody's Investor Service or Fitch Investor's Service at the time of purchase or, if not rated, be deemed by the manager to be of similar quality.

Cash and Cash Equivalents

The TCDRS Board of Trustees may select one or more commercial banks, depository trust companies or other entities to serve as custodian or custodians of the system's cash, cash equivalents and short-term investments, and may authorize the custodian to invest the cash in such short-term investments as the board determines. TCDRS has authorized its custodian to invest cash, on an overnight basis, in the custodian's Collective Trust Government Short-Term Investment Fund (STIF). The investment objective

of the STIF is to provide safety of principal, daily liquidity and competitive returns. The STIF owns high-quality debt instruments (which include U.S. government or U.S. government agencies, repurchase agreements, floating-rate notes, etc.). At Dec. 31, 2022, the dollar-weighted average maturity of the STIF was 6 days with an average current yield of 4.16%. In comparison, at Dec. 31, 2021, the dollar-weighted average maturity of the STIF was 56 days with an average current yield of 0.00%.

The investment officer manages cash in the STIF together with new contributions until they are allocated to a portfolio.

F: SECURITIES LENDING

State statutes and the board's policies permit TCDRS to use its investments to enter into securities-lending transactions – loans of securities to broker-dealers and other entities in exchange for collateral with a simultaneous agreement to return the collateral for the same securities in the future. The system's custodian, The Bank of New York Mellon Corp. (BNY Mellon), is engaged as the lending agent to lend securities from the system's REITs, MLPs, High-Yield and Investment-Grade Bond portfolios for collateral of a minimum of 102% of the fair value of securities loaned.

Collateral, either cash or U.S. government securities, is initially pledged for the securities on loan and additional collateral is required from the borrower by the close of the next business day if its value falls to less than 100% of the fair value of the securities on loan. TCDRS does not have the ability to pledge or sell securities received as collateral unless the borrower defaults. At Dec. 31, 2022 and 2021, BNY Mellon held \$46,487,540 and \$49,071,197 of non-cash collateral, respectively.

**TABLE 3:
INVESTED SECURITIES-LENDING CASH-COLLATERAL**

Investment Type	Dec. 31,	
	2022	2021
Cash and Other Liquid Assets	1,236,569	35,807
Money Funds	0	15,354,000
Asset-Backed Securities	0	3,477,000
Agencies	265,267,146	227,567,330
Commercial Paper	0	38,380,600
Repurchase Agreements	30,331,717	101,539,072
Certificates of Deposit	0	57,724,968
Interest Bearing	0	3,096,355
Total Invested Securities-Lending Collateral	\$ 296,835,432	\$ 447,175,132

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TABLE 4: CREDIT RISK BY QUALITY

Dec. 31,

Based on Moody's ratings	Investment-Grade Bonds				High-Yield Bonds ¹			
	2022		2021		2022		2021	
	Fair Value (\$ Millions)	% of Total	Fair Value (\$ Millions)	% of Total	Fair Value (\$ Millions)	% of Total	Fair Value (\$ Millions)	% of Total
Aaa	564.0	62	630.0	60	—	—	—	—
Aa	25.3	3	36.1	3	—	—	—	—
A	102.0	11	106.0	10	—	—	0.3	< 1
Baa	159.8	17	187.6	18	2.0	2	2.3	2
Ba	17.5	2	34.2	3	34.4	26	33.6	23
B	9.7	1	0.8	1	73.7	56	82.6	57
Less than B	—	—	—	—	10.9	8	15.0	10
Not Rated - Bonds	35.4	4	50.7	5	10.2	8	12.0	8
Total	\$ 913.7	100%	\$ 1,045.4	100%	\$ 131.2	100%	\$ 145.8	100%

¹ Included in the fair value of Credit investments reported in Statements of Fiduciary Net Position on page 26.

Cash collateral is invested in short-term fixed-income instruments in accordance with the system's securities-lending guidelines. Table 3 lists the categories of cash-collateral investments at Dec. 31, 2022 and 2021.

At the end of years 2022 and 2021, TCDRS had no credit risk exposure to borrowers because the amounts the system owed to borrowers (cash plus non-cash collateral) exceeded the amounts the borrowers owed to TCDRS. The contract with the lending agent requires the agent to indemnify TCDRS if borrowers fail to return the securities (and if the collateral is inadequate to replace the securities on loan) or fail to pay TCDRS for income distributions while the securities are on loan. At Dec. 31, 2022 and 2021, the fair value of securities on loan for cash and non-cash collateral was \$333,506,634 and \$484,985,924, respectively.

Additionally, TCDRS invests in two commingled domestic and international equity portfolios that participate in securities-lending programs managed by State Street Global Advisors. TCDRS receives a proportionate share of the securities-lending income generated from these activities.

G: DEPOSIT AND INVESTMENT RISK

Identification of credit risk, custodial credit risk, concentration of credit risk, interest rate risk and foreign currency risk is promulgated by GASB Statement No. 40.

Credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. This is measured by the assignment of

a rating by a nationally recognized statistical rating organization. At both Dec. 31, 2022 and 2021, according to Standard and Poor's (S&P) evaluations, the investment-grade bond portfolio exhibited an overall quality rating of AA-. The Bloomberg U.S. Aggregate Bond Index is the benchmark for performance measurement of the investment-grade bond portfolio. At both Dec. 31, 2022 and 2021, the Bloomberg U.S. Aggregate Bond Index had an average S&P quality rating of A-1+.

At both Dec. 31, 2022 and 2021, according to S&P evaluations, the high-yield portion of the credit portfolio exhibited an overall quality rating of B+. The FTSE High-Yield Cash-Pay Index is the benchmark for performance measurement of the credit portfolio. At both Dec. 31, 2022 and 2021, according to S&P evaluations, the benchmark exhibited an average quality rating of B+.

The investment policy does not explicitly outline an acceptable level of credit risk for the investment-grade bond or credit portfolios, but the board's adoption of their respective benchmark indices is an implicit adoption of the market risk inherent in these portfolios.

Table 4 lists the credit risk associated with the investment-grade bond portfolio and the high-yield bond portion of the credit investments portfolio.

At Dec. 31, 2022, according to Moody's Investors Service evaluations, the BNY Mellon STIF contained short-term securities with quality ratings of P-1 (Prime-1), which exhibit a superior ability for repayment of senior short-term debt obligations, and long-term investments (maturity date greater than

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TABLE 5: INTEREST RATE RISK – FIXED-INCOME PORTFOLIOS

Asset Class	Dec. 31,		2021	
	2022	Effective Duration in Years	Fair Value	Effective Duration in Years
Investment-Grade Bonds	\$ 913,722,295	6.1	\$ 1,045,376,299	6.2
High-Yield Bonds ¹	132,337,596	3.8	145,496,437	3.9

¹ Included in Credit investments reported in the Statements of Fiduciary Net Position on page 26.

one year) with an average quality rating of Aaa. Based upon the fair value of the fund at Dec. 31, 2022, 55% of the instruments were rated P-1, 45% of the instruments were rated Aaa and less than 1% was held in cash.

At Dec. 31, 2021, according to Moody's Investors Service evaluations, the BNY Mellon STIF exhibited average short-term quality ratings of P-1 and an average long-term quality rating of Aaa with 81% of the instruments rated P-1, 19% of the instruments rated Aaa and less than 1% was held in cash.

Custodial credit risk is the risk that, in the event of the failure of a depository financial institution, TCDRS will not be able to recover deposits or will not be able to recover collateral securities that are in the possession of an outside party. TCDRS requires that demand deposit accounts be fully collateralized. Funds received by its master custodian are invested on an overnight basis or, if the funds are received late during a business day, are maintained in a U.S. dollar-denominated interest-bearing deposit account insured by the FDIC.

TCDRS investments, evidenced by securities in physical or book entry form and not on loan, are registered and held in safekeeping for TCDRS by its custodian bank.

Concentration of credit risk is the risk of loss attributed to the magnitude of investment in a single issuer. Investment guidelines established with the individual investment managers generally address concentration risk limits. At Dec. 31, 2022 and 2021, TCDRS did not have investments in any one issuer which were greater than 5% of net investments.

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. The values of portfolios of longer duration are more affected by interest rate changes than are those of shorter duration. Increases in bond market yields result in fair value losses; decreases result in fair value gains. Multiplying the change in market yield by the duration of the portfolio

can approximate the size of the gain or loss in fair value. For example, if one owned a portfolio of investment-grade bonds that had a duration of 6.5 years and if the yields within the bond market were to immediately fall 1%, the fair value gain of the portfolio would approximate 6.5%. This change in fair value indicates the level of interest rate risk inherent in the portfolio.

Table 5 discloses the level of interest rate risk inherent in the TCDRS fixed-income portfolios by reporting the effective duration of those portfolios.

The effective duration of the Bloomberg U.S. Aggregate Bond Index at Dec. 31, 2022 and 2021 was 6.3 and 6.7 years, respectively.

The high-yield bond portion of the credit portfolio is measured against the FTSE High-Yield Cash-Pay Index. The effective duration of the FTSE High-Yield Cash-Pay Index at Dec. 31, 2022 and 2021 was 4.2 and 3.9 years, respectively.

TCDRS does not have a formal policy governing interest rate risk, but the board's adoption of the respective benchmark indices used to measure the investment-grade bond and credit portfolios against is an implicit adoption of the market risk inherent in these portfolios.

The maturities of the investments made with cash collateral may not match the maturities of securities on loan. Any material interest rate risk on investments from cash collateral received from securities lending is mitigated by maintaining an investment yield higher than the rebate rate owed to borrowers. Further, to reduce risk, investment guidelines require floating-rate instruments to reset no less frequently than 90 days or limit maturity of fixed-rate instruments to no more than 18 months.

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or deposit. The asset allocation plan adopted in the investment policy includes a 13.5% allocation to international and global equities, a

NOTES TO THE FINANCIAL STATEMENTS

TABLE 6: FOREIGN CURRENCY RISK

	Dec. 31,							
	REITs / MLPs		Credit Investments		Private Equity & Private Real Estate		Total	
	2022	2021	2022	2021	2022	2021	2022	2021
AUSTRALIAN DOLLAR	–	1,387	–	–	–	–	–	1,387
BRITISH POUND STERLING	–	–	1,002,685	1,096,846	121,537,390	110,753,377	122,540,075	111,850,223
CANADIAN DOLLAR	5,364	470,819	–	–	–	–	5,364	470,819
EURO CURRENCY UNIT	11,688	12,663	211,977,005	153,682,889	1,057,772,402	1,175,688,060	1,269,761,095	1,329,383,612
NORWEGIAN KRONE	–	6,879	–	–	–	–	–	6,879
Total subject to currency risk	\$ 17,052	\$ 491,748	\$ 212,979,690	\$ 154,779,735	\$ 1,179,309,792	\$ 1,286,441,436	\$ 1,392,306,534	\$ 1,441,713,920

Due to rounding, totals and detail may not equal.

4% allocation to distressed debt, a 2% allocation to REITs, a 2% allocation to MLPs, a 16% allocation to direct lending, a 6% allocation to private real estate partnerships and a 25% allocation to private equity, all of which allow non-U.S. dollar-denominated investments. TCDRS does not have a formal policy governing foreign currency risk. Accordingly, the foreign currency risks inherent in the benchmark indices assigned to these asset classes have been implicitly adopted as an acceptable level of foreign currency risk.

Table 6 lists the foreign currency risk associated within the REITs, MLPs, credit investments, private equity and private real estate partnerships portfolios.

Additionally, at Dec. 31, 2022 and 2021, the international equity portfolio contained nine commingled funds from the Developed International, Emerging Market and Global asset classes. These asset classes are subject to foreign currency risk with an aggregate fair value of \$5,217,924,744 and \$6,266,649,490, respectively.

Derivative instruments are financial contracts whose values depend on the values of one or more underlying assets, reference rates or financial indexes. The investment policy does not explicitly outline the use of derivatives, but investment guidelines allow the investment-grade bond managers the use of exchange-traded treasury futures to replicate cash investments or to manage yield curve or other risk positions within their portfolio. In 2015, the board approved the implementation of a currency overlay program to the passive developed international equity and emerging market allocations managed by State Street Global Advisors using foreign currency forward contracts which are over-the-counter (OTC) instruments used to hedge volatility in currency exchange rates on

assets held within these portfolios. TCDRS' derivative instruments are considered investments and not hedges for accounting purposes. In 2016, the overlay program was suspended but may be re-engaged at a future date.

Table 7, on page 38, lists TCDRS' exposure to derivative instruments at Dec. 31, 2022.

H: FAIR VALUE MEASUREMENT AND APPLICATION

TCDRS categorizes fair value measurements of investment assets and liabilities within the fair value hierarchy established by generally accepted accounting principles as promulgated by GASB Statement No. 72. These investments are valued through industry standard practices for the respective type of security at a price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The hierarchy classifications are based on the transparency of inputs to the valuation techniques used and should not be perceived as the particular investment's risk. These classifications are summarized into three broad levels, arranged from highest to lowest:

Level 1 – Unadjusted inputs using quoted prices in active markets or exchanges for identical investments.

Level 2 – Other significant observable inputs including quoted prices of securities that are comparable in coupon, rating, maturity and industry. Inputs other than quoted prices that are observable take into account operational, market, financial and non-financial factors (interest rates, yield curves, credit risk, and default rates) or other market corroborated inputs that are observable at commonly quoted intervals for the full term of the investment.

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TABLE 7: FUTURES CONTRACTS

Dec. 31, 2022

Futures Contract	Expiration Date	Contracts	Value Per Point	Price Per Contract	Exposure	Base Notional Cost	Unrealized Gain/(Loss)
US 10Yr Ultra Future	Mar 2023	-236.00	1,000	118.2813	\$(27,914,375)	\$(28,073,293)	\$158,918
US 10Yr Ultra Future	Mar 2023	-148.00	1,000	118.2813	(17,505,625)	(17,619,247)	113,622
US Long Bond Future	Mar 2023	-219.00	1,000	125.3438	(27,450,281)	(27,572,377)	122,096
US Long Bond Future	Mar 2023	-99.00	1,000	125.3438	(12,409,031)	(12,430,869)	21,838
US 10Yr Note Future	Mar 2023	369.00	1,000	112.2969	41,437,547	41,659,549	(222,002)
US 5Yr Note Future	Mar 2023	3.00	1,000	107.9297	323,789	323,836	(47)
US 5Yr Note Future	Mar 2023	624.00	1,000	107.9297	67,348,125	67,411,372	(63,247)
US 2Yr Note Future	Mar 2023	45.00	2,000	102.5391	9,228,516	9,222,469	6,047
US 2Yr Note Future	Mar 2023	69.00	2,000	102.5391	14,150,391	14,126,840	23,551
US Ultra Bond	Mar 2023	43.00	1,000	134.3125	5,775,438	5,843,143	(67,705)
US Ultra Bond	Mar 2023	67.00	1,000	134.3125	8,998,938	9,020,992	(22,054)
Total					\$ 61,983,432	\$ 61,912,415	\$ 71,017

Due to rounding, totals and detail may not equal.

Level 3 – Significant inputs that are not observable and cannot be corroborated by observable market data (assumptions, cash flows or earnings multiples).

In instances where inputs used to measure fair value fall into different levels in the fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant to the valuation. The assessment of the significance of particular inputs to their fair value measurements requires judgment and considers factors specific to each asset.

In 2022 and 2021, there were no changes in valuation techniques that had a significant impact on the result.

Short-Term Securities

Holdings in short-term securities at Dec. 31, 2022 and 2021 consist of a Government Short-Term Investment Fund (STIF) which invests principally or entirely in securities or other obligations issued by or guaranteed by the U.S. government or its agencies and repurchase agreements collateralized by securities or other obligations issued by or guaranteed by the U.S. government. TCDRS classifies the STIF at level 2 based on the availability of a daily value, traded in an inactive market.

Equity, Debt and Other Securities

Equity and debt securities classified in level 1 are valued using prices quoted in active markets. Investments classified in level 2 are derived using

either a bid evaluation or a matrix pricing technique. Bid evaluations may include market quotations, yields, maturities, call features and ratings. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices. Index-linked securities are valued by using multiples of the external market price and the index ratio. Level 3 debt securities at Dec. 31, 2022 and 2021 are impaired assets and are valued using unobservable inputs in inactive markets, such as proprietary information or single source pricing.

Commingled funds are valued daily or monthly through an exchange or provided by the investment manager. Funds where pricing is obtained daily are considered to be in an active market and are listed in level 1, and monthly priced funds are listed in level 2.

Investments Measured at the Net Asset Value (NAV)

For assets that are measured at the NAV per share (or its equivalent), the non-lagged year-end valuation provided by the fund manager is used. All partnerships provide audited financial statements with unmodified opinions, along with unaudited quarterly reports. In addition, TCDRS confirms additional information regarding the underlying holdings and TCDRS' ownership percentage of the total limited partnership.

Commingled Funds

The commingled funds with fair values reported at NAV per share (or its equivalent), such as member

units or an ownership interest in partners' capital to which a proportionate share of net assets is attributed, are reported in Tables 8 and 9 disclosures on pages 40–43, along with their redemption restrictions.

Hedge Funds & Strategic Credit Funds

Most hedge funds and strategic credit funds are organized as limited partnerships under the laws of Delaware and use partnership accounting methodologies. These partnerships may invest their assets directly or through a master fund and may also use a wider range of investment techniques such as leverage, short selling and derivatives to achieve their objectives. The fair value of these investments has been determined using the NAV per share or its equivalent. Due to the inherent uncertainty of valuations of investments that are determined to be illiquid and/or do not have readily ascertainable fair values, the estimates of fair value may differ from the values ultimately realized by the partnership, and those differences can be material. The amount of notice the investor is required to give to the general partner in order to redeem ranges from 45 to 180 days. For hedge funds, investors are generally able to sell their interest in the partnerships at regular intervals ranging from monthly to every two years. Strategic credit funds can be organized using a traditional hedge fund structure, which provides investors regular intervals to sell their interest in the partnership ranging from monthly to annually, or organized using a shorter-duration, private-equity structure which allows for a two-year investment period, one-year harvest period, and an optional one- to two-year extension. Certain funds may allow for the creation of "special investments," which are investments the investment manager believes lack a readily ascertainable fair value, are illiquid, or should be held until the resolution of a special event or circumstance.

TCDRS targets 50% of its hedge fund allocation to equity long/short funds in which the equity securities maintain some level of market exposure (either net long or net short); however, the level of exposure may vary over time. TCDRS targets 5% of its hedge fund allocation to a market neutral strategy designed to maintain no net exposure to the overall direction of the equity market. Event-driven funds, which are targeted at 20% of TCDRS' hedge fund allocation, focus on identifying and analyzing securities that can benefit from the occurrence of an extraordinary corporate transaction or event such as mergers, acquisitions, buyouts, stock splits and bankruptcies. Credit/distressed debt funds can come in the form of bonds, mutual funds or the distressed firm itself.

This strategy has a low correlation with factors that affect the stock markets. While TCDRS has a target allocation of zero percent to the credit/distressed strategy, TCDRS may allocate a maximum of 20% to this strategy. The global macro strategy structures its holdings, such as long and short positions, in order to take advantage of shifts in macroeconomic trends; TCDRS targets 10% of hedge funds to this strategy. The remaining 15% uses a multi-strategy approach, which represents a mix of the other hedge fund strategies.

Private Equity

Private equity is risk capital provided outside of the public markets. Investments are illiquid and traded only on acquisition or exit. The term private equity is very broad and includes many types of investments. TCDRS targets 50% of its private equity allocation to buyout funds which include investments in acquisitions, growth equity, recovery investments, and special situations (a class which represents a diversified strategy across many sub-classes). Buyouts use leverage (debt), aggressive restructuring and the purchase of large controlling stakes in the portfolio companies. Venture capital includes funds that invest in companies in a range of stages of development from start-up/seed-stage, early stage, and later/expansion stage. TCDRS targets 25% of its private equity allocation to venture capital funds. TCDRS targets 5% of its private equity allocation to real assets. Funds that invest in real assets have a return linked to inflation, such as energy or other commodity-based investments. The remaining allocation to private equity targets non-U.S. investments. These may be buyout, venture capital or real assets.

The fair value of these investments has been determined using the NAV per share or its equivalent. The fund managers determine fair value of these funds by reference to observable valuation measures for comparable companies or transactions, adjusted for differences between the investment and the referenced comparable, and in some instances by reference to option pricing models or other similar methods. Inputs may include, but are not limited to, significant developments such as meaningful third-party transactions, material progress or slippage in the development of the investee company's business, a change in the cash or debt on a company's balance sheet, dividend accretion on certain types of securities, valuation of comparable publicly traded companies, significant changes in the overall market environment and discounts for lack of marketability.

