



Helping you build a brighter tomorrow.

COUNTY EMPLOYEES' RETIREMENT FUND

CERF Pension Plan Information

CERF Administrative Office 2121 Schotthill Woods Drive Jefferson City, MO 65101



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COUNTY EMPLOYEES' RETIREMENT FUND

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