NOTES TO THE FINANCIAL STATEMENTS

TABLE 8: INVESTMENTS AND DERIVATIVE INSTRUMENTS MEASURED AT FAIR VALUE

Investment Description	Investment Portfolio	Fair Value Measurements Using			
		Fair Value 12/31/2022	Quoted Prices in Active Markets for Identical Assets Level 1	Significant Other Observable Inputs Level 2	Significant Unobservable Inputs Level 3
Short-Term Securities					
Collective US Gov. STIF	Investment-Grade Bonds	\$ 34,637,425	\$ —	\$ 34,637,425	\$ —
	Master Limited Partnerships	4,814,401	—	4,814,401	—
	Credit	2,719,227	—	2,719,227	—
	REITs	3,357,904	—	3,357,904	—
	Cash and Cash Equivalents	990,423,570	—	990,423,570	—
Commercial Paper	Investment-Grade Bonds	—	—	—	—
Total Short-Term Securities		1,035,952,527	—	1,035,952,527	—
Equity Securities					
Corporate Stock - Preferred	Investment-Grade Bonds	8,729,997	—	8,729,997	—
	Credit	1,143,322	—	1,143,322	—
Corporate Stock - Common	Master Limited Partnerships	378,363,508	378,363,508	—	—
	Credit	65,063,544	65,063,544	—	—
	REITs	550,363,286	550,363,286	—	—
Domestic Equity/Commingled	US Equities	5,130,427,791	5,130,427,791	—	—
Internat'l Equity/Commingled Funds	Credit	6,540,648	6,540,648	—	—
	REITs	208,511,230	208,511,230	—	—
	International Equities	3,655,063,913	3,655,063,913	—	—
Total Equity Securities		10,004,207,238	9,994,333,920	9,873,318	—
Debt Securities					
Corp. Debt Instruments	Investment-Grade Bonds	415,099,318	—	415,099,318	—
	Credit	120,804,724	—	120,711,211	93,513
Government Non-US	Investment-Grade Bonds	641,552	—	641,552	—
Municipals	Investment-Grade Bonds	12,088,342	—	12,088,342	—
US Government Securities	Investment-Grade Bonds	470,794,900	—	470,794,900	—
Bond Futures/Swaps	Investment-Grade Bonds	71,014	71,014	—	—
Total Debt Securities		1,019,499,849	71,014	1,019,335,322	93,513
Other Investments					
Invested Securities-Lending Collateral		296,835,432	—	296,835,432	—
		296,835,432	—	296,835,432	—
Leveled Assets at Fair Value		\$ 12,356,495,047	\$ 9,994,404,934	\$ 2,361,996,600	\$ 93,513
Investments Measured at the Net Asset Value (NAV)					
Internat'l Equity/Commingled Funds	Emerging	286,777,202			
	Global	1,276,083,629			
Private Real Estate Partnerships		2,185,772,977			
Private Equity Partnerships		11,553,981,365			
Hedge Funds		2,568,415,590			
Strategic Credit		4,401,966,102			
Distressed Debt		1,627,628,320			
Direct Lending		5,860,119,225			
Total Investments Measured at the NAV		29,760,744,410			
Investment-related Cash, Receivables and Payables Not Included Above		20,032,445			
Total Investments and Securities-Lending Collateral Reinvested		\$ 42,137,271,902			

Due to rounding, totals and detail may not equal.

NOTES TO THE FINANCIAL STATEMENTS

TABLE 8: LIQUIDITY INFORMATION FOR INVESTMENTS MEASURED AT THE NET ASSET VALUE (NAV)

		Fair Value 12/31/2022	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Internat'l Equity/Commingle Funds	Emerging	\$ 286,777,202		Monthly, Quarterly	15-60 days
	Global	1,276,083,629		Monthly	45 days
Private Real Estate Partnerships		2,185,772,977	2,230,944,091	Not eligible	
Private Equity Partnerships	Buyout	6,922,893,931	3,593,423,113	Not eligible	
	Venture Capital	3,923,458,447	1,764,542,287	Not eligible	
	Real Assets	707,628,987	274,314,028	Not eligible	
Hedge Funds	Equity Long/Short	1,116,890,450		Monthly, Quarterly, Rolling 1-yr	45-91 days
	Event Driven	423,258,167		Monthly, Quarterly	60-65 days
	Credit/Distressed	—			
	Global Macro	373,772,107		Quarterly	45 days
	Multi-Strategies	428,976,962		Monthly, Quarterly, Semi-annual	45-180 days
	Terminating Funds/In Liquidation	225,517,904			
Strategic Credit		4,060,431,204	21,450,000	Monthly, Quarterly, Annually	30-90 days
Strategic Credit - not eligible for redemption		341,534,898	266,474,143	Not eligible	
Distressed Debt		1,627,628,320	832,586,399	Not eligible	
Direct Lending		5,860,119,225	3,487,626,729	Not eligible	
Total Investments Measured at the NAV		\$ 29,760,744,410	\$ 12,471,360,790		

Due to rounding, totals and detail may not equal.

NOTES TO THE FINANCIAL STATEMENTS

TABLE 9: INVESTMENTS AND DERIVATIVE INSTRUMENTS MEASURED AT FAIR VALUE

Investment Description	Investment Portfolio	Fair Value Measurements Using			
		Fair Value 12/31/2021	Quoted Prices in Active Markets for Identical Assets Level 1	Significant Other Observable Inputs Level 2	Significant Unobservable Inputs Level 3
Short-Term Securities					
Collective US Gov. STIF	Investment-Grade Bonds	\$ 52,208,263	\$ —	\$ 52,208,263	\$ —
	Master Limited Partnerships	2,796,126	—	2,796,126	—
	Credit	1,013,570	—	1,013,570	—
	REITs	20,893,869	—	20,893,869	—
	Cash and Cash Equivalents	1,061,408,040	—	1,061,408,040	—
Commercial Paper	Investment-Grade Bonds	260,000	—	260,000	—
Total Short-Term Securities		1,138,579,869	—	1,138,579,869	—
Equity Securities					
Corporate Stock - Preferred	Investment-Grade Bonds	10,502,792	—	10,502,792	—
	Credit	1,128,614	2,028	1,126,586	—
Corporate Stock - Common	Master Limited Partnerships	1,141,037,066	1,141,037,066	—	—
	Credit	89,743,994	89,603,570	77,374	63,050
	REITs	1,044,240,744	1,044,240,744	—	—
Domestic Equity/Commingled	US Equities	6,369,760,673	6,369,760,673	—	—
Internat'l Equity/Commingled Funds	Credit	7,198,959	7,198,959	—	—
	REITs	382,006,023	382,006,023	—	—
	International Equities	4,368,711,340	3,828,900,108	539,811,232	—
Total Equity Securities		13,414,330,205	12,862,749,171	551,517,984	63,050
Debt Securities					
Corp. Debt Instruments	Investment-Grade Bonds	466,751,065	—	466,751,065	—
	Credit	134,761,092	45,545	132,435,287	2,280,260
Government Non-US	Investment-Grade Bonds	3,757,988	—	3,757,988	—
Municipals	Investment-Grade Bonds	13,615,764	—	13,615,764	—
US Government Securities	Investment-Grade Bonds	530,850,256	—	530,850,256	—
Bond Futures/Swaps	Investment-Grade Bonds	(225,631)	(225,631)	—	—
Total Debt Securities		1,149,510,534	(180,086)	1,147,410,360	2,280,260
Other Investments					
Invested Securities-Lending Collateral		447,175,132	—	447,175,132	—
		447,175,132	—	447,175,132	—
Leveled Assets at Fair Value		\$ 16,149,595,739	\$ 12,862,569,085	\$ 3,284,683,344	\$ 2,343,310
Investments Measured at the Net Asset Value (NAV)					
Internat'l Equity/Commingled Funds	Emerging	335,716,898			
	Global	1,553,628,407			
Private Real Estate Partnerships		1,958,964,452			
Private Equity Partnerships		11,415,342,893			
Hedge Funds		2,908,697,362			
Strategic Credit		4,732,925,277			
Distressed Debt		1,351,268,813			
Direct Lending		4,827,848,279			
Total Investments Measured at the NAV		29,084,392,381			
Investment-related Cash, Receivables and Payables Not Included Above		(2,701,751)			
Total Investments and Securities-Lending Collateral Reinvested		\$ 45,231,286,369			

Due to rounding, totals and detail may not equal.

NOTES TO THE FINANCIAL STATEMENTS

TABLE 9: LIQUIDITY INFORMATION FOR INVESTMENTS MEASURED AT THE NET ASSET VALUE (NAV)

		Fair Value 12/31/2021	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Internat'l Equity/Commingle Funds	Emerging	\$ 335,716,898		Monthly, Quarterly	15-60 days
	Global	1,553,628,407		Monthly	45 days
Private Real Estate Partnerships		1,958,964,452	2,087,145,144	Not eligible	
Private Equity Partnerships	Buyout	6,383,898,878	3,768,345,866	Not eligible	
	Venture Capital	4,448,883,902	1,371,185,057	Not eligible	
	Real Assets	582,560,113	423,644,427	Not eligible	
Hedge Funds	Equity Long/Short	1,334,172,740		Monthly, Quarterly, Rolling 1-yr	30-91 days
	Event Driven	553,106,623		Monthly, Quarterly	60-65 days
	Credit/Distressed	259,926,582		Quarterly	60-90 days
	Global Macro	319,760,015		Quarterly	45 days
	Multi-Strategies	431,021,060		Monthly, Quarterly, Semi-annual	45-180 days
	Terminating Funds/In Liquidation	10,710,341			
Strategic Credit		4,084,354,157	177,619,955	Monthly, Quarterly, Annually	60-90 days
Strategic Credit - not eligible for redemption		648,571,120	224,595,180	Not eligible	
Distressed Debt		1,351,268,813	1,176,520,311	Not eligible	
Direct Lending		4,827,848,279	2,928,969,231	Not eligible	
Total Investments Measured at the NAV		\$ 29,084,392,381	\$ 12,158,025,172		

Due to rounding, totals and detail may not equal.

NOTES TO THE FINANCIAL STATEMENTS

Private equity investments are illiquid and typically have expected holding periods of 10 to 12 years. These investments are not eligible for redemption. Distributions from each fund are received as the underlying investments in the funds are liquidated.

Distressed Debt

Distressed debt includes investments in the debt instruments of companies which may be publicly traded or privately held that are financially distressed and are either in bankruptcy or likely candidates for bankruptcy. Typical holdings are senior and subordinated debt instruments and bank loans. Gains can be realized by holding the debt until there are some payments by the company at maturity or through distributions of cash, restructured debt or equity resulting from the bankruptcy process. Distressed debt investments are not eligible for redemption. Distributions are received as the underlying investments in the funds are liquidated. Investments are typically made in years one through five with capital typically returned in years three through ten.

Direct Lending

Direct lending partnerships invest primarily in privately originated debt and preferred equity instruments to small and mid-sized companies and privately originated senior and mezzanine debt for

real estate. Direct lending investments may also include other types of yield-oriented non-correlated funds including, but not limited to, royalty streams and aviation leases. Direct lending investments are not eligible for redemption. Distributions are received as the underlying investments in the funds are liquidated, which may take up to three to five years.

Private Real Estate

Private real estate may behave as highly debt-like securities or as highly equity-like securities, depending on the characteristics of the property. Core properties tend to be held for a long time to take full advantage of the lease and rental cash flows that they provide. Value-added and opportunistic real estate achieve a substantial portion of their return from appreciation in value. Value-added real estate can involve repositioning, renovation, and redevelopment of existing properties while opportunistic real estate includes all of these activities as well as the purchase of raw land and ground-up development. These investments are not eligible for redemption. Distributions from each fund will be received as the underlying investments in the funds are liquidated. As a private, non-exchange-traded asset, private real estate funds are illiquid. The life of a private real estate fund is typically 10 to 12 years.

REQUIRED SUPPLEMENTARY INFORMATION AND NOTES

TABLE 10: MONEY-WEIGHTED RATES OF RETURN (UNAUDITED)

The money-weighted rates of return are presented to provide information regarding investment performance, net of investment expenses, adjusted for the changing amounts actually invested.

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Annual money-weighted rate of return, net of investment expenses	-5.82%	22.02%	10.42%	16.58%	-1.85%	14.72%	7.48%	-0.66%	6.84%	16.39%

See accompanying independent auditor's report.

Table 10 presents the money-weighted rate of return which provides information regarding TCDRS' investment performance, net of investment expenses, adjusted for the changing amounts actually invested. The money weighted return and time-weighted performance return may differ due to timing and magnitude of cash flows.

OTHER SUPPLEMENTARY INFORMATION

CHANGES IN FIDUCIARY NET POSITION BY FUND AND INTERFUND TRANSFERS

Pension Trust Fund
Twelve Month Period Ending December 31, 2022

	Employees Saving Fund	Subdivision Accumulation Fund
ADDITIONS		
Employee Deposits and Employer Contributions	\$ 588,035,367	\$ 1,200,119,263
Investment Income		
Net Depreciation in Fair Value of Investments	—	—
Interest and Dividends	—	—
Total Investment Activity Loss	—	—
Less Investment Activity Expenses	—	—
Net Loss from Investment Activities	—	—
Net Income from Securities-Lending Activities	—	—
Total Net Investment Loss	—	—
Building Operations and Miscellaneous Income	—	—
Total Additions	588,035,367	1,200,119,263
DEDUCTIONS		
Benefits Paid	—	1,961,032,317
Withdrawals	116,292,898	—
Terminating Employer SAF Refunds	—	—
Interest Allocation to Group Term Life Fund	—	—
Administrative Operations Expenses	—	—
Building Operations Expenses	—	—
Total Deductions	116,292,898	1,961,032,317
TRANSFERS OF FUNDS		
Retirement Transfers	(600,714,984)	599,270,106
Income Allocation	552,048,841	234,773,751
Expense Fund Transfer	—	—
Escheated Accounts, Net	(256,775)	—
Allocation from General Reserves	—	—
Net Transfers	(48,922,918)	834,043,857
Net Increase (Decrease) in Fiduciary Net Position	422,819,551	73,130,803
NET POSITION RESTRICTED FOR PENSION BENEFITS		
Beginning of Period	8,310,440,801	30,993,529,524
End of Period	\$ 8,733,260,352	\$ 31,066,660,327

See accompanying independent auditor's report.

OTHER SUPPLEMENTARY INFORMATION

CHANGES IN FIDUCIARY NET POSITION BY FUND AND INTERFUND TRANSFERS, continued

Pension Trust Fund
Twelve Month Period Ending December 31, 2022

Closed Subdivision Annuity Reserve Fund	Endowment Fund	Income Fund	Expense Fund	Total
\$ —	\$ —	\$ —	\$ —	\$ 1,788,154,630
—	—	(2,737,305,388)	—	(2,737,305,388)
—	—	179,562,186	—	179,562,186
—	—	(2,557,743,202)	—	(2,557,743,202)
—	—	49,164,361	—	49,164,361
—	—	(2,606,907,563)	—	(2,606,907,563)
—	—	1,935,381	—	1,935,381
—	—	(2,604,972,182)	—	(2,604,972,182)
—	—	—	2,203,583	2,203,583
—	—	(2,604,972,182)	2,203,583	(814,613,969)
2,010,399	10,714	—	—	1,963,053,430
—	—	—	—	116,292,898
—	—	—	—	—
—	—	2,999,561	—	2,999,561
—	—	—	24,767,172	24,767,172
—	—	—	2,030,784	2,030,784
2,010,399	10,714	2,999,561	26,797,956	2,109,143,845
1,444,878	—	—	—	—
970,268	—	(787,792,860)	—	—
—	(25,000,000)	—	25,000,000	—
—	256,775	—	—	—
—	(3,395,764,603)	3,395,764,603	—	—
2,415,146	(3,420,507,828)	2,607,971,743	25,000,000	—
404,747	(3,420,518,542)	—	405,627	(2,923,757,814)
14,175,737	5,560,953,933	—	13,175,536	44,892,275,531
\$ 14,580,484	\$ 2,140,435,391	\$ —	\$ 13,581,163	\$ 41,968,517,717

OTHER SUPPLEMENTARY INFORMATION

CHANGES IN ENDOWMENT FUND				
Pension Trust Fund				
Twelve Month Period Ending December 31, 2022				
	General Reserves Account	Perpetual Endowment Account	Reserve for Expense Fund	Total
ADDITIONS				
Escheated Accounts	—	\$ 734,365	—	\$ 734,365
Total Additions	—	734,365	—	734,365
DEDUCTIONS				
Transfer to Income Fund	3,395,764,603	—	—	3,395,764,603
Transfer to Expense Fund	—	—	25,000,000	25,000,000
Reinstatements of Escheated Accounts	—	477,590	—	477,590
Uncollectible Benefits	10,714	—	—	10,714
Total Deductions	3,395,775,317	477,590	25,000,000	3,421,252,907
TRANSFERS				
Next Year Expense Fund Transfer	(29,000,000)	—	29,000,000	—
Total Transfers	(29,000,000)	—	29,000,000	—
Net Change in Fund	(3,424,775,317)	256,775	4,000,000	(3,420,518,542)
Beginning of Year	5,530,439,645	5,514,288	25,000,000	5,560,953,933
Balance — December 31, 2022	\$ 2,105,664,328	\$ 5,771,063	\$ 29,000,000	\$ 2,140,435,391

See accompanying independent auditor's report.

OTHER SUPPLEMENTARY INFORMATION

CHANGES IN INCOME FUND

Pension Trust Fund
Twelve Month Period Ending December 31, 2022

INVESTMENT RESULTS

Net Depreciation in Fair Value of Investments	\$ (2,737,305,388)
Interest and Dividends	179,562,186
Net Income from Securities-Lending Activities	1,935,381
Investment Activity Expenses	(49,164,361)
Net Investment Results	(2,604,972,182)

STATUTORY ALLOCATIONS

Allocation of Current Year Interest:

Employees Saving Fund	(552,048,841)
Closed Subdivision Annuity Reserve Fund	(970,268)
Group Term Life Fund	(2,999,561)

Total Statutory Allocations	(556,018,670)
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BOARD OF TRUSTEES' ALLOCATIONS

Subdivision Accumulation Fund	(234,773,751)
Transfers from General Reserves	3,395,764,603
Total Board of Trustees' Allocations	3,160,990,852

Net Change in Fund	—
Balance—January 1, 2022	—
Balance—December 31, 2022	\$ —

See accompanying independent auditor's report.

OTHER SUPPLEMENTARY INFORMATION

ADMINISTRATIVE REVENUES AND EXPENSES

Year Ended Dec. 31, 2022

	Administrative Operations	Building Operations	Combined Operations
Administrative Revenues:			
Rental Income	\$ —	\$ 2,193,474	\$ 2,193,474
Other Income	—	10,109	\$ 10,109
Total Administrative Revenues	—	2,203,583	2,203,583
Administrative Expenses:			
Payroll and Temporary Employees	10,929,090	—	10,929,090
Payroll Taxes	742,188	—	742,188
Pension Contributions	663,612	—	663,612
Employee Insurance & Benefits	1,569,669	—	1,569,669
Professional Fees/Outsourced Services	2,489,131	—	2,489,131
Software Licensing	2,134,264	—	2,134,264
Equipment Service	207,948	—	207,948
Building Operations	—	1,444,379	1,444,379
Office Supplies/Postage	135,660	—	135,660
Telecommunications/Internet Services	314,752	—	314,752
Printing and Communications	486,618	—	486,618
Records Management and Reference Materials	41,277	—	41,277
Memberships	16,785	—	16,785
Education and Training	158,250	—	158,250
Field Services for Members and Employers	215,446	—	215,446
Organization and Meetings	163,504	—	163,504
General Insurance	260,474	—	260,474
Strategic Projects	506,926	—	506,926
Depreciation and Amortization	3,731,578	586,405	4,317,983
Total Administrative Expenses	\$ 24,767,172	\$ 2,030,784	\$ 26,797,956

See accompanying independent auditor's report.

OTHER SUPPLEMENTARY INFORMATION

INVESTMENT EXPENSES

Year Ended Dec. 31, 2022

INVESTMENT-ACTIVITY EXPENSES

Department Operating Expenses

Salaries	\$ 4,909,318
Payroll Taxes	258,219
Pension Contributions	258,072
Employee Insurance and Benefits	374,329
Professional Fees/Outsourced Services	901,699
Investment Data Systems	191,798
Equipment Service and Repairs	1,748
Office Supplies/Postage	12,900
Telecommunications	14,345
Reference Materials and Memberships	20,062
Education and Travel	142,052
Depreciation	—

Total Department Operating Expenses	7,084,542
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Nondepartment Managers' Fees:

Equities/Hedge Funds	13,375,394
REITs	4,964,009
Master Limited Partnerships	4,911,005
Private Real Estate Partnerships	9,600,287
Investment-Grade Bonds	1,792,755
Credit	4,064,247
Private Equity	(154)

Total Nondepartment Managers' Fees	38,707,543
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Total Department Operating Expenses and Managers' Fees	45,792,085
--	------------

Custodial Fees — Mellon Trust	622,276
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Investment Consultant Fees — Cliffwater LLC	2,750,000
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Total Investment-Activity Expenses	\$ 49,164,361
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SECURITIES-LENDING EXPENSES

Borrower Rebates and Agent Fees	\$ 5,757,993
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See accompanying independent auditor's report.

OTHER SUPPLEMENTARY INFORMATION

PROFESSIONAL AND CONSULTING SERVICES

Year Ended Dec. 31, 2022

Professional/Consultant	Nature of Service	Administrative Operations	Investment Operations ¹
Evonsys, LLC	Technology consulting	\$ 1,718,530	—
Oshyn, Inc.	Technology consulting	932,400	—
Milliman, Inc.	Actuarial services	513,279	—
Vinson & Elkins, LLP	Legal services	—	488,244
Gartner, Inc.	Technology consulting & research	385,026	—
STG Design	Architectural consulting	286,878	—
Phidiex, LLC	Technology consulting	245,066	—
KPMG, LLP	Audit services	238,650	—
Apriori, LLC	Technology consulting	208,686	—
DLA Piper US, LLP	Legal services	—	189,277
Binary Defense Systems	Technology consulting	167,000	—
JP Morgan Chase	Banking services	94,891	—
Pegasystems Inc.	Technology consulting	93,000	—
McElvaney Public Affairs, LLC	Consulting	86,000	—
Prophet Brand Strategy	Technology consulting	83,600	—
Jackson Walker, LLP	Legal services	35,149	37,073
TrustedSec, LLC	Technology consulting	62,000	—
Bradshaw & Bickerton, PLLC	Legal services	—	61,523
McLagan Partners, Inc.	Data & analytics	—	55,000
Broaddus & Associates	Project management	43,335	—
Hirschler Fleischer, A Professional Corp.	Legal services	—	41,407
Imagine You Media	Communications consulting	39,700	—
Norton Rose Fulbright	Legal services	—	35,673
		\$ 5,233,190	\$ 908,196

¹ Pursuant to GFOA guidelines, investment advisor expenses are shown only on the investment expenses schedule on the preceding page. The members of the TCDRS Board of Trustees serve without compensation and are reimbursed for actual out-of-pocket travel expenses incurred.

See accompanying independent auditor's report.

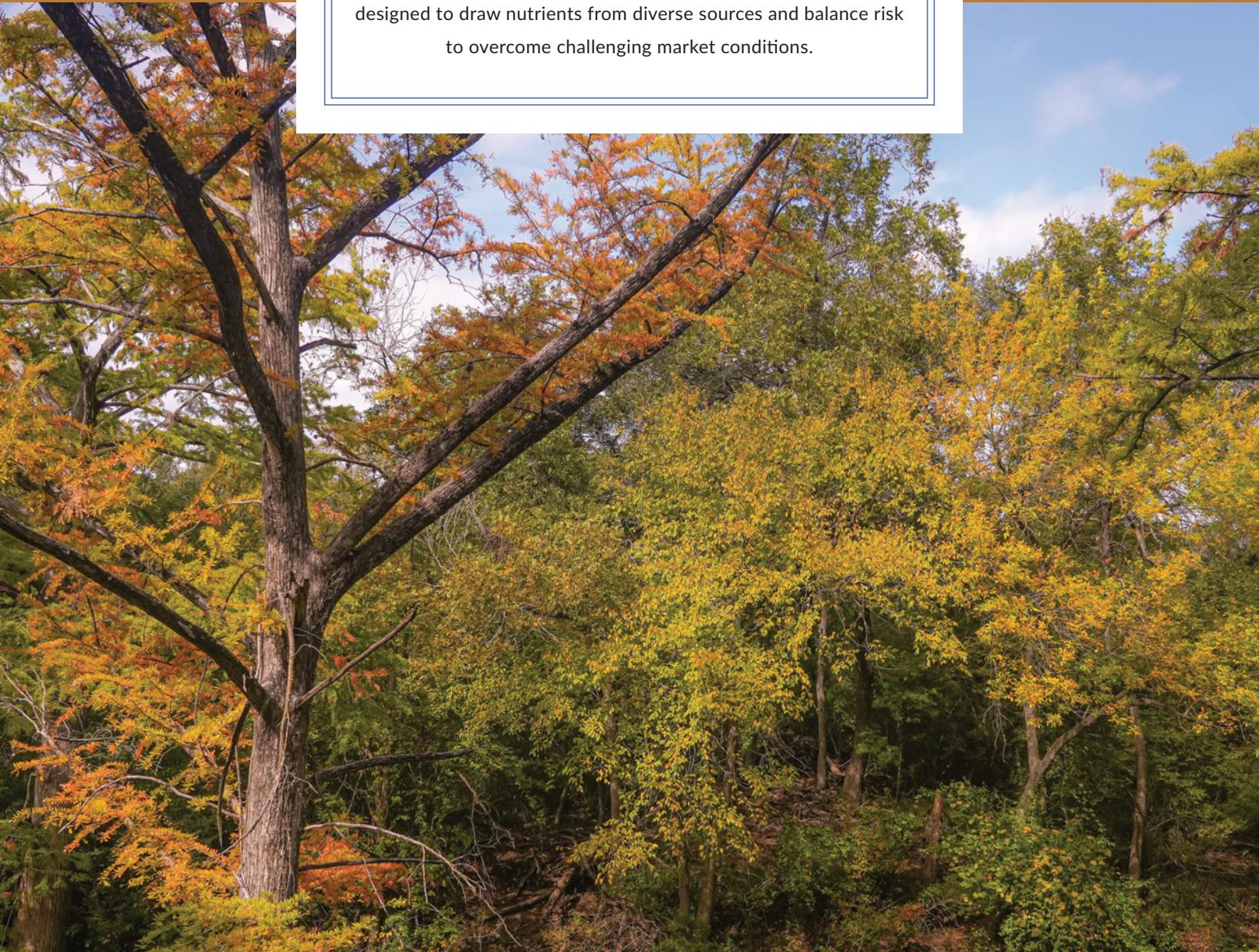
THREE

INVESTMENT

OLD BALDY, MCKINNEY FALLS STATE PARK

Stable Growth

Bald cypress trees, like McKinney Falls State Park's 300-year-old "Old Baldy", can thrive despite flooding and drought thanks to their extensive root systems. These slowly-but-steadily growing trees are a lot like TCDRS' investment portfolio, which has been designed to draw nutrients from diverse sources and balance risk to overcome challenging market conditions.



BALD CYPRESS (TAXODIUM DISTICHUM)



May 2023

Board of Trustees
Texas County and District Retirement System
901 MoPac Expressway South
Barton Oaks Plaza IV, Ste. 500
Austin, Texas 78746

To the members of the Board:

It is our pleasure to be the investment consultant for the Texas County and District Retirement System (hereinafter referred to as "TCDRS") and to report on your investment performance and activities for the year ending 2022. Retained in 2005, Cliffwater LLC provides investment policy development and review, asset allocation analysis, asset class structure analysis, investment manager searches and investment performance monitoring and evaluation to the Board and its staff. In calculating investment performance, TCDRS uses the industry standard time-weighted rate of return methodology (net of fees) based upon market values.

2022 was a year marked by stimulus unwind following the easing of the global pandemic. The Federal Reserve raised interest rates seven times during the year and began quantitative tightening to combat persistently high inflation (December Trailing 12 month CPI-U of 6.42%). As a result, stocks and bonds suffered losses at the same time. The US Total Stock Market Index returned -19.5% and developed international stocks (MSCI World Ex US net Index) returned -14.3%. The 10 Year US Treasury yield started the year at 1.51% and ended the year at 3.87%. Most other risk bearing asset classes also suffered losses throughout the year with longer duration assets suffering the most. Additionally, floating rate debt (that benefited from the rise in cash rates) significantly outperformed fixed rate debt. Correspondingly, high yield bonds returned -10.8% (FTSE High Yield Cash-Pay Index) for the year while bank loans were only down -0.8% (Morningstar LSTA US Leveraged Loan Index). REITs suffered large losses at -24.7% (FTSE NAREIT All Equity REIT Index) while higher energy prices resulted in MLPs returning 30.9% (Alerian MLP Index). Against this backdrop, private equity funds suffered modest losses, but venture capital portfolios where there were publicly traded companies, suffered most. In contrast, direct lending benefited from the rise in short-term rates and was a positive contributor for the year.

TCDRS' diversified investment portfolio decreased in total assets from \$44.8 billion to \$41.9 billion. The one-year total fund return was -5.8%, after fees, which was above the Board's Total Fund Policy Benchmark return of -8.8%. Over 10 years, the fund's 8.3% return exceeds the Board's Total Fund Policy Benchmark return of 6.8%. At the asset class level, TCDRS' passively managed US equities portfolio returned -19.5% for the year. TCDRS' balance of active and passive developed international managers resulted in an -13.9% return, slightly above the benchmark return while the active global equity portfolio returned -17.9%, which was also slightly above the benchmark return. Emerging market equities had an -18.5% return compared to the benchmark of -20.1%. The active REIT portfolio's return of -26.1% was below the benchmark's -24.7% return as real estate suffered from rising borrowing costs. In contrast, the MLP portfolio returned 26.5% compared to the benchmark's 30.9% return as energy costs rose with the economy's re-opening. The active core fixed income portfolio returned -12.5% relative to -13.0% for the benchmark as bonds posted their worst year since the Great Depression. Hedge funds did provide a buffer with the portfolio returning -1.3% compared to its benchmark return of -5.3%. The strategic credit asset class return of -0.2% exceeded the benchmark's -10.8% return while distressed debt also performed well at 5.6%. The private equity program returned -4.6%, outperforming its benchmark return of -7.8%. Direct lending returned 6.4% and the real estate program returned 5.8% for the year. Having a lower bond exposure during a period of rising interest rates and the outperformance of several asset classes, most notably private equity, direct lending and strategic credit, led to the fund exceeding the benchmark.

In terms of asset allocation, the TCDRS Board did not make any asset allocation policy changes during the year. Rather, the private asset classes neared or exceeded their target weights as the public markets suffered large declines. The fund added several strategic credit managers to increase diversification and the fund committed to new private equity, private real estate, distressed debt and direct lending partnerships in accordance with its annual commitment budgets.

Respectfully submitted,

A handwritten signature in blue ink that reads "Kathleen K. Barchick".

Kathleen K. Barchick, Sr. Managing Director

A: THE TCDRS ACT AND INVESTMENT POLICY

Investment decisions of the TCDRS Board of Trustees (board) are subject to the Texas Constitution, the TCDRS Act and the applicable statutory provisions of the Texas Trust Code that provide for a “prudent person” standard of care.

Additionally, the board has adopted, and reviews at least annually, an investment policy that defines investment authority and emphasizes the importance of a long-term investment philosophy with minimization of risk.

B: INVESTMENT PHILOSOPHY AND STRATEGY

The board has established a long-term target investment return of 7.5% and has diversified the TCDRS portfolio to include:

- Equities
 - U.S., international developed, emerging markets, and global equities
- Hedge funds

- Credit investments
 - Strategic credit, distressed debt and direct lending
- Private equity
- Real assets
 - Real estate investment trusts (REITs), commodities, private real estate partnerships, Treasury Inflation-Protected Securities (TIPS) and Master Limited Partnerships (MLPs)
- Investment-grade bonds
- Cash and cash equivalents

(For more information on these types of securities, please see the Glossary on page 90.) The board uses a long-term, strategic approach to asset allocation based upon capital market assumptions that are reviewed and adopted annually. The assumptions in effect as of March 2022 are shown in Table 1 and include the long-term expected return and risk (standard deviation) for each asset class.

C: ASSET ALLOCATION

The board has established asset allocation targets for each asset class within the TCDRS portfolio. Table 2 shows the target allocations in effect during 2022 for each asset class.

TABLE 1: CAPITAL MARKET ASSUMPTIONS

As of Jan. 1, 2022

Asset Category (Portfolio)	Expected Return	Standard Deviation
Equities		
U.S. Equities	6.40%	17.00%
International Equities – Developed	6.40	18.00
International Equities – Emerging	6.90	26.00
Global Equities	6.70	17.70
Hedge Funds	4.15	4.40
Credit Investments		
Strategic Credit	4.37	5.86
Distressed Debt	7.10	11.00
Direct Lending	8.85	8.00
Private Equity	9.40	20.00
Real Assets		
REIT Equities	5.70	22.00
Commodities	1.50	18.00
Private Real Estate Partnerships	7.70	30.00
TIPS	1.50	7.00
Master Limited Partnerships (MLPs)	6.45	24.00
Investment-Grade Bonds	1.75	4.00
Cash and Cash Equivalents¹	1.55	2.00

¹ Money awaiting allocation to an asset category and deposited with the system's custodian.

TABLE 2: ASSET ALLOCATION TARGETS

Asset Category	Target Allocation Percentages in Effect at:	
	Jan. 1, 2022	Dec. 31, 2022
Equities		
U.S. Equities	11.5%	11.5
International Equities – Developed	5.0	5.0
International Equities – Emerging	6.0	6.0
Global Equities	2.5	2.5
Hedge Funds	6.0	6.0
Credit Investments		
Strategic Credit	9.0	9.0
Distressed Debt	4.0	4.0
Direct Lending	16.0	16.0
Private Equity	25.0	25.0
Real Assets		
REIT Equities	2.0	2.0
Private Real Estate Partnerships	6.0	6.0
Master Limited Partnerships	2.0	2.0
Investment-Grade Bonds	3.0	3.0
Cash	2.0	2.0

The target allocation for TIPS and Commodities at 12/31/22 was 0.0%.

TABLE 3: BENCHMARK PORTFOLIOS FOR PERFORMANCE MEASUREMENT

Asset Category	Benchmark Portfolio
Equities	U.S. Equity Index <i>Dow Jones U.S. Total Stock Market Index</i>
	Developed International Equity Index <i>MSCI World ex U.S. Index (net)</i>
	Emerging Market International Equity Index <i>MSCI EM (Emerging Markets) Index (net)</i>
	Global Equity Index <i>MSCI World Index (net)</i>
Hedge Funds	<i>Hedge Fund Research, Inc. (HFRI) Fund of Funds Composite Index</i>
Credit Investments	Strategic Credit Index <i>FTSE High-Yield Cash-Pay Index</i>
	Distressed Debt Index <i>Cambridge Associates Distressed Securities Index¹</i>
	Direct Lending Index <i>Morningstar LSTA US Leveraged Loan TR USD Index</i>
Private Equity	<i>Cambridge Associates Global Private Equity & Venture Capital Index²</i>
Real Assets	REIT Index <i>67% FTSE NAREIT All Equity REIT Index</i>
	<i>33% S&P Global REIT (net) Index</i>
	Commodities Index <i>Bloomberg Commodities Index</i>
	TIPS Index <i>Bloomberg U.S. 10-Year Breakeven Inflation Index</i>
	Private Real Estate Partnerships <i>Cambridge Associates Real Estate Index³</i>
	MLP Index <i>Alerian MLP Index</i>
Investment-Grade Fixed-Income	<i>Bloomberg U.S. Aggregate Bond Index</i>
Cash	<i>U.S. 3-Month Treasury Bill</i>

¹ Includes vintage years 2005–present of Quarter Pooled Horizon IRRs.

² Includes vintage years 2006–present of Quarter Pooled Horizon IRRs.

³ Includes vintage years 2007–present of Quarter Pooled Horizon IRRs.

D: ASSET CLASSES, INVESTMENT STYLES AND INVESTMENT MANAGERS

TCDRS uses both active and passive styles of investment management. The passive style seeks to match the performance of an established market index by holding the same securities as the index. An active style seeks to exceed the performance of a benchmark by allowing the manager to actively trade securities that may be different from the index.

Asset classes managed passively are U.S. equities and a portion of the developed international and emerging market equities. The remainder of the assets are actively managed.

The investment manager responsible for an externally managed portfolio holds any cash that portfolio generates in interest-bearing instruments or accounts until it is reinvested. The TCDRS Investment Officer manages cash as well as new contributions in a short-term investment fund until allocated to a portfolio.

E: INVESTMENT RESULTS

TCDRS retains a professional performance measurement analyst that regularly reports investment performance to the board for each investment manager, for the aggregate of all managers in each asset class and for the total portfolio.

Performance Reporting

Performance of each investment manager is measured against the performance of similar assets contained within a benchmark portfolio, as represented by a specific index. Comparisons indicate the value added by each manager, if any, in excess of the performance that was experienced by the specific benchmark index. When multiple investment managers are retained within a particular asset class, a benchmark portfolio is selected for measurement of the performance of the entire asset class. Table 3 identifies the benchmark portfolio associated with each asset class contained within the TCDRS investment portfolio.

A policy benchmark portfolio consisting of individual asset class benchmarks, weighted by asset class target allocation, is constructed for measurement of the performance of the entire portfolio.

Performance Results

The TCDRS portfolio in 2022 returned -5.8% net of fees. 2022 was a challenging year for most investment markets with most major asset classes decreasing in value mainly driven by the rise in interest rates to help combat the rise in inflation. TCDRS' U.S. equities (-19.5%), developed international equities (-13.9%), emerging market

equities (-18.5%), global equities (-17.9%), REITs (-26.1%), investment-grade bonds (-12.5%), and private equity (-4.6%) were all negative. Certain segments of the portfolio were close to flat or even positive in this environment: hedge funds (-1.3%), strategic credit (-0.2%), cash (+1.5%) private real estate (+5.8%), distressed debt (+5.6%), and direct lending (+6.4%).

TABLE 4: RESULTS FROM INVESTING ACTIVITIES, NET OF ALL FEES¹

Periods Ended Dec. 31, 2022

TCDRS Portfolio/Benchmark Portfolio	2022 Return	Annualized Returns				
		3-Year	5-Year	10-Year	20-Year	30-Year
Total Fund	-5.8	8.3	7.8	8.3	7.8	7.6
<i>Policy Benchmark Portfolio</i>	-8.8	6.3	6.1	6.8	6.9	6.5
Equities						
U.S. Equities	-19.5	6.7	8.6	12.0	10.0	—
<i>U.S. Equity Index Benchmark Portfolio</i>	-19.5	6.9	8.7	12.0	10.0	—
International Equities - Developed	-13.9	1.3	2.0	5.4	6.9	—
<i>Developed Intl Equity Index Benchmark Portfolio</i>	-14.3	1.3	1.8	4.6	6.5	—
International Equities - Emerging	-18.5	-1.2	-0.1	1.8	—	—
<i>Emerging Intl Equity Index Benchmark Portfolio</i>	-20.1	-2.7	-1.4	1.4	—	—
Global Equity	-17.9	6.5	8.1	12.8	—	—
<i>Global Equity Benchmark Portfolio</i>	-18.1	4.9	6.1	8.9	—	—
Hedge Funds	-1.3	5.6	5.0	5.2	—	—
<i>Hedge Fund Benchmark Portfolio</i>	-5.3	3.7	3.0	3.5	—	—
Credit Investments						
Strategic Credit	-0.2	5.3	5.8	7.3	7.9	—
<i>Strategic Credit Benchmark Portfolio</i>	-10.8	-0.3	2.0	3.6	7.0	—
Distressed Debt	5.6	11.5	9.2	10.0	—	—
<i>Distressed Debt Index Benchmark Portfolio</i>	3.7	13.1	9.6	7.5	—	—
Direct Lending	6.4	8.9	9.0	—	—	—
<i>Direct Lending Index Benchmark Portfolio</i>	-0.8	2.5	3.3	—	—	—
Private Equity	-4.6	20.8	18.7	16.9	—	—
<i>Private Equity Benchmark Portfolio</i>	-7.8	17.0	15.4	14.8	—	—
Real Assets						
REITs	-26.1	0.3	4.5	6.4	9.2	—
<i>REIT Index Benchmark Portfolio</i>	-24.7	-0.9	3.1	5.7	8.6	—
Private Real Estate Partnerships	5.8	10.2	8.9	12.1	—	—
<i>Private Real Estate Benchmark Portfolio</i>	2.7	9.4	8.8	10.3	—	—
MLPs	26.5	10.2	5.4	—	—	—
<i>MLP Index Benchmark Portfolio</i>	30.9	9.4	4.1	—	—	—
Investment-Grade Bonds	-12.5	-1.8	0.6	1.8	3.6	5.4
<i>Investment-Grade Bond Index Benchmark Portfolio</i>	-13.0	-2.7	0.0	1.1	3.2	4.7
Cash	1.5	0.7	1.3	1.0	—	—
<i>U.S. 3-month T-Bill</i>	2.2	0.8	1.3	0.8	—	—

¹ Calculations of performance were prepared using time-weighted rates of return calculations and are reported net of all fees.

Source: BNY Mellon Performance and Risk Analytics Fund Analysis, Fourth Quarter 2022

TABLE 5: LIST OF LARGEST EQUITY HOLDINGS¹

Dec. 31, 2022 (\$ Millions)

Company	Portfolio	Fair Value
Apple Inc	U.S. Equities	\$ 253.1
Microsoft Corp	U.S. Equities	233.2
Amazon.com Inc	U.S. Equities	97.1
Berkshire Hathaway Inc	U.S. Equities	72.5
Alphabet Inc Class A	U.S. Equities	68.6
Energy Transfer LP	MLP	64.8
UtdHealth Group Inc	U.S. Equities	64.7
Crescent Capital BDC Inc	Credit	63.9
Alphabet Inc Class C	U.S. Equities	61.2
Johnson & Johnson	U.S. Equities	60.2

¹ TCDRS invests in equity securities through separately managed and commingled equity vehicles. At Dec. 31, 2022, the largest equities contained in the U.S. Equities portfolio represent TCDRS' investment in a State Street U.S. Total Stock Market Index Fund which TCDRS owns a 100% undivided interest in. The remaining securities are individual shares held in the MLP and credit portfolios.

F: LISTS OF LARGEST HOLDINGS¹

Equity Holdings

The system's exposure to equity markets is achieved through participation in commingled investment pools, such as State Street Global Advisors (SSgA) U.S. equity and international equity index funds, and direct investment in separately managed REIT and MLP portfolios. At Dec. 31, 2022, TCDRS' largest equity holdings were in the U.S. equity, credit, and MLP portfolios. Table 5 displays our exposure to the 10 largest equity holdings.

Fixed-Income Holdings

Table 6 presents the top 10 fixed-income securities owned by TCDRS. The securities are contained within the investment-grade bond portfolio. At Dec. 31, 2022, the aggregate fair value of the investment-grade bond portfolio was \$914 million.

¹ A complete listing of all securities TCDRS owned at Dec. 31, 2022, is available upon written request.

G: RESULTS OF SECURITIES-LENDING ACTIVITIES

TCDRS retains The Bank of New York Mellon Corp. as securities-lending agent to engage in lending securities from its portfolios. Securities-lending transactions consist of loans of securities to broker-dealers and other entities in exchange for collateral with a simultaneous agreement to return the collateral for the same securities in the future.

TABLE 6: LIST OF LARGEST FIXED-INCOME HOLDINGS

Dec. 31, 2022 (\$ Millions)

Description	Maturity	Interest Rate	Fair Value
U S Treasury Bond	11/15/2041	2.000%	\$16.49
U S Treasury Note	07/31/2029	2.625%	14.26
U S Treasury Note	10/31/2027	0.500%	12.32
FHLMC Pool #Ra-7194	04/1/2052	3.500%	8.88
U S Treasury Note	07/15/2025	3.000%	8.85
FHLMC Pool #Sd-1581	09/1/2052	2.500%	8.17
FNMA Pool #0Cb3594	05/1/2052	3.500%	8.12
Slc Student Loan Trust 20 2 A4	12/15/2039	VAR RT	7.89
U S Treasury Bond	05/15/2041	2.250%	7.84
FHLMC Pool #Ra-3202	07/1/2050	2.500%	7.54

TABLE 7: SECURITIES-LENDING ACTIVITY

Year Ended Dec. 31, 2022

Elements of Securities-Lending Activity	Amount
Gross Earnings	\$ 6,493,316
Less Rebates from Lenders and Lending Agent's Share of Income	5,757,993
Net Securities-Lending Income (Separately Managed Accounts)	735,323
Securities-Lending Income (Commingled Funds)	1,200,058
Net Securities-Lending Income	\$ 1,935,381

The gross income and expenses attributable to securities-lending activity and net lending income of \$0.7 million are shown in Table 7. Additionally, SSgA passively manages the U.S. and international equity portfolios of TCDRS in commingled funds. The securities in these funds participate in the securities-lending program of SSgA with TCDRS receiving a proportionate share of the securities-lending income generated from this activity. Also shown in Table 7 is income of \$1.2 million representing TCDRS' share of the 2022 equity portfolios' securities-lending income.

H: FEES AND COMMISSIONS

Table 8, on page 59, presents the 2022 investment managers' fees TCDRS incurred, excluding securities-lending fees.

Note that all returns presented throughout this annual report are reported net of the amounts reported in Table 8.

TABLE 8: INVESTMENT MANAGERS' FEES

Year Ended Dec. 31, 2022

Asset Class	Fees Paid from the Pension Trust Fund ¹		Fees Netted Against Returns		Fair Value at Dec. 31, 2022
	Management Fees	Performance Fees	Management Fees	Performance Fees	
Equities	\$ 7,079,914	\$ 6,295,480	\$ —	\$ —	\$ 10,348,352,167
MLPs	4,911,005	—	—	—	383,195,096
REITs	4,964,009	—	—	—	762,232,420
Investment-Grade Bonds	1,792,755	—	—	—	913,722,295
Cash & Equivalents	—	—	—	—	1,033,775,695
Alternative Investments	Management Fees	Performance Fees	Management Fees	General Partner Carried Interest	Fair Value at Dec. 31, 2022
Private Equity	(154)	—	159,885,963	(218,399,715)	11,558,996,580
Private Real Estate Partnerships	9,600,287	—	39,516,669	43,343,402	2,185,772,991
Hedge Funds	—	—	34,675,912	5,248,830	2,568,415,590
Strategic Credit	3,374,069	—	45,544,526	27,463,712	4,534,303,698
Distressed Debt	690,178	—	16,039,644	14,481,591	1,627,628,322
Direct Lending	—	—	66,713,132	60,196,026	5,924,041,616
Total	\$ 32,412,063	\$ 6,295,480	\$ 362,375,846	\$ (67,666,154)	\$ 41,840,436,470

¹ See Nondepartment Managers' Fees on page 51.

Alternative Investment Fees

The investment management fees included in Investment Activity Expenses presented in the Statement of Changes in Fiduciary Net Position represent only those paid directly from the Pension Trust Fund and do not include fees incurred and charged by general partners in partnerships investing in private equity, distressed debt, direct lending, strategic credit, private real estate and hedge funds, as these types of fees are netted directly against returns for those investments in accordance with FASB ASC 820. In the interest of greater transparency, fees and profit shares associated with these types of investments are disclosed in Table 8, based on information requested and received from fund general partners in conjunction with the annual audit.

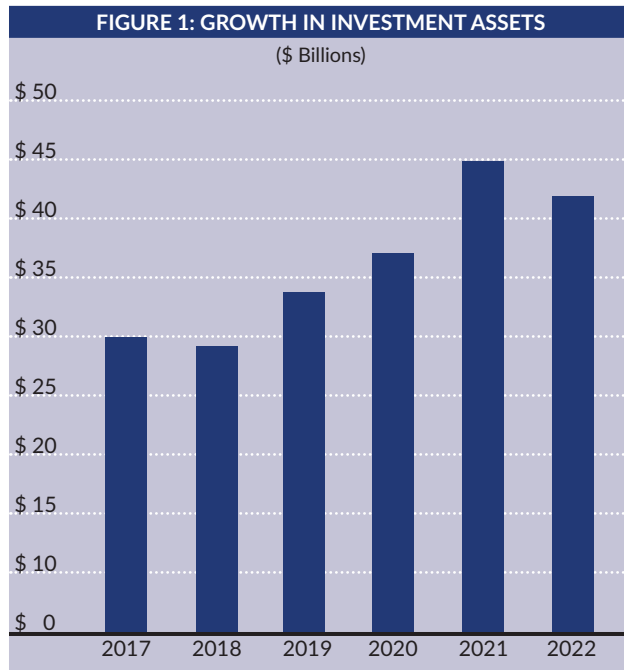
The investment expenses related to TCDRS' investments in partnerships investing in private equity, distressed debt, direct lending, strategic credit, private real estate and hedge funds fall into the categories of management fees and profit sharing (also called "carried interest").

Management fees typically range from 1.5% to 2% of the value of invested assets (hedge funds and strategic credit) or committed capital (private equity, private real estate, distressed debt and direct

lending) and are intended to compensate the general partner for its costs in operating the partnership.

Profit sharing or carried interest incentivizes and aligns the general partner's interest with TCDRS' interest. The carried interest represents the general partner's share of the partnership's profits, typically 20%, with 80% going to the limited partners such as TCDRS. Carried interest earned by hedge funds and strategic credit funds is generally accrued monthly and paid annually since the underlying investments are relatively liquid and more easily valued. Due to the long-term nature of private equity, private real estate, distressed debt and direct lending partnerships (typically 8 to 12 years) and the illiquidity associated with the underlying investments, carried interest is accrued over the life of the partnership but is usually not finalized until the fund is fully liquidated. Generally, an agreed rate of return, or preferred return, must first be surpassed before carried interest is earned by the general partner. To incentivize general partners to maintain performance over the life of a partnership, periods of negative performance may result in previously accrued carried interest being reduced or "clawed back". During such periods, negative carried interest expense would be reported.

The fees reported in Table 8 are those that directly impact TCDRS' various partnership investments.



General partners may receive additional economic benefits from their management of the partnerships in accordance with the partnerships' governing documents.

Table 9 presents the commissions paid to brokers by the system's equity managers. The managers executed trades of 103.3 million shares through 42 brokers. The \$2.0 million in commissions earned by these brokers represents a cost of \$.02 per share traded.

I: ASSET GROWTH OF THE SYSTEM

As shown in Figure 1, the total value of TCDRS' investment assets, including accrued interest and dividends, has increased by \$12 billion over the past five years (from \$29.9 billion at Dec. 31, 2017 to \$41.9 billion at Dec. 31, 2022). The decrease of investment assets in 2022 was attributable to a -5.8% investment return along with net cash outflows as the system has reached a stage in its maturity where cash flow from employee deposits and employer contributions is slightly less than the amounts required to meet annual benefits, withdrawals and administrative expenses.

TABLE 9: BROKER COMMISSIONS PAID BY EQUITY MANAGERS

Year Ended Dec. 31, 2022

Brokerage Firm	Shares Traded (Thousands)	Commissions	
		(Thousands)	Per Share
B. Riley And Co. LLC, New York	34,313	1,029	0.03
J.P Morgan Securities Inc., New York	6,056	123	0.02
Wells Fargo Securities, LLC, New York	9,839	96	0.01
RBC Capital Markets LLC, New York	14,927	92	0.01
Goldman Sachs & Co., NY	2,033	68	0.03
Citigroup Global Markets, Inc., New York	2,091	64	0.03
Merrill Lynch PF&S, New York	1,195	60	0.05
LSI Group Inc., New York	3,198	55	0.02
Cowen And Co. LLC, New York	6,612	42	0.01
Barclays Capital Le, New York	2,897	39	0.01
Summary of Remaining Firms	20,139	291	0.01
Totals	103,300	\$ 1,959	\$ 0.02

J: INVESTMENT SUMMARY

The total value of the portfolio and each asset class at Dec. 31, 2022, is shown in Table 10 on page 61 and is composed of the fair value of the underlying investments plus the amount of accrued interest and dividends, if any. The values shown in each asset class under the column labeled "Fair Value" are the investment amounts presented in the Statements of Fiduciary Net Position shown on page 26 in the Financial Section of this annual report.

TABLE 10: INVESTMENTS BY ASSET SUBCLASS

Dec. 31, 2022

Type of Investment	Fair Value	Interest, Dividends and Other Receivables	Total Value	% of Total Value
Equities				
US Equities	\$ 5,130,427,791	\$ 676,636	\$ 5,131,104,427	12.3%
International Equities	3,941,840,747	0	3,941,840,747	9.4%
Global Equities	1,276,083,629	0	1,276,083,629	3.0%
Hedge Funds	2,568,415,590	0	2,568,415,590	6.1%
Credit Investments				
Strategic Credit	4,534,303,698	2,111,311	4,536,415,009	10.8%
Distressed Debt	1,627,628,322	321	1,627,628,643	3.9%
Direct Lending	5,924,041,616	2,050,718	5,926,092,334	14.2%
Private Equity	11,558,996,580	0	11,558,996,580	27.6%
Real Assets				
REITs	762,232,420	2,520,911	764,753,331	1.8%
Private Real Estate Partnerships	2,185,772,991	0	2,185,772,991	5.2%
MLPs	383,195,096	370,400	383,565,496	0.9%
Investment-Grade Bonds	913,722,295	5,900,543	919,622,838	2.2%
Cash and Cash Equivalents	1,033,775,695	3,856,274	1,037,631,969	2.5%
Total Investments Shown on Statements of Fiduciary Net Position	\$ 41,840,436,470	\$ 17,487,114	\$ 41,857,923,584	100.0%

READER'S NOTES

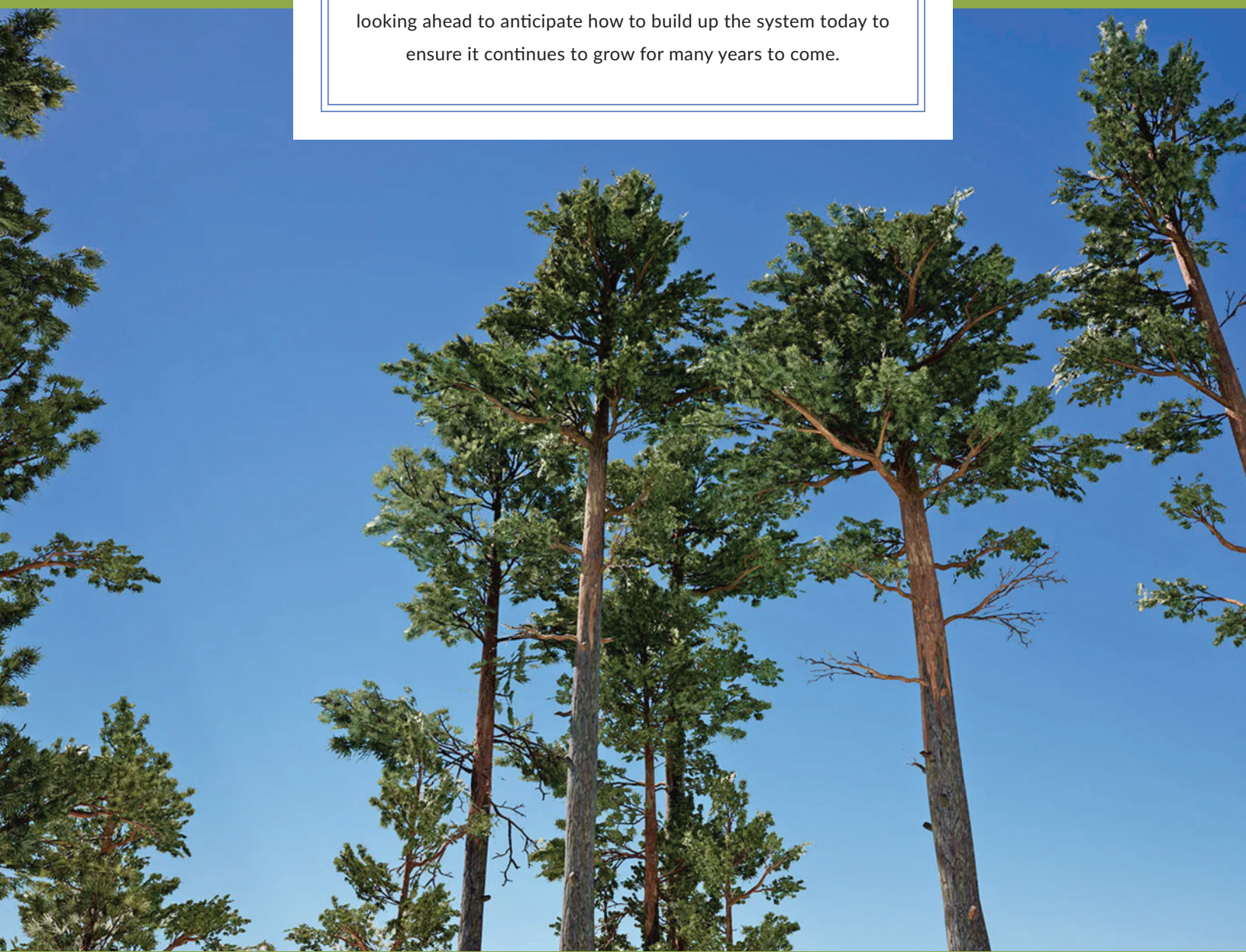
FOUR

ACTUARIAL

RUSK COUNTY LOBLOLLY PINE

A Long-Term Approach

At 138 feet tall, the Rusk County Loblolly Pine recently claimed the title of tallest loblolly pine in Texas, providing a sweeping, bird's eye view of East Texas for miles in all directions. At TCDRS, we take a long-term approach to funding and administration, looking ahead to anticipate how to build up the system today to ensure it continues to grow for many years to come.



LOBLOLLY PINE (PINUS TAEDA)



1301 Fifth Avenue
Suite 3800
Seattle, WA 98101-2605
USA

Tel +1 206 624 7940

milliman.com

May 17, 2023

Board of Trustees
Texas County & District Retirement System
Austin, Texas

Dear Trustees:

In accordance with the Texas County & District Retirement System (TCDRS) Act, the annual actuarial valuation of the assets and liabilities of TCERS has been completed as of December 31, 2022. This valuation was performed using actuarial assumptions that were adopted by the Board. The economic assumptions were adopted at the March 2021 Board meeting, and the demographic assumptions were adopted at the December 2021 Board meeting.

We believe the assumptions individually and collectively represent reasonable expectations of experience over the long-term future and that all methods and assumptions used for funding and financial reporting are in compliance with the relevant Actuarial Standards of Practice. Nevertheless, the emerging costs of the TCERS employers will vary from those presented to the extent that actual experience differs from that projected by the actuarial assumptions.

To test how well the financing objective for each plan is being achieved, annual actuarial valuations are made. These valuations recognize differences in the past year between the actuarial assumptions and the actual experience, and any benefit changes for each plan.

The financing objective for each TCERS plan is to provide retirement, death, and disability benefits for a county's or a district's employees financed by an employer contribution rate. This rate is determined annually and is designed to remain approximately level from year to year as a percent of the employer's covered payroll. The employer contribution rate consists of the normal cost contribution rate plus the unfunded actuarial accrued liability (UAAL) contribution rate. The UAAL as of December 31, 2020 and any subsequent gains and losses are amortized over closed 20-year periods (open 30-year period if the employer is in an overfunded position). In some cases, the initial closed period for the December 31, 2020 UAAL is amortized over a period shorter than 20 years. Benefit increases are amortized over closed 15-year periods. The methods for calculating the required contribution rates are specified in the funding policy which has been adopted by the Board.

A separate actuarial valuation for each participating county and district was performed based on the plan benefits in effect on January 1, 2023. The aggregate results of the actuarial valuation of system-wide assets and liabilities are presented in the Actuarial Section in the Summary Actuarial Valuation Results schedule. The assumptions and methods used in this valuation are summarized in the actuarial section. The member, annuitant and asset data used in the valuation were all prepared and furnished by TCERS. We relied on that data after examining it for general reasonableness and year-to-year consistency. Please refer to the December 31, 2022 System-wide Actuarial Valuation Report for further disclosures.



Milliman provided the information that TCDRS used in preparing the following tables and figures:

- Financial Section – Table 1: Membership
- Financial Section – Notes to the Financial Statements: TCDRS Bridge Program Health Reimbursement Arrangement
- Actuarial Section – Table 1: Select Termination Rates
- Actuarial Section – Table 2: Rates of Withdrawal Upon Termination
- Actuarial Section – Table 3: Disability Rates
- Actuarial Section – Table 4: Service Retirement Rates
- Actuarial Section – Table 5: Annual Rate of Salary Increase
- Actuarial Section – Summary Actuarial Data (Funding Status and Funding Progress)
- Actuarial Section – Table 6: Funding Progress
- Actuarial Section – Table 7: Employer Contributions
- Actuarial Section – Table 8: Retiree and Beneficiary Data – Accounts
- Actuarial Section – Table 9: Retiree and Beneficiary Data – Amounts
- Actuarial Section – Table 10: Solvency Test
- Actuarial Section – Table 11: Contribution Rate Information for Participating Employers
- Actuarial Section – Table 12: Participating Employers and Depositing Members
- Actuarial Section – Table 13: Analysis of Financial Experience
- Actuarial Section – Table 14: Summary Actuarial Valuation Results
- Statistical Section – Table 3: Average Benefits
- Statistical Section – Table 4: Average Benefit Profile by Employer Type
- Statistical Section – Table 5: Annuitants by Type of Benefit
- Statistical Section – Figure 4: Number of Annuitants Grouped by Age

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Consulting Actuary

Nick J. Collier, ASA, EA, MAAA
Consulting Actuary

RETIREMENT PLAN: SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

A: ACTUARIAL ASSUMPTIONS

Except as indicated below, the actuarial assumptions for funding valuation purposes described below were developed from an actuarial experience investigation of TCDRS over the years 2017-2020. They were recommended by Milliman, Inc., adopted by the TCDRS Board of Trustees in 2021 and first used in the Dec. 31, 2021 actuarial valuation. For new plans joining TCDRS, employer-specific assumptions for termination rates and payroll increases are assigned based on the size of the employer and other relevant factors.

There were two assumptions that changed for the Dec. 31, 2020 actuarial valuation: the investment return assumption and the price inflation assumption. The change in the price inflation assumption also impacted the salary increases assumption and the payroll growth assumption. They were recommended by Milliman, Inc., adopted by the TCDRS Board of Trustees in Mar. 2021 and first used in the Dec. 31, 2020 actuarial valuation.

More detail can be found in the explanation of the individual assumptions that follows.

Termination Rates

The termination rates are used to estimate future terminations of employment for reasons other than death, disability or retirement. The rates vary by length of service, entry-age group (age at hire) and termination group assignments, and do not apply after an employee is eligible for retirement. Sample rates for three of the seven termination groups are shown in Table 1.

Each employer was assigned to a termination group based primarily upon the termination characteristics of the members of that employer's plan during the years 2017-2020 relative to the termination characteristics of TCDRS membership system-wide during the same period. Consideration was also given to previous experience studies when assigning an employer's termination group to account for the possibility that 2017-2020 experience was out of the ordinary.

For plans that have adopted the partial lump-sum payment option, adjustments are made to the termination rates. Rates are reduced at ages near retirement as it is anticipated that if the partial lump sum is available, members are less likely to terminate employment so they can withdraw their accounts.

Withdrawal Rates

Members who terminate employment with the county or district may either elect to leave their accounts with TCDRS or withdraw their accounts. The likelihood that an active member who terminates employment will elect to withdraw varies by length of service and vesting requirement. Sample withdrawal rates are shown in Table 2.

Entry Age	Years of Service	Male and Female		
		Low	Mid	High
20 to 29	0	0.264	0.330	0.396
	3	0.144	0.180	0.216
	6	0.088	0.110	0.132
	9	0.064	0.080	0.096
	12	0.048	0.060	0.072
	15	0.035	0.044	0.053
	18	0.026	0.033	0.040
	21	0.020	0.025	0.030
	24	0.015	0.019	0.023
30 to 39	0	0.216	0.270	0.324
	3	0.120	0.150	0.180
	6	0.080	0.100	0.120
	9	0.056	0.070	0.084
	12	0.044	0.055	0.066
	15	0.035	0.044	0.053
	18	0.026	0.033	0.040
	21	0.020	0.025	0.030
	24	0.015	0.019	0.023
40 to 49	0	0.192	0.240	0.288
	3	0.096	0.120	0.144
	6	0.064	0.080	0.096
	9	0.044	0.055	0.066
	12	0.036	0.045	0.054
	15	0.027	0.034	0.041
	18	0.018	0.022	0.026
	21	0.000	0.000	0.000
	24	0.000	0.000	0.000
27	0.000	0.000	0.000	

Years of Service	Vesting Requirement		
	5 Years	8 Years	10 Years
0	100.0%	100.0%	100.0%
4	100.0%	100.0%	100.0%
6	38.0%	100.0%	100.0%
8	34.0%	34.0%	100.0%
10	32.0%	32.0%	32.0%
15	26.0%	26.0%	26.0%
20	21.0%	21.0%	21.0%
25	17.5%	17.5%	17.5%
30 and over	0	0	0

RETIREMENT PLAN: SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

TABLE 3: DISABILITY RATES

Age	Male and Female Occupational ¹	Male and Female All Causes ²
35	.00001	.000252
40	.00001	.000420
45	.00001	.000740
50	.00001	.001170
55	.00001	.001620
60 and above	.00001	.000000

¹Applicable for non-vested members
²Applicable for vested members who are not eligible for service retirement

Members who have already terminated employment and are neither vested nor active with another TCDRS employer are assumed to withdraw their accounts. Otherwise, they are assumed to defer their benefit until retirement eligible.

Disability Rates

There are two types of disability rates, occupational disability rates (predicts disabilities that occur during the performance of job duties) and all-causes disability rates (predicts all disabilities regardless of whether they occur during the performance of job duties). Before a member is vested, only the occupational disability rates are applicable. For members who are vested, but not eligible for service retirement, the rate of disablement is the all-causes rate. Rates are assumed to be zero after the member is eligible for service retirement. Sample disability rates are shown in Table 3.

Service Retirement Rates

Retirement rates predict when active retirement eligible members will commence receiving benefit payments and are based on a member's age and length of service. Retirement eligible members age 75 or older are assumed to commence receiving benefits immediately. Sample rates are shown in Table 4.

Non-depositing members are assumed to retire at the later of first retirement eligibility or age 60.

Mortality Rates

Depositing members:

135% of the PubG-2010 Employee amount-weighted mortality table for males, and 120% of the PubG-2010 Employee amount-weighted mortality table for females, both projected from 2021 using 100% of the MP-2021 Ultimate Projection Scale.

TABLE 4: SERVICE RETIREMENT RATES

Age	Years of Service			
	Less than 15 Years	Between 15 and 24 Years	Between 25 and 29 Years	Greater than 29 years
40-49	.05250	.06300	.07700	.08750
50-51	.05625	.06750	.08250	.09375
52-53	.06000	.07200	.08800	.10000
54-56	.06750	.08100	.09900	.11250
57-59	.07500	.09000	.11000	.12500
60-61	.09000	.10800	.13200	.15000
62	.13500	.16200	.19800	.22500
63-64	.11250	.13500	.16500	.18750
65-66	.22500	.22500	.27500	.27500
67	.21600	.21600	.26400	.26400
68-69	.18900	.18900	.23100	.23100
70-74	.20700	.20700	.25300	.25300
75 & Over	1.00000	1.00000	1.00000	1.00000

TABLE 5: ANNUAL RATE OF SALARY INCREASE

Years of Service	Entry-Age Group			
	< 30	30-39	40-49	> 50
1	7.6%	7.1%	6.6%	5.8%
3	6.8	6.1	5.6	4.8
5	6.2	5.7	5.2	4.6
10	5.3	4.9	4.5	4.0
15	4.7	4.4	3.9	3.7
20	4.2	4.0	3.6	3.4
25	3.9	3.6	3.4	3.4

Service retirees, beneficiaries and non-depositing members:

135% of the PubG-2010 Healthy Retiree amount-weighted mortality table for males, and 120% of the PubG-2010 Healthy Retiree amount-weighted mortality table for females, both projected from 2010 using 100% of the MP-2014 Ultimate Projection Scale.

Disabled retirees:

160% of the PubG-2010 Disabled Retiree amount-weighted mortality table for males, and 125% of the PubG-2010 Disabled Retiree amount-weighted mortality table for females, both projected from 2010 using 100% of the MP-2014 Ultimate Projection Scale.

Investment Return

A 7.50% annual discount rate is used in the valuation based on the expected long-term investment return of 7.50%. This rate of 7.50% is net of investment and administrative expenses.

RETIREMENT PLAN: SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Salary Increases

The salary increase assumption predicts salary increases for individuals over their projected careers. These rates vary by the employee's length of service and age at hire (entry age). Annual increase percentages consist of a general wage inflation component of 3.00% and a merit, promotion and longevity component that varies from 0.40% to 5.25% based on entry age and service. The 3.00% wage inflation component is based on the underlying price inflation assumption of 2.50% and 0.50% for assumed increases in productivity. The salary scale varies by entry age, with an approximately 4.70% average annual increase over a typical employee's entire career. Because the TCDRS benefit is not based on final average salary, this assumption is generally not as significant as for other defined benefit retirement systems. Refer to Table 5 for sample salary increase rates.

Payroll Increase

The payroll increase assumption projects the rate of growth of the employer's aggregate payroll. The rate varies by employer, with a maximum of 3.00%, or a smaller percentage as considered appropriate based on the employer's number of employees and prior experience. It also assumes no future growth in the number of employees.

Cost-of-Living Adjustment

An annual increase of 0% cost-of-living adjustment for retirees and beneficiaries is assumed. Within certain parameters, employers may elect cost-of-living adjustments for retirees and beneficiaries on an ad hoc basis.

B: ACTUARIAL METHODS

Actuarial Cost Method

For funding calculations, TCDRS uses an entry-age actuarial cost method assuming the current plan provisions have always been in place. The goal of this cost method is to fund benefits in an orderly manner for each participant over his or her career so that sufficient funds are accumulated by the time benefit payments begin. Under this approach, benefits are funded in advance as a level percentage of pay. This part of the contribution rate is called the normal cost rate and generally remains stable from year to year. A portion of the normal cost rate is paid by the employee (employee deposit rate) and the remainder is paid by the employer (employer-paid normal cost rate).

Amortization Policy

The portion of the contribution rate that funds any remaining unfunded amounts for benefits that are not covered by the normal cost is called the unfunded actuarial accrued liability (UAAL) rate. UAAL amounts occur when benefit enhancements are adopted, when actual investment or demographic experience varies from the actuarial assumptions (actuarial gains and losses), or when there are changes in actuarial assumptions or methods.

In general, UAAL amounts are amortized on a level-percentage-of-covered-payroll basis over a closed period with a layered approach. The closed periods ensure all unfunded liabilities are financed over no more than a 20-year period. Each year, new layers are established to amortize changes in the UAAL due to actuarial gains or losses, as well as any plan benefit changes elected by an employer for that year.

Benefit enhancements are amortized over a 15-year closed period. All other changes in the UAAL except for changes due to scheduled amortization are amortized over 20-year closed periods.

For newly participating districts that have five or fewer employees who are all within five years of retirement eligibility, any initial UAAL and any subsequent adoption of prior service credits are amortized over a five-year closed amortization period. This ensures that benefits are appropriately funded over the current generation of employees.

Extra contributions may be made by employers by choosing to pay an elected rate that is greater than the required funding rate or making ad hoc lump-sum contributions. Any extra contributions made as lump sums are first used to offset the UAAL increase, if any, related to plan changes elected during the current year. Any extra contributions from an elected rate or remaining extra contribution amounts from lump sums are then used to pay down existing loss bases, in the order of oldest to most recent. After all existing loss bases have been paid off, any remaining extra contributions are incorporated into the actuarial gains or losses for the current year.

Notwithstanding the layered approach, the total UAAL payment may not be less than the required payment obtained by amortizing the entire UAAL over a 20-year period.

If a plan is overfunded, the overfunded actuarial accrued liability (OAAL) is calculated annually using a 30-year open amortization period.

RETIREMENT PLAN: SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

Asset Valuation Method

When determining the actuarial value of assets used for determining required plan funding, TCDRS smooths each year's actuarial investment gains and losses in the following manner. First, any remaining unrecognized asset gains or losses from the previous year are updated to the current year to account for the time value of money using the investment return assumption. Then to the extent that there is a loss for the year and there are unrecognized gains from previous years, or to the extent that there is a gain for the year and there are unrecognized losses from previous years, the gain or loss for the year shall be used to offset unrecognized gains or losses from previous years in the order of oldest to most recent. Any remaining gain or loss for the year is recognized over a five-year period. This better reflects the system's long-term investment horizon and keeps employer contribution rates more stable. As actuarial asset investment gains and losses are recognized, they become part of the actuarial gains and losses for the year and are funded according to the amortization policy. This method ensures that an investment gain and loss for a year will be

recognized within five years, helping to stabilize employer rates while still resulting in rates that are reasonably reflective of current market conditions. In addition, the board has the ability to set aside reserves from investment earnings that are used to help offset future negative economic cycles. These reserves are held separately and are not counted as part of a participating employer's plan assets until they are passed through to employers as determined by the board. Reserves help maintain rate stability for employers. In addition, reserves ensure that employers do not adopt benefit increases based on a temporarily lower plan cost at a high point in a market cycle and, conversely, are not as pressured to immediately reduce benefit levels during a low point in a market cycle.

C: CHANGES IN ACTUARIAL ASSUMPTIONS AND METHODS

There were no changes in actuarial assumptions or methods reflected in the Dec. 31, 2022 actuarial valuation.

RETIREMENT PLAN: SUMMARY ACTUARIAL DATA

SUMMARY ACTUARIAL DATA

Funded Status and Funding Progress

Pension Trust Fund

The funded status of the pension plan as of Dec. 31, 2022, the most recent actuarial valuation date is:

	(\$ Millions)
Actuarial Value of Assets (a)	\$ 40,924.1
Actuarial Accrued Liability (AAL) – Entry Age (b)	\$ 46,194.5
Unfunded AAL (UAAL) (b-a)	\$ 5,270.4
Funded Ratio (a/b)	88.6%
Covered Payroll (c)	\$ 8,657.3
UAAL as a Percentage of Covered Payroll [(b-a) / c]	60.9%

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment and mortality. Actuarially determined amounts are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The schedule of funding progress presents multi-year trend information about whether the actuarial values of plan assets are increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

Actuarial calculations reflect a long-term perspective. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial values of assets, consistent with the long-term perspective of the calculations.

Additional information as of the latest actuarial valuation for the retirement plan follows:

Valuation Date:	Dec. 31, 2022
Actuarial Cost Method:	Entry age
Amortization Method:	Level percent
Unfunded AAL	Closed
Overfunded AAL	Open
Remaining Amortization Period:	
Unfunded AAL	20 years or less (varies by plan)
Overfunded AAL	30 years
Asset Valuation Method:	
SAF	5-year smoothed value
ESF	Fund value
CSARF	Fund value
Actuarial Assumptions:	
Investment Return	7.50%
Career Average Projected Salary Increases	4.70% avg. ¹
Payroll Increase (varies by plan)	3.00% or less
Inflation	2.50%
Cost-of-Living Adjustments	0.0%

¹ Includes inflation at the indicated rate

RETIREMENT PLAN: SUMMARY ACTUARIAL DATA

TABLE 6: FUNDING PROGRESS

(\$ Millions)

Actuarial Valuation Date ¹	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) ² (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Annual Covered Payroll ³ (c)	UAAL as a Percentage of Covered Payroll [(b-a)/c]
12/31/13 ⁴	\$ 21,912.7	\$ 24,514.8	\$ 2,602.1	89.4%	\$ 5,483.8	47.5%
12/31/14	23,751.8	26,252.8	2,501.0	90.5	5,779.0	43.3
12/31/15	25,398.8	28,632.5	3,233.7	88.7	6,122.3	52.8
12/31/16	26,951.9	30,473.9	3,522.0	88.4	6,378.4	55.2
12/31/17 ⁴	28,975.7	32,539.9	3,564.3	89.0	6,676.5	53.4
12/31/18	30,553.9	34,541.2	3,987.3	88.5	6,921.0	57.6
12/31/19	32,789.7	36,670.2	3,880.4	89.4	7,342.6	52.8
12/31/20 ⁵	36,017.0	41,294.8	5,277.8	87.2	7,908.8	66.7
12/31/21 ⁶	38,598.2	43,612.4	5,014.2	88.5	8,109.0	61.8
12/31/22	40,924.1	46,194.5	5,270.4	88.6	8,657.3	60.9

¹ Each county and district participating in TCDRS is financially responsible for its own plan. Therefore, the aggregate numbers shown above reflect only the aggregate condition of TCDRS and are not indicative of the status of any one plan. The valuations above reflect changes in benefits elected by individual employees.

² The entry-age actuarial cost method is used for all plans. Each valuation above reflects the actuarial cost method, assumptions and benefits in effect as of the valuation date.

³ The annual covered payroll is based on the employee deposits received by TCDRS for the year ending with the valuation date.

⁴ Revised economic and demographic assumptions due to an experience review were first used in this valuation.

⁵ Revised economic assumptions due to an experience review were first used in this valuation.

⁶ Revised demographic assumptions due to an experience review were first used in this valuation.

TABLE 7: EMPLOYER CONTRIBUTIONS

(\$ Millions)

Plan Year Ended Dec. 31	Actuarial Determined Contributions (ADC)		Actual Contributions		Percentage of ADC Contributed
	Average Rate*	Dollar Amount	Average Rate*	Dollar Amount	
2012	10.32%	\$ 545.2	11.05%	\$ 583.9	106%
2013	10.93	599.4	11.75	644.5	106
2014	11.36	656.7	11.84	684.2	103
2015	11.42	699.0	12.14	743.1	104
2016	11.20	714.2	12.10	771.7	108
2017	11.36	758.4	12.33	823.5	109
2018	11.68	808.1	12.56	869.6	108
2019	11.58	850.4	12.79	939.0	110
2020	12.14	959.8	13.08	1,034.4	108
2021	11.81	958.1	13.24	1,073.4	112
2022	12.89	1,116.1	13.86	1,200.1	108

* System average weighted by payroll

RETIREMENT PLAN: SUMMARY ACTUARIAL DATA

TABLE 8: RETIREE AND BENEFICIARY DATA – ACCOUNTS*

Year Ended	New Accounts Added	Accounts Removed	Net Change in Accounts	Total Number of Accounts	Percent Change in Number of Accounts
12/31/12	4,099	933	3,166	46,801	7.3%
12/31/13	3,961	942	3,019	49,820	6.5
12/31/14	4,504	1,155	3,349	53,169	6.7
12/31/15	4,277	1,084	3,193	56,362	6.0
12/31/16	4,783	1,160	3,623	59,985	6.4
12/31/17	4,689	1,046	3,643	63,628	6.1
12/31/18	5,024	1,223	3,801	67,429	6.0
12/31/19	4,588	1,165	3,423	70,852	5.1
12/31/20	5,299	1,536	3,763	74,615	5.3
12/31/21	5,052	1,461	3,591	78,206	4.8
12/31/22	5,327	1,502	3,825	82,031	4.9

* Accounts reflect the total number of members being paid by separate employers.

TABLE 9: RETIREE AND BENEFICIARY DATA – AMOUNTS

Year Ended	New Annual Benefits Added	Annual Benefits Removed	Net Change in Annual Benefits Amount	Annual Benefits	Percent Change in Annual Benefits	Average Annual Benefit*
12/31/12	\$ 94,155,638	\$ 10,559,930	\$ 83,595,708	\$ 830,756,736	11.19%	\$ 17,748
12/31/13	91,413,679	10,968,524	80,445,155	911,201,891	9.68	18,288
12/31/14	114,372,968	13,737,044	100,635,924	1,011,837,815	11.04	19,032
12/31/15	108,470,125	12,908,359	95,561,766	1,107,399,581	9.44	19,644
12/31/16	129,666,055	13,856,779	115,809,276	1,223,208,857	10.46	20,388
12/31/17	125,169,416	15,890,364	109,279,052	1,332,487,909	8.93	20,940
12/31/18	162,174,909	18,552,675	143,622,234	1,476,110,143	10.78	21,888
12/31/19	138,210,299	17,155,446	121,054,853	1,597,164,996	8.20	22,548
12/31/20	168,256,759	24,199,586	144,057,173	1,741,222,169	9.02	23,340
12/31/21	158,940,085	24,886,392	134,053,693	1,875,275,862	7.70	23,976
12/31/22	200,159,081	28,066,216	172,092,865	2,047,368,727	9.18	24,960

* The average annual benefits are based on the regular benefits paid in January following the valuation date.

TABLE 10: SOLVENCY TEST

(\$ Millions)

Valuation Date	Actuarial Accrued Liabilities for			Actuarial Value of Assets	Portion of Actuarial Accrued Liabilities Covered by Net Position		
	(1) Current Member Deposits	(2) Retirees and Beneficiaries	(3) Current Members (Employer-Financed Portion)		(1)	(2)	(3)
12/31/12	\$ 5,364.3	\$ 8,014.5	\$ 9,574.2	\$ 20,250.3	100%	100%	71.8%
12/31/13	5,668.9	8,796.9	10,049.0	21,912.7	100	100	74.1
12/31/14	5,931.8	9,785.8	10,535.2	23,751.8	100	100	76.3
12/31/15	6,264.8	10,552.7	11,815.0	25,398.8	100	100	72.6
12/31/16	6,563.4	11,601.0	12,309.5	26,951.9	100	100	71.4
12/31/17	6,901.3	12,713.5	12,925.1	28,975.7	100	100	72.4
12/31/18	7,153.4	14,099.6	13,288.2	30,553.9	100	100	70.0
12/31/19	7,591.0	15,221.3	13,857.9	32,789.7	100	100	72.0
12/31/20	7,990.1	17,259.6	16,045.1	36,017.0	100	100	67.1
12/31/21	8,310.4	18,388.6	16,913.4	38,598.2	100	100	70.4
12/31/22	8,733.3	20,042.2	17,419.0	40,924.1	100	100	69.7

RETIREMENT PLAN: SUMMARY ACTUARIAL DATA

TABLE 11: CONTRIBUTION RATE INFORMATION FOR PARTICIPATING EMPLOYERS

Distribution of TCDRS Plans by Year 2024 Employer Actuarially Determined Contribution Rate

Number of Depositing Members as of 12/31/2022	Year 2024 Employer Actuarially Determined Contribution Rate Based on the Plan of Benefits in Effect 1/1/2023						Total
	Under 5.00%	5.00% – 6.99%	7.00% – 8.99%	9.00% – 10.99%	11.00% – 12.99%	Over 12.99%	
1 – 5	30	28	22	22	20	35	157
6 – 15	26	22	27	35	23	33	166
16 – 30	19	6	23	20	24	15	107
31 – 50	11	7	14	14	17	18	81
51 – 85	16	9	26	7	10	11	79
86 – 150	18	12	19	21	14	11	95
151 – 250	5	7	16	18	7	13	66
251 – 500	3	2	8	17	12	7	49
Over 500	1	1	4	5	18	19	48
Total	129	94	159	159	145	162	848

TABLE 12: PARTICIPATING EMPLOYERS AND DEPOSITING MEMBERS

Valuation Date	Number of Participating Employers	Depositing Members		Average Annual Pay	Percent Increase in Average Annual Pay	Employer Contributions ¹	Average Employer Rate Paid
		Number	Annual Payroll				
12/31/12	641	121,963	\$ 5,283,625,749	\$ 43,322	2.1%	\$ 583,902,381	11.05%
12/31/13	656	124,525	5,483,787,404	44,038	1.7	644,462,694	11.75
12/31/14	677	125,860	5,779,022,617	45,916	4.3	684,212,315	11.84
12/31/15	701	129,717	6,122,322,455	47,380	3.2	743,149,234	12.14
12/31/16	737	131,140	6,378,374,324	48,638	2.7	771,701,126	12.10
12/31/17	760	135,751	6,676,520,194	49,182	1.1	823,501,201	12.33
12/31/18	781	137,528	6,921,029,795	50,325	2.3	869,683,305	12.56
12/31/19	798	142,265	7,342,564,173	51,612	2.6	939,026,347	12.79
12/31/20	817	142,722	7,908,759,528	55,414	7.4	1,034,443,115	13.08
12/31/21	830	144,107	8,109,002,702	56,271	1.5	1,073,415,093	13.24
12/31/22	848	145,226	8,657,340,761	59,613	5.9	1,200,119,263	13.86

¹ Employer contributions include optional lump-sum contributions and elected rates.

TABLE 13: ANALYSIS OF FINANCIAL EXPERIENCE

Gains and Losses in Actuarial Accrued Liabilities During 2021–22 Resulting from Differences Between Assumed Experience and Actual Experience (\$ Millions)

Source of Change	\$ Gain (or Loss) for Year	
	2022	2021
Age and Service Retirements	\$ 25.1	\$ 6.0
Death In-Service Benefits	5.3	10.7
Other Termination	95.8	70.7
Pay Increases	(36.4)	14.3
Contribution Income	(17.7)	34.2
Investment Income	(265.8)	198.9
Death After Retirement	55.0	38.0
Other	(24.9)	15.4
Gain (Loss) During Year from Financial Experience	(163.6)	388.2
Non-Recurring Items		
Plan Changes	(246.0)	(46.0)
Assumption and Method Changes	0.0	(54.4)
Gain (or Loss) from Non-Recurring Items	(246.0)	(100.4)
Composite Gain (or Loss) for Year	\$ (409.6)	\$ 287.8
Composite Gain (or Loss) as a % of Actuarial Accrued Liabilities	(0.9%)	0.7%

RETIREMENT PLAN: SUMMARY OF PLAN PROVISIONS

A: ORGANIZATION

TCDRS is a statewide, agent multiple-employer, public-employee retirement system that provides the employees of participating counties and districts with retirement, disability and survivor benefits. Each county and district that participates in TCDRS maintains its own customized plan of benefits which may be changed annually. The governing body of each employer has the option to adopt or change plan provisions based on their needs and budget.

Each employer has a savings-based defined benefit plan where member benefits are based on each member's account balance at retirement and employer matching. All plan assets are pooled for investment purposes, but each employer's plan assets may be used only for the payment of benefits to the members of that employer's plan. This summary describes the plan provisions in general terms. Any questions related to the actual administration, provisions or policies of the retirement plans should be directed to TCDRS.

B: MEMBERSHIP

All full- and part-time non-temporary employees become members in TCDRS, regardless of the number of hours they work in a year. Employees in a temporary position are not eligible for membership.

C: TERMINATION OF MEMBERSHIP

TCDRS membership is terminated by a member's death, retirement, or withdrawal of a member's account.

D: MEMBER DEPOSITS

TCDRS is a savings-based plan. Every paycheck, a portion of each employee's pay — from 4% to 7% as set by the employer — is deposited into his or her TCDRS account. By law, member accounts earn 7% interest annually.

E: SERVICE

Members receive a month of service for each month that they make a deposit into their account. Service may also be granted for periods of employment prior to the employer joining TCDRS, and for military and certain other service.

Within TCDRS, all periods of service with any TCDRS participating employers are combined. Also, service periods with other Texas public retirement

plans participating with TCDRS in the Texas Proportionate Retirement Program are combined to satisfy TCDRS retirement eligibility and vesting requirements.

F: ELIGIBILITY REQUIREMENTS

Service Retirement Benefits

The amount of service a member needs to earn a future monthly benefit is called the vesting requirement. When a member is vested, he or she has the right to a monthly benefit at age 60 or older. Employers may choose 5-, 8- or 10-year vesting. In addition, members may retire before age 60 if they meet one of the following requirements, set by the employer:

- "Rule of" eligibility: Under these rules, vested members can retire if their age plus years of service time add up to at least 75 or 80.
- 20-year or 30-year retirement at any age: This lets members retire when they have at least 20 or 30 years of service time.

Disability Retirement Benefits

A member who is vested and who is totally and permanently disabled is eligible for an immediate disability retirement benefit. A member who is not vested is eligible for an immediate disability retirement benefit if the total and permanent disability was a result of an on-the-job injury.

Survivor Benefits

Benefits are payable to the beneficiaries or estate of a deceased member. The eligibility requirement for an employer-provided survivor benefit is four years of TCDRS service. Otherwise the survivor benefit is the deceased member's account balance.

G: DETERMINATION OF RETIREMENT BENEFITS

The service or disability retirement benefit is calculated based on the member's account balance and employer matching as selected by the employer, and may include other employer provided funds. The employer matching can range from a "dollar for dollar," up to \$2.50 per \$1.00 in the member's account. The member's account and employer provided funds are combined and converted to a lifetime annuity. The retiree receives a payment every month for the rest of his or her life. Conversions to a lifetime annuity are based on a 7% discount rate and the following mortality assumptions:

RETIREMENT PLAN: SUMMARY OF PLAN PROVISIONS

- The portion of the benefit that accrues before 2018, including member deposits made before 2018 and interest and employer matching on those deposits, shall be calculated based on the UP-1984 table with an age setback of five years for retirees and an age setback of 10 years for beneficiaries, with a 30% reserve refund assumption for the single life option.
- The portion of the benefit that accrues after 2017, including member deposits made after 2017 and interest and employer matching on those deposits, shall be calculated on a generational mortality basis using the RP-2000 Combined Mortality Table, with a one-year set-forward for males and no set-forward for females, projected to 2014 using Scale AA and for projections after 2014 using 110% of MP-2014 Ultimate Projection Scale, with a 32.79% reserve refund assumption for the single life option. Mortality assumptions for these calculations are blended 50% male and 50% female for retirees, and blended 30% male and 70% female for beneficiaries.

Retirees elect to receive their monthly lifetime benefit by choosing from one of the following seven actuarially equivalent payment options:

- **Single Life option** – Monthly payments cease upon death of the retiree. This option provides the highest monthly benefit.
- **Guaranteed Term Benefit options** – The two guaranteed term benefit options are 10-year guaranteed term and 15-year guaranteed term. These options provide a lifetime monthly benefit to the retiree. In addition, if the retiree passes away within 10 or 15 years of the retirement date, the beneficiary will receive the monthly benefit until the end of the guaranteed term.
- **Dual Life options** – The four dual life options are 100% to beneficiary, 75% to beneficiary, 50% to beneficiary and 100% to beneficiary with pop-up. Under each of these options, after the death of the retiree, the beneficiary receives a monthly lifetime benefit equal to the selected percentage of the retiree's benefit payment. Under the 100% to beneficiary with pop-up option, if the beneficiary dies before the retiree, the monthly benefit amount will "pop up" to a higher monthly amount, as if the retiree had retired under the single life option.

All options pay a death benefit equal to the excess of the person's account at retirement over the total monthly benefits that have been paid.

Each employer may allow partial lump-sum payments. This allows the retiring member to receive an

immediate lump-sum payment, not to exceed his or her account balance, and choose a reduced monthly lifetime benefit from any of the payment options.

H: FUNDING PROVISIONS

Contributions are made monthly by both the employees and the employers based on covered payroll.

Each year the actuary determines the required contribution rate for the following year to adequately fund each employer's benefit plan using the actuarial methods described beginning on page 68. Employers may also elect to fund at a rate higher than the required rate, and may also make additional lump-sum contributions.

I: CHANGES IN PROVISIONS

There were no system-wide changes in plan provisions reflected in the Dec. 31, 2022 actuarial valuation.

Effective each Jan. 1 and within the parameters described previously in the summary of plan provisions, each TCDRS plan may make certain changes to their benefit levels, vesting, retirement eligibility and other plan provisions. The Dec. 31, 2022 actuarial valuation reflects plan provisions in effect for each plan as of Jan. 1, 2023.

RETIREMENT PLAN: SUMMARY ACTUARIAL VALUATION RESULTS

TABLE 14: SUMMARY ACTUARIAL VALUATION RESULTS

	Dec. 31, 2022	Dec. 31, 2021
Valuation Results for Employer Plans		
1 Actuarial present value of future benefits		
Annuitants	\$ 20,027,963,182	\$ 18,374,896,747
Members	35,785,997,247	34,258,552,109
Total	55,813,960,429	52,633,448,856
2 Actuarial present value of future normal cost contributions	9,633,774,817	9,034,694,588
3 Actuarial accrued liability [1 - 2]	46,180,185,612	43,598,754,268
4 Actuarial value of assets		
Employees Saving Fund	8,733,260,353	8,310,440,801
Subdivision Accumulation Fund	32,176,205,652	30,273,625,997
Total	40,909,466,005	38,584,066,798
5 Total unfunded actuarial accrued liability (UAAL)	5,337,087,463	5,077,993,756
6 Total overfunded actuarial accrued liability (OAAL)	(66,367,856)	(63,306,286)
7 Unfunded actuarial accrued liability (UAAL), net of overfunded actuarial accrued liability (OAAL) [5 + 6]. Also equals [3 - 4].	5,270,719,607	5,014,687,470
Valuation Results for Pooled Benefits		
8 Actuarial present value of future benefits from the Closed Subdivision Annuity Reserve Fund for annuities in effect	14,269,456	13,669,014
9 Actuarial value of assets of the Closed Subdivision Annuity Reserve Fund	14,580,484	14,175,737
10 Underfunded actuarial accrued liability (UAAL) [8 - 9]	(311,028)	(506,723)
11 System-wide AAL [3 + 8]	\$ 46,194,455,068	\$ 43,612,423,282
12 System-wide actuarial value of assets [4 + 9]	40,924,046,489	38,598,242,535
13 System-wide UAAL [11 - 12]	\$ 5,270,408,579	\$ 5,014,180,747
14 System-wide Funded Ratio [12/11]	88.6%	88.5%



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May 17, 2023

Board of Trustees
Texas County & District Retirement System
Austin, Texas

Dear Trustees:

The Group Term Life Fund (GTLF) is an optional cost-sharing multiple-employer defined benefit plan that is administered by the Texas County & District Retirement System. It provides death benefits to active and, if elected, retired employees of participating employers. The financing objective of the GTLF is to operate as a group term insured benefit, charging each employer its premium based on current actuarial assumptions and its own demographic membership (number of active and retired members covered by GTLF). The funding of the GTLF is in accordance with Section 845.406 of the TCDRS statute. Contribution rates are established as a percentage of pay.

Milliman annually determines contribution rates for those employers that elect to participate in the GTLF for the Group Term Life Fund (GTLF). Additionally, Milliman performs GASB 75 financial reporting valuations of employers participating in the GTL who have elected both active and retiree coverage. It is our understanding that GASB 74 reporting is not required for the GTLF as it is not an Other Post-Employment Benefit (OPEB) trust, because it covers both actives and retirees.

The GTLF provides death benefits to both active and retired members. Each participating employer can elect to cover just active members, or active and retired members. The required contribution rates for funding purposes are equal to a premium rate that is individually determined for each participating employer annually and is based on the mortality and service experience of all employees and retirees covered by the fund and the demographics specific to the workforce of the participating employer. The rate is expressed as a percentage of the compensation of members employed by the participating employer. The required contributions are determined using a one-year term cost funding method.

Milliman provided the summarized information about the GTLF that TCDRS has used in preparing the following tables:

- Actuarial Section – Table 15: GTLF – Retirees Covered
- Actuarial Section – Table 16: GTLF – Retirees Coverage Amounts
- Actuarial Section – Table 17: GTLF Participating Employers and Covered Members

The assumptions and methods used in the funding calculations are also summarized in the actuarial section.

Sincerely,

Matt Larrabee, FSA, EA, MAAA
Consulting Actuary

Nick J. Collier, ASA, EA, MAAA
Consulting Actuary

GTLF: SUMMARY OF ACTUARIAL ASSUMPTIONS, METHODS AND DATA

A: ACTUARIAL ASSUMPTIONS AND METHODS

The actuarial assumptions for funding valuation purposes described below were developed from an actuarial experience investigation of TCDRS over the years 2017–2020. They were recommended by Milliman, Inc., adopted by the TCDRS Board of Trustees in 2021 and first used in the Dec. 31, 2021 actuarial valuation.

Mortality Rates

Same as for retirement plan.

Actuarial Value of Assets

All assets are valued at fund value. The fund's assets are pooled with those of the Pension Trust Fund under provisions of the TCDRS Act.

Actuarial Cost Method

For funding purposes, the term cost method is used for determining the cost of one-year term life insurance for both active employees and retirees. The one-year term cost is 80% of the rate determined by applying the mortality rate assumptions. This takes into account the size of the GTLF relative to the expected benefit payments and the statutory requirement that the GTLF be credited annually with 7% interest. The only demographic assumptions used for determining funding requirements are active employee mortality rates and retiree mortality rates.

Changes in Actuarial Assumptions and Methods

There were no changes in actuarial assumptions or methods, reflected in the Dec. 31, 2022 actuarial valuation.

B: PLAN PROVISIONS

Participation in the Group Term Life Plan

Employers who participate in the TCDRS retirement plan may elect to participate in the Group Term Life plan. Employers may elect to cover members who are active employees only or both members who are active employees and retirees, and may elect to change or discontinue coverage annually.

Benefit Eligibility

The county or district must have elected the applicable Group Term Life coverage for the calendar year in which a member who is an active employee or retiree dies.

Amount of Insurance Benefit

If death occurs while the member is actively employed, the benefit is an amount equal to the employee's most recent regular annualized salary. The insurance benefit payable to retirees is \$5,000.

GTLF: SUMMARY OF ACTUARIAL ASSUMPTIONS, METHODS AND DATA

TABLE 15: GTLF – RETIREES COVERED

Year Ended	New Retirees Added	Retirees Removed	Net Change in Retirees	Total Number of Retirees ¹	Percent Change in Number Covered
12/31/13	618	196	422	6,723	6.7%
12/31/14	676	183	493	7,216	7.3
12/31/15	639	203	436	7,652	6.0
12/31/16	797	254	543	8,195	7.1
12/31/17 ²	652	542	110	8,305	1.3
12/31/18	799	232	567	8,872	6.8
12/31/19	756	943	(187)	8,685	(2.1)
12/31/20	740	345	395	9,080	4.5
12/31/21	651	353	298	9,378	3.3
12/31/22	1,034	286	748	10,126	8.0

¹ A single individual may have coverage with more than one participating employer.

² An adjustment is included to combine retirees with multiple benefits paid by a single employer.

TABLE 16: GTLF – RETIREES COVERAGE AMOUNTS

Year Ended	New Annual Coverage Added	Annual Coverage Removed	Net Change in Annual Coverage Amount	Annual Coverage Amount ¹	Percent Change in Annual Coverage	Average Annual Coverage Per Retiree
12/31/13	\$ 3,090,000	\$ 980,000	\$ 2,110,000	\$ 33,615,000	6.7%	\$ 5,000
12/31/14	3,380,000	915,000	2,465,000	36,080,000	7.3	5,000
12/31/15	3,195,000	1,015,000	2,180,000	38,260,000	6.0	5,000
12/31/16	3,985,000	1,270,000	2,715,000	40,975,000	7.1	5,000
12/31/17 ²	3,260,000	2,710,000	550,000	41,525,000	1.3	5,000
12/31/18	3,995,000	1,160,000	2,835,000	44,360,000	6.8	5,000
12/31/19	3,780,000	4,715,000	(935,000)	43,425,000	(2.1)	5,000
12/31/20	3,700,000	1,725,000	1,975,000	45,400,000	4.5	5,000
12/31/21	3,255,000	1,765,000	1,490,000	46,890,000	3.3	5,000
12/31/22	5,170,000	1,430,000	3,740,000	50,630,000	8.0	5,000

¹ A single individual may have coverage with more than one participating employer.

² An adjustment is included to combine retirees with multiple benefits paid by a single employer.

TABLE 17: GTLF PARTICIPATING EMPLOYERS AND COVERED MEMBERS¹

Valuation Date	Number of Participating Employers	Covered Members		Average Annual Pay	Percent Increase in Average Annual Pay	Employer Contributions	Average Employer Rate
		Number	Annual Payroll				
12/31/13	279	33,118	\$ 1,343,369,311	\$ 40,563	2.1%	\$ 4,203,456	0.31%
12/31/14	289	33,394	1,419,012,335	42,493	4.8	4,510,866	0.32
12/31/15	298	34,548	1,502,084,556	43,478	2.3	4,766,129	0.32
12/31/16	312	34,800	1,561,487,281	44,870	3.2	4,962,423	0.32
12/31/17	318	35,934	1,605,566,274	44,681	(0.4)	4,467,382	0.28
12/31/18	329	36,693	1,693,759,626	46,160	3.3	4,518,735	0.27
12/31/19	336	35,975	1,702,168,008	47,315	2.5	4,357,410	0.26
12/31/20	357	36,080	1,816,641,615	50,350	6.4	4,647,511	0.26
12/31/21	365	36,562	1,872,280,412	51,208	1.7	4,778,158	0.26
12/31/22	382	37,169	1,999,921,303	53,806	5.1	4,967,995	0.25

¹ Includes only employers that participate in the Group Term Life program.

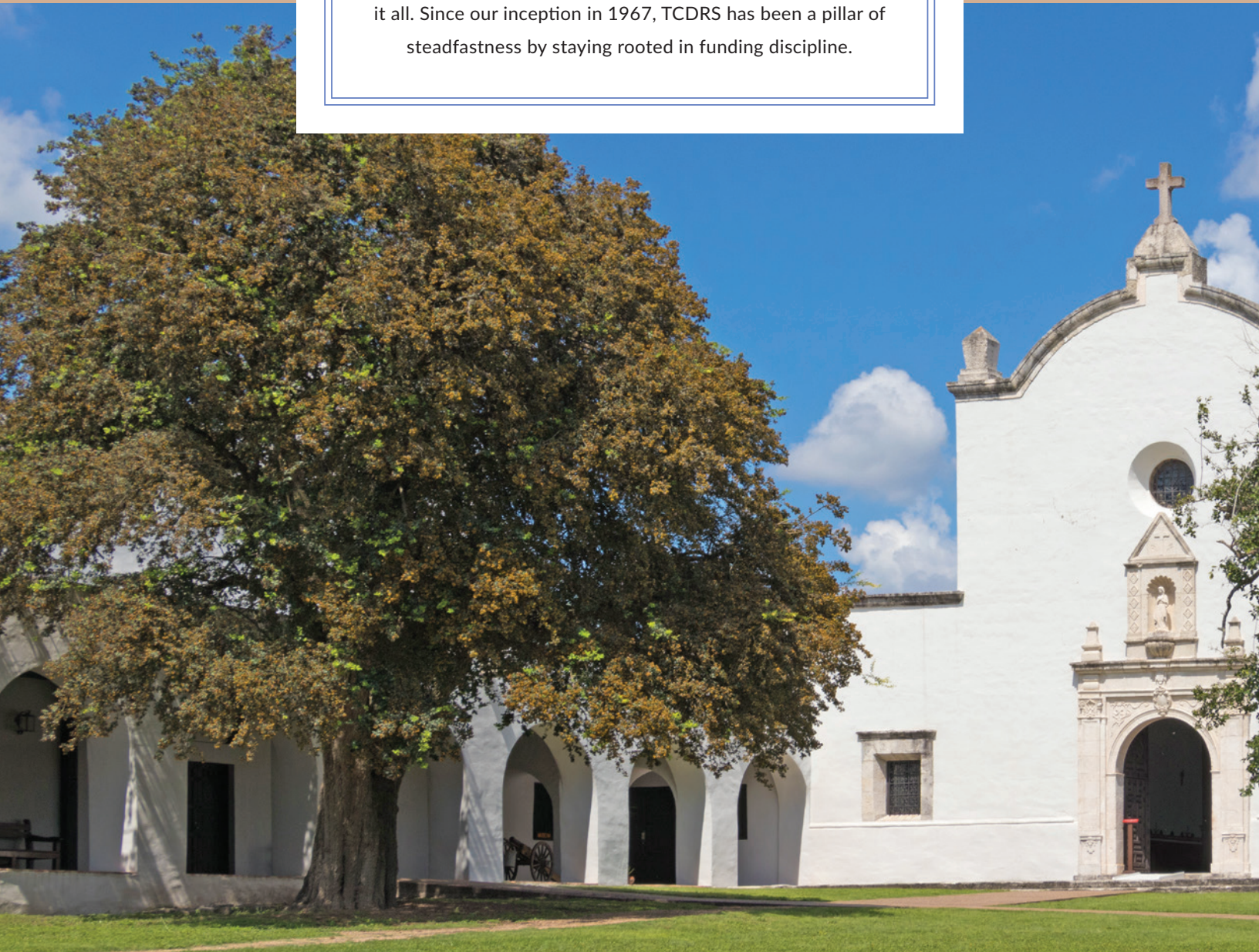
READER'S NOTES

FIVE STATISTICAL

GOLIAD ANACUA, GOLIAD COUNTY

Steady and Disciplined

Sometime in the 1800s, Goliad State Park's famous Anacua tree grew up from the ruins of the Espiritu Santo mission. The area has undergone significant changes, including the restoration of the mission, but the Goliad Anacua has remained a constant through it all. Since our inception in 1967, TCDRS has been a pillar of steadfastness by staying rooted in funding discipline.



ANACUA (EHRETIA ANACUA)

INTRODUCTION

The Statistical Section provides additional detail to assist you in interpreting the information in the Financial Statements, Notes to Financial Statements and Required Supplementary Information. The information is presented in two main categories: Financial Trends Data and Demographic and Operating Information.

The Financial Trends Data illustrates how TCDRS' financial position has changed over time. The changes in net position for the last 10 fiscal years show additions by source, deductions by type and the total change in Pension Trust Fund and Group Term Life Fund (GTLF) net position for each year. The pension benefit expenses by type gives data on benefits paid and withdrawal deductions for the last 10 fiscal years.

The Demographic and Operating Information provides details about TCDRS' operations and membership. The schedule of New Retiree Average Benefits gives the average monthly benefit and number of retired members, organized by five-year increments of credited service, for the last 10 fiscal years. Data is given for both pension benefits and for GTLF benefit payments. This section also includes information on the number of annuitants grouped by age and by type of benefits, along with a description of the retirement payment options. The schedule of largest participating employers compares the number of current members for those employers for the most recent year end and as of nine years ago.

FIGURE 1: ADDITIONS BY SOURCE – 2022

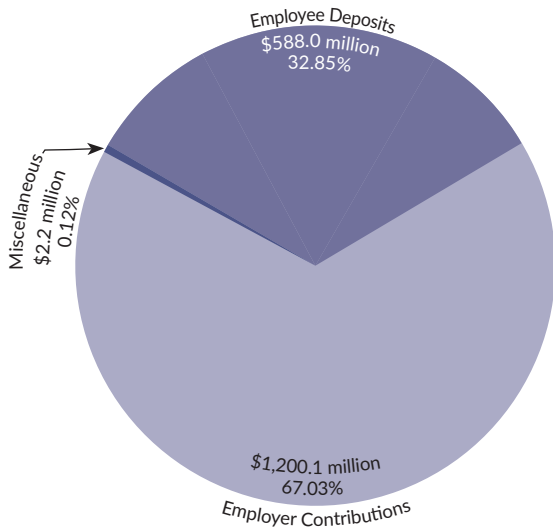


FIGURE 2: DEDUCTIONS BY TYPE – 2022

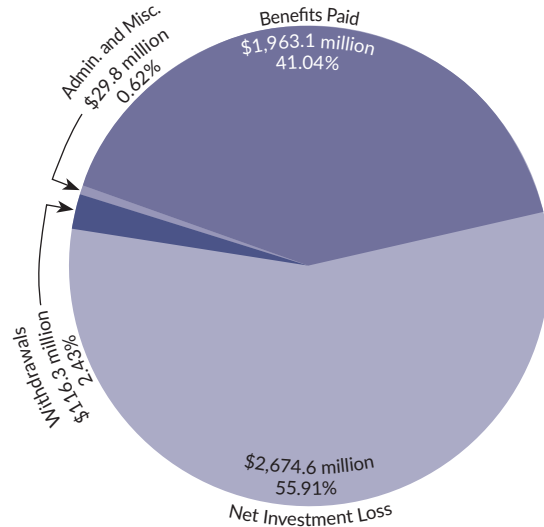
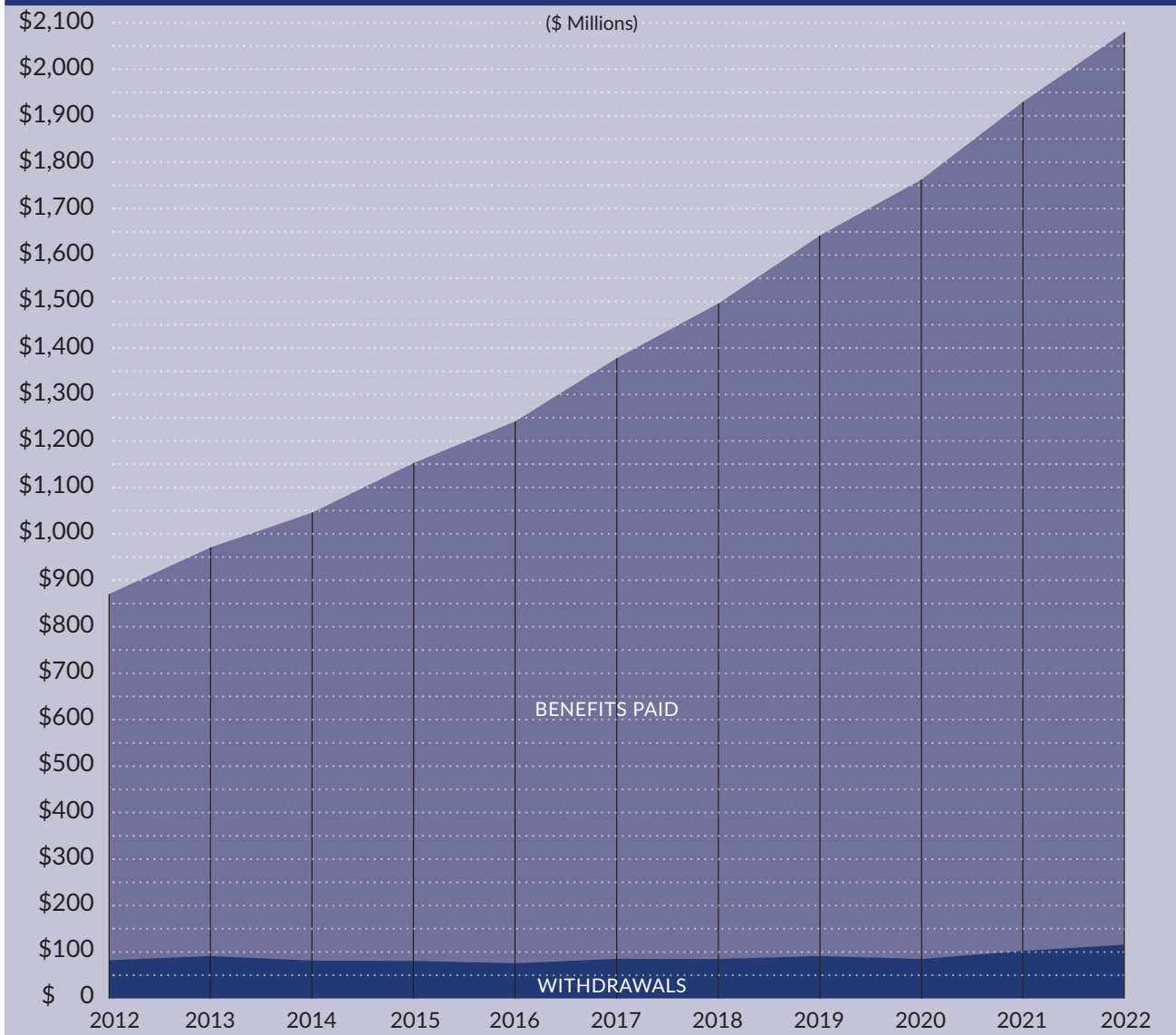


FIGURE 3: BENEFIT EXPENSES BY TYPE



FINANCIAL TRENDS DATA

TABLE 1: CHANGES IN NET POSITION, LAST TEN FISCAL YEARS

Pension Trust Fund	2013	2014	2015	2016
Additions				
Employee Deposits	\$ 367,313,130	\$ 383,186,524	\$ 414,806,917	\$ 432,765,143
Employer Contributions	644,462,694	684,212,315	743,149,234	771,701,126
Total Net Investment Income (Loss)	3,239,794,960	1,568,660,707	(172,638,528)	1,816,576,383
Other Additions	1,524,722	1,588,730	2,475,483	1,858,748
Total Additions	4,253,095,506	2,637,648,276	987,793,106	3,022,901,400
Deductions				
Benefits Paid:				
Service Retirements	864,546,467	948,890,194	1,053,112,636	1,149,053,001
Disability Retirements	15,400,094	15,566,244	15,996,931	16,069,755
Total Benefits Allowances	879,946,561	964,456,438	1,069,109,567	1,165,122,756
Withdrawals:				
Separation	89,227,565	81,243,255	80,373,804	74,737,725
Death / Ineligible	1,791,138	959,497	1,685,020	1,845,188
Total Withdrawals	91,018,703	82,202,752	82,058,823	76,582,913
Administrative and Building Operations Expenses	19,816,891	20,048,081	20,215,681	21,592,272
Interest Allocation to Group Term Life Fund	1,625,589	1,738,911	1,889,834	2,132,226
Payments to Terminating Employers	46,835	—	—	—
Total Deductions	992,454,579	1,068,446,182	1,173,273,905	1,265,430,167
Change in Net Position	\$ 3,260,640,927	\$ 1,569,202,094	\$ (185,480,799)	\$ 1,757,471,233
Group Term Life Fund				
Additions				
Employer Premiums	\$ 4,203,456	\$ 4,510,866	\$ 4,766,129	\$ 4,962,423
Income Allocation from Pension Trust Fund	1,625,589	1,738,911	1,889,834	2,132,226
Total Additions	5,829,045	6,249,777	6,655,963	7,094,649
Deductions				
Insurance Benefits	4,318,663	4,637,239	3,404,592	3,123,197
Total Deductions	4,318,663	4,637,239	3,404,592	3,123,197
Change in Net Position	\$ 1,510,382	\$ 1,612,538	\$ 3,251,371	\$ 3,971,452

FINANCIAL TRENDS DATA

TABLE 1: CHANGES IN NET POSITION, LAST TEN FISCAL YEARS, continued

	2017	2018	2019	2020	2021	2022
\$	453,435,928	\$ 469,786,710	\$ 498,343,448	\$ 536,458,089	\$ 550,152,286	\$ 588,035,367
	823,501,201	869,683,305	939,026,347	1,034,443,116	1,073,415,093	1,200,119,263
	3,837,061,315	(558,892,357)	4,807,071,981	3,496,597,429	8,117,364,773	(2,604,972,182)
	1,957,900	1,871,879	1,976,896	1,818,132	1,765,526	2,203,583
	5,115,956,344	782,449,537	6,246,418,672	5,069,316,766	9,742,697,678	(814,613,969)
	1,276,444,848	1,392,219,836	1,534,633,593	1,661,524,380	1,810,701,446	1,946,743,174
	16,363,172	16,499,057	16,523,966	16,512,662	16,389,004	16,310,256
	1,292,808,020	1,408,718,893	1,551,157,559	1,678,037,042	1,827,090,450	1,963,053,430
	84,208,957	84,596,757	90,484,037	83,338,482	100,550,641	114,253,951
	1,446,916	1,056,035	1,300,467	1,425,161	1,970,027	2,038,947
	85,655,873	85,652,792	91,784,504	84,763,643	102,520,668	116,292,898
	21,909,103	25,374,075	27,759,303	28,970,834	26,052,711	26,797,956
	2,359,682	2,527,808	2,715,200	2,856,996	2,892,692	2,999,561
	2,186	92	37,835	838	63,568	—
	1,402,734,864	1,522,273,660	1,673,454,401	1,794,629,353	1,958,620,089	2,109,143,845
\$	3,713,221,480	\$ (739,824,123)	\$ 4,572,964,271	\$ 3,274,687,413	\$ 7,784,077,589	\$ (2,923,757,814)
\$	4,467,382	\$ 4,518,735	\$ 4,357,410	\$ 4,647,511	\$ 4,778,158	\$ 4,967,995
	2,359,682	2,527,808	2,715,200	2,856,996	2,892,692	2,999,561
	6,827,064	7,046,543	7,072,610	7,504,507	7,670,850	7,967,556
	4,345,197	4,398,477	4,453,463	6,279,423	6,699,149	5,231,901
	4,345,197	4,398,477	4,453,463	6,279,423	6,699,149	5,231,901
\$	2,481,867	\$ 2,648,066	\$ 2,619,147	\$ 1,225,084	\$ 971,701	\$ 2,735,655

DEMOGRAPHIC AND OPERATING INFORMATION

TABLE 2: BENEFIT AT RETIREMENT FOR RECENT RETIREES

This schedule reports the number and average monthly benefit at retirement for recent retirees grouped by years of credited service and year of retirement.

	Years of Credited Service						
	0-5	5-10	10-15	15-20	20-25	25-30	30+
2013							
Average Monthly Benefit	\$ 235	\$ 668	\$ 1,210	\$ 1,648	\$ 2,247	\$ 3,396	\$ 4,735
Number of Annuitants	449	671	684	575	642	462	415
2014							
Average Monthly Benefit	\$ 253	\$ 708	\$ 1,228	\$ 1,707	\$ 2,423	\$ 3,691	\$ 5,002
Number of Annuitants	459	782	761	677	745	599	512
2015							
Average Monthly Benefit	\$ 289	\$ 756	\$ 1,239	\$ 1,841	\$ 2,518	\$ 3,462	\$ 5,390
Number of Annuitants	450	733	741	626	674	495	492
2016							
Average Monthly Benefit	\$ 254	\$ 765	\$ 1,301	\$ 1,875	\$ 2,590	\$ 3,792	\$ 5,420
Number of Annuitants	483	786	891	722	735	608	593
2017							
Average Monthly Benefit	\$ 321	\$ 854	\$ 1,322	\$ 1,971	\$ 2,756	\$ 4,043	\$ 5,805
Number of Annuitants	480	744	833	658	700	583	503
2018							
Average Monthly Benefit	\$ 300	\$ 963	\$ 1,381	\$ 2,174	\$ 2,973	\$ 4,208	\$ 6,507
Number of Annuitants	582	743	959	817	710	688	663
2019							
Average Monthly Benefit	\$ 324	\$ 908	\$ 1,432	\$ 2,168	\$ 2,913	\$ 4,219	\$ 6,130
Number of Annuitants	504	738	871	704	671	609	505
2020							
Average Monthly Benefit	\$ 338	\$ 910	\$ 1,453	\$ 2,167	\$ 2,857	\$ 4,255	\$ 6,469
Number of Annuitants	608	852	985	823	825	688	701
2021							
Average Monthly Benefit	\$ 329	\$ 887	\$ 1,494	\$ 2,211	\$ 2,984	\$ 4,329	\$ 6,430
Number of Annuitants	566	881	885	790	837	551	633
2022							
Average Monthly Benefit	\$364	\$954	\$1,611	\$2,277	\$3,197	\$4,671	\$6,918
Number of Annuitants	569	931	899	826	844	619	725

Note: TCDRS is an account-based plan similar to a cash balance plan, and final average salary data is not used to determine benefits, therefore final average salary data is not presented.

TABLE 3: AVERAGE BENEFITS

This schedule reports the average benefit for retirees and for all retirees and beneficiaries.¹

As of Dec. 31,	Retirees Only		All Payees	
	Monthly	Annually	Monthly	Annually
2013	\$ 1,629	\$ 19,548	\$ 1,524	\$ 18,288
2014	1,693	20,316	1,586	19,032
2015	1,752	21,024	1,637	19,644
2016	1,817	21,804	1,699	20,388
2017	1,897	22,764	1,745	20,940
2018	1,981	23,772	1,824	21,888
2019	2,039	24,468	1,879	22,548
2020	2,111	25,332	1,945	23,340
2021	2,169	26,028	1,998	23,976
2022	2,260	27,120	2,080	24,960

¹ In cases of retirees with multiple accounts from a single employer, the accounts are considered as a single benefit. Benefits from multiple employers to a single retiree are calculated as multiple benefits.

TABLE 4: AVERAGE BENEFIT PROFILE BY EMPLOYER TYPE

As of Dec. 31, 2022

	Retirees Only		All Payees	
	Monthly	Annually	Monthly	Annually
Counties	\$ 2,301	\$ 27,612	\$ 2,113	\$ 25,356
Districts	1,953	23,436	1,825	21,900

DEMOGRAPHIC AND OPERATING INFORMATION

TABLE 5: ANNUITANTS BY TYPE OF BENEFIT

Amount of Monthly Benefit	Annuitants			Retirement Option Selected							
	Retiree	Beneficiary ¹	Single Life	100% to Beneficiary	100% to Beneficiary with Pop-up	75% to Beneficiary	50% to Beneficiary	25% to Beneficiary ²	15-year Guarantee	10-year Guarantee	5-year Guarantee ²
\$ 0 – 499	10,252	4,762	6,042	2,748	1,879	369	1,320	148	1,680	754	74
500 – 999	12,249	3,471	6,379	2,878	2,256	485	1,511	49	1,263	815	84
1,000 – 1,499	10,019	1,954	4,552	2,071	1,904	489	1,376	46	869	597	69
1,500 – 1,999	7,747	1,101	3,458	1,399	1,345	480	1,064	33	546	469	54
2,000 – 2,499	6,117	722	2,640	1,108	1,063	310	968	11	387	330	22
2,500 – 2,999	4,635	458	1,985	827	843	249	694	7	266	202	20
3,000 – 3,499	3,664	327	1,521	630	616	230	608	7	188	176	15
3,500 – 3,999	2,854	226	1,242	470	457	147	432	2	167	152	11
4,000 – 4,499	2,295	148	925	412	355	152	356	2	111	125	5
4,500 – 4,999	1,762	79	738	282	265	103	299	3	77	71	3
5,000 – 5,499	1,508	62	592	261	206	110	259	1	71	67	3
5,500 – 5,999	1,124	46	442	195	175	90	176	1	42	49	0
6,000 – 6,499	966	27	378	155	140	83	171	1	31	34	0
6,500 – 6,999	658	27	266	100	78	60	116	0	32	33	0
7,000 & Over	2,672	99	967	494	312	232	532	2	120	112	0
Subtotals	68,522	13,509	32,127	14,030	11,894	3,589	9,882	313	5,850	3,986	360
Totals	82,031								82,031		

¹ Includes Alternate Payees of Retirees.

² Retirement payment option is no longer available to new retirees.

RETIREMENT BENEFIT PAYMENT OPTIONS

All options pay the retiree a monthly benefit for life and, when a retiree passes away, guarantee that the total benefit paid will equal, at a minimum, the total accumulated contributions of the retiree.

Single Life

Payments cease upon the death of the retiree.

15-year Guaranteed Term

If the retiree dies within 15 years of retirement, the beneficiary will receive the same monthly payment as the retiree for the balance of the 15-year period, at which time payments cease.

10-year Guaranteed Term

If the retiree dies within 10 years of retirement, the beneficiary will receive the same monthly payment as the retiree for the balance of the 10-year period, at which time payments cease.

50% to Beneficiary

At the death of the retiree, the beneficiary will receive 50% of the retiree's monthly payment throughout the beneficiary's life.

75% to Beneficiary

At the death of the retiree, the beneficiary will receive 75% of the retiree's monthly payment throughout the beneficiary's life.

100% to Beneficiary

At the death of the retiree, the beneficiary will receive 100% of the monthly amount paid to the retiree throughout the beneficiary's life.

100% to Beneficiary with Pop-up

If the beneficiary survives the retiree, monthly payments equal to 100% of the monthly amount paid to the retiree continue to the beneficiary for life. If the retiree outlives the beneficiary, the monthly payment amount will increase (pop up) after the beneficiary's death to the higher amount of the Single Life option.

DEMOGRAPHIC AND OPERATING INFORMATION

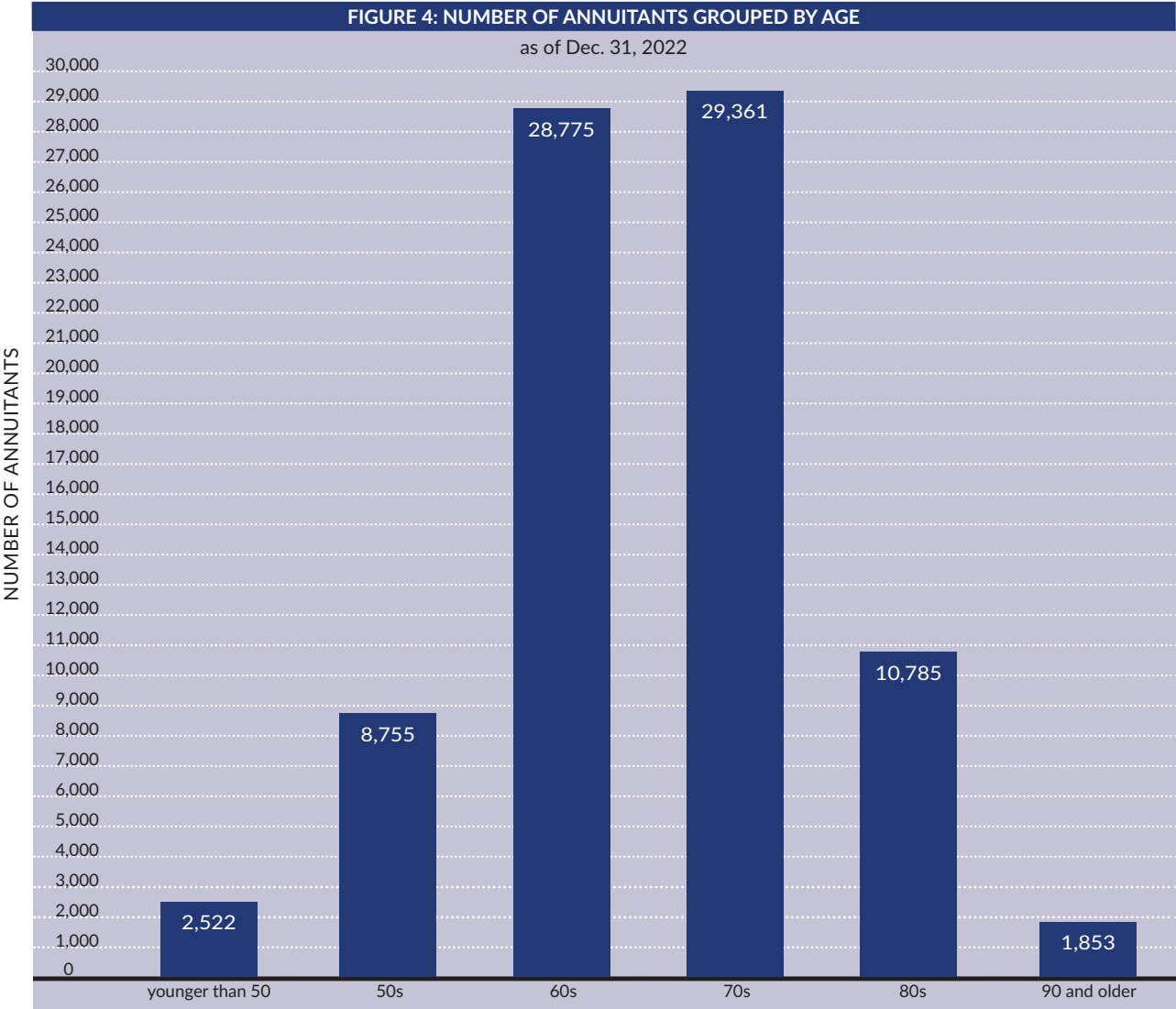


TABLE 6: LARGEST PARTICIPATING EMPLOYERS – CURRENT YEAR AND NINE YEARS AGO

Employer	2022			2013		
	Number of Current Employee Accounts	Rank	% of Total System	Number of Current Employee Accounts	Rank	% of Total System
Harris County	19,088	1	13.1%	15,278	1	12.3%
Dallas County	6,764	2	4.7%	6,801	2	5.5%
Bexar County	5,282	3	3.6%	5,003	4	4.0%
Travis County	5,063	4	3.5%	5,123	3	4.1%
Tarrant County	4,644	5	3.2%	4,385	5	3.5%
El Paso Co. Hospital District	3,471	6	2.4%	2,593	8	2.1%
Hidalgo County	3,219	7	2.2%	3,034	6	2.4%
Fort Bend County	3,135	8	2.2%	2,473	9	2.0%
El Paso County	2,949	9	2.0%	2,891	7	2.3%
Montgomery County	2,622	10	1.8%	2,087	10	1.7%
All others	88,989		61.3%	74,857		60.1%
Totals	145,226		100.0%	124,525		100.0%

DEMOGRAPHIC AND OPERATING INFORMATION

**TABLE 7: GROUP TERM LIFE FUND –
AVERAGE BENEFITS PAID**

This schedule reports the number of GTLF insurance payments and the average benefits paid.

	Active	Retirees
2013		
Average benefit payment	\$38,659	\$5,000
Number of payments	83	222
2014		
Average benefit payment	\$41,205	\$5,000
Number of payments	89	194
2015		
Average benefit payment	\$36,819	\$5,000
Number of payments	63	217
2016		
Average benefit payment	\$38,763	\$5,000
Number of payments	54	206
2017		
Average benefit payment	\$41,175	\$5,000
Number of payments	81	202
2018		
Average benefit payment	\$43,446	\$5,000
Number of payments	75	228
2019		
Average benefit payment	\$47,719	\$5,000
Number of payments	69	233
2020		
Average benefit payment	\$50,436	\$5,000
Number of payments	95	317
2021		
Average benefit payment	\$44,137	\$5,000
Number of payments	112	351
2022		
Average benefit payment	\$48,261	\$5,000
Number of payments	77	302

GLOSSARY

ACTUARIAL ACCRUED LIABILITY

The portion, as determined by the actuarial cost method, of the Actuarial Present Value of pension plan benefits and expenses that is not provided for by future Normal Costs.

ACTUARIAL ASSUMPTIONS

In order to estimate the cost of funding benefits, the actuaries use long-term assumptions. Examples include mortality, termination, disablement and retirement; changes in salary; payroll growth; investment returns and other relevant items. Actuarial assumptions are adopted by the board of trustees upon recommendation of the consulting actuaries. The assumptions are reviewed every four years.

ACTUARIAL GAIN (LOSS)

The difference between actual results and what was projected to happen based on Actuarial Assumptions during the period between annual Actuarial Valuations.

ACTUARIAL PRESENT VALUE

The calculated value of a series of projected cash flows expressed in present day dollars as of the valuation date using actuarial assumptions.

ACTUARIAL VALUATION

The process to calculate the employer contribution rate. This process determines the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets and Actuarial Present Values.

ACTUARIAL VALUE OF ASSETS

The value of cash, investments and other property belonging to a pension plan, as used by the actuary for the purpose of an Actuarial Valuation.

ACTUARIALLY EQUIVALENT PAYMENT OPTIONS

Different benefit payment options that pay different amounts per month, but are of equal value at the time the option is selected.

ALERIAN MLP INDEX

This index is a benchmark for energy infrastructure Master Limited Partnerships that includes MLPs which earn the majority of their cash flow from midstream activities. The index is calculated using a capped, float-adjusted, capitalization-weighted methodology.

BENCHMARK PORTFOLIOS

Portfolios represented by specific indices that are created for the purpose of measuring the relative performance of investment managers, asset classes and, in the case of the Policy Benchmark Portfolio, the entire TCDRS portfolio. Data regarding performance of these benchmark portfolios during any period indicate the returns that were available during the period for comparable investments that were passively managed. Comparisons indicate the value added by each manager, if any, in excess of the performance that was experienced by the specific benchmark index.

BLOOMBERG COMMODITIES INDEX

This index is composed of futures contracts on physical commodities. It provides broad-based exposure to commodities, with no single commodity or sector dominating the index. The liquidity and diversity of the benchmark make it suitable for institutional investment.

BLOOMBERG U.S. AGGREGATE BOND INDEX

This index incorporates all domestic debt issues with maturities greater than one year and in amounts greater than \$1 million. Included are publicly issued, nonconvertible, domestic debt issues of the U.S. government and its agencies and corporations in industrial, utility or financial segments.

BLOOMBERG U.S. 10-YEAR BREAKEVEN INFLATION INDEX

This index is designed to provide access to 10-year breakeven inflation by capturing the returns of a simultaneous long position in 10-year inflation linked securities and a short position in suitable nominal comparator U.S. Treasury bonds.

CAMBRIDGE ASSOCIATES DISTRESSED SECURITIES INDEX

A custom benchmark index provided by Cambridge Associates based on data compiled from more than 325 distressed debt funds, including fully liquidated partnerships with first cash flows beginning in 2005. The benchmark return is net of fees, expenses and carried interest.

CAMBRIDGE ASSOCIATES GLOBAL PRIVATE EQUITY & VENTURE CAPITAL INDEX

A custom benchmark index provided by Cambridge Associates based on data compiled from approximately 3,700 global private equity

and venture capital funds, including fully liquidated partnerships, with first cash flows beginning 2006. The benchmark return is net of fees, expenses and carried interest.

CAMBRIDGE ASSOCIATES REAL ESTATE INDEX

A custom benchmark index provided by Cambridge Associates based on data compiled from more than 750 global private real estate funds, including fully liquidated partnerships with first cash flows beginning 2007. The benchmark return is net of fees, expenses and carried interest.

COMMODITIES

Investment in resources that can be perishable (grains, sugar, etc.) and non-perishable (metals, energy, etc.). Commodities provide protection against inflation and have low correlation to stocks and other asset classes.

DIRECT LENDING

Privately originated debt made to small to medium-sized companies or to real estate investors in order to take advantage of disruptions in the banking system.

DISTRESSED DEBT

Distressed debt investments are investments in partnerships that purchase the debt of companies experiencing financial distress ranging from deteriorating financial conditions to bankruptcy. Strategies employed include trading, participating in restructuring transactions and controlling bankruptcy proceedings.

DOW JONES U.S. TOTAL STOCK MARKET INDEX

This index is one of the broadest measures of domestic equity performance since it is computed based upon all equity trades of U.S. stocks during any day. Each company included within the index is not equally weighted within the index, but rather is weighted according to its market value among the market values of all U.S. companies.

EMPLOYER REQUIRED CONTRIBUTION RATE

The percentage of payroll the employer is required to contribute to fund future benefits for their current employees, former employees and retirees. It is the sum of the Normal Cost Contribution Rate and the Unfunded Actuarial Accrued Liability Contribution Rate.

ENTRY-AGE ACTUARIAL COST METHOD

An actuarial cost method under which the Actuarial Present Value of the Projected Benefits of each individual included in an Actuarial Valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit ages. The portion of this Actuarial Present Value allocated to a valuation year is called the Normal Cost. The portion of this Actuarial Present Value not provided for at a Valuation Date by the Actuarial Present Value of future Normal Costs is called the Actuarial Accrued Liability.

FOREIGN CURRENCY FORWARD CONTRACTS

Forward contracts are over-the-counter agreements between two parties to buy and sell a currency at a set price on a future date. The contracts are marked-to-market on each valuation date with any resulting unrealized appreciation or depreciation recorded on such date. Realized gains or losses equal to the value of the contract when it was opened and the settlement amount at the time the contract is closed (or rolled) are recorded upon receipt of the currency.

FTSE HIGH-YIELD CASH-PAY INDEX

This index includes cash-pay bonds with a below-investment-grade rating by both Moody's Investor Services and Standard & Poor's. The bonds must have a maturity of at least one year and a minimum amount outstanding of \$250 million.

FTSE NAREIT ALL EQUITY REIT INDEX

This index gives a broad exposure to U.S. publicly traded equity REITs in every property sector.

FTSE NAREIT EQUITY REITS INDEX

This index contains all Equity REITs across the U.S. economy not designated as Timber REITs or Infrastructure REITs.

GLOBAL EQUITY

Investments in stocks included in all public markets, both domestic and international.

HEDGE FUND RESEARCH INSTITUTE (HFRI) FUND OF FUNDS COMPOSITE INDEX

This index consists of funds that each manage a group of diverse hedge funds. Fund of Funds invests with multiple managers through funds or managed accounts. The strategy designs a diversified portfolio of managers with the objective of significantly lowering the risk (volatility) of investing with an individual manager. The Fund of Funds manager has discretion in choosing which strategies to invest in for the portfolio.

GLOSSARY

HEDGE FUNDS

An investment strategy applied to a variety of different investments to help manage risk within the entire portfolio. Over a full market cycle, hedge funds produce risk-adjusted returns to help mitigate losses during market downturns.

HIGH-YIELD BONDS

Domestic fixed-income securities that have not been highly rated by national rating agencies, such as Moody's Investors Service (Moody's) or Standard & Poor's (S&P). A security is considered a high-yield bond if it is rated below Baa3 by Moody's or below BBB- by S&P. To pay for the risk, the interest rates earned are higher than investment-grade bonds.

INVESTMENT-GRADE BONDS

The investment-grade bonds portfolio consists of debt securities issued by the U.S. Treasury or an agency or government-sponsored entity (GSE) of the United States (U.S. government); mortgage-related instruments, U.S. dollar-denominated fixed-income securities issued by U.S. and foreign corporations; and U.S. dollar-denominated debt issued by foreign governments and supranationals. Additionally, these portfolios may contain minimal investments in short-term instruments, non-rated securities, private placement securities, convertible bonds and preferred stock. The portfolio should exhibit an overall dollar-weighted average quality rating of AA.

MASTER LIMITED PARTNERSHIPS (MLPS)

Publicly traded partnership interests created by Congress to encourage investment in domestic energy infrastructure. At the entity level, these interests are tax free provided that 90% of their income comes from natural resources such as oil, natural gas, coal, timber and other depletable resources.

MORNINGSTAR LSTA US LEVERAGED LOAN TR USD INDEX

This index is a market value-weighted index designed to measure the performance of the U.S. leveraged loan market based upon market weights, spreads and interest payments.

MSCI EAFE INDEX (EUROPE, AUSTRALASIA, FAR EAST)

This index, prepared by Morgan Stanley Capital International (MSCI), is designed to measure developed market large and mid-cap equity performance excluding the United States and Canada.

MSCI EMERGING MARKETS (EM) INDEX

This index, prepared by Morgan Stanley Capital International (MSCI), captures large and mid-cap equity performance across 24 emerging market countries with more than 1,300 constituents.

MSCI WORLD EX U.S.

This index, prepared by Morgan Stanley Capital International (MSCI), is designed to measure developed market equity performance excluding the United States.

MSCI WORLD INDEX (NET)

This index, prepared by Morgan Stanley Capital International (MSCI), is a broad global equity index that represents large and mid-cap equity performance across developed markets countries.

NORMAL COST

The portion of the Actuarial Present Value of pension plan benefits and expenses that is allocated to a valuation year by the actuarial cost method.

NORMAL COST CONTRIBUTION RATE

This is the rate required to fund current employees' benefits over their projected careers. It is equal to the Actuarial Present Value at hire of Projected Benefits divided by the Actuarial Present Value at hire of anticipated future compensation. It is calculated for each contributing member and the average is weighted by compensation.

OPPORTUNISTIC CREDIT

Comprises investments primarily in debt instruments that provide return opportunities resulting from dislocations in capital markets.

OVERFUNDED ACTUARIAL ACCRUED LIABILITY (OAL)

The excess, if any, of the Actuarial Value of Assets over the Actuarial Accrued Liability.

PLAN YEAR

The period from Jan. 1 to Dec. 31 inclusive.

PRIOR SERVICE

Benefits attributable to an amount provided by the employer for service rendered by an employee prior to employer participation in TCDRS.

PRIVATE EQUITY

Private partnerships that (a) take public companies private in order to improve their operations and resell them in the future; (b) invest in start-up companies with new ideas or technologies; and (c) invest in companies seeking to discover, produce, and transport energy products.

PRIVATE REAL ESTATE

Non-publicly traded vehicles that invest in a broad array of real estate properties and ventures. Private real estate investments are expected to be very illiquid and long term in nature. The vehicles for private real estate investments are typically partnerships, but may also include other entities such as limited liability companies or offshore corporations.

PROJECTED BENEFITS

Retirement benefit amounts that are estimated to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such factors as the effect of advancement in age, and past and anticipated future compensation and service time.

REITS

Real estate investment trusts are companies that own and operate income-producing real estate, such as commercial office buildings, apartments, malls, warehouses and storage facilities. Under provisions of the U.S. tax law, if REITs pay out most of their income, they do not pay income taxes. This means higher income earnings along with any increase in the value of the real estate.

S&P GLOBAL REIT INDEX (NET)

This index serves as a comprehensive benchmark of publicly traded equity REITs listed in both developed and emerging markets.

STRATEGIC CREDIT

Portfolio comprised of high-yield bond and opportunistic credit portfolios.

TIPS

Treasury Inflation-Protected Securities are bonds issued by the U.S. Treasury just like other U.S. government bonds. However, the principal amount of TIPS increases with the rate of inflation so that inflation does not decrease the value of the bond. They provide a way to protect against inflation.

UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)

The excess, if any, of the Actuarial Accrued Liability over the Actuarial Value of Assets.

UNFUNDED ACTUARIAL ACCRUED LIABILITY CONTRIBUTION RATE

The amount needed to amortize the Unfunded Actuarial Accrued Liability over a closed period of 20 years or less, expressed as a percent of payroll. If the plan has an Overfunded Actuarial Accrued Liability, it is amortized over an open period of 30 years, and the resulting negative Unfunded Actuarial Accrued Liability Contribution Rate is offset against the Normal Cost Contribution Rate.

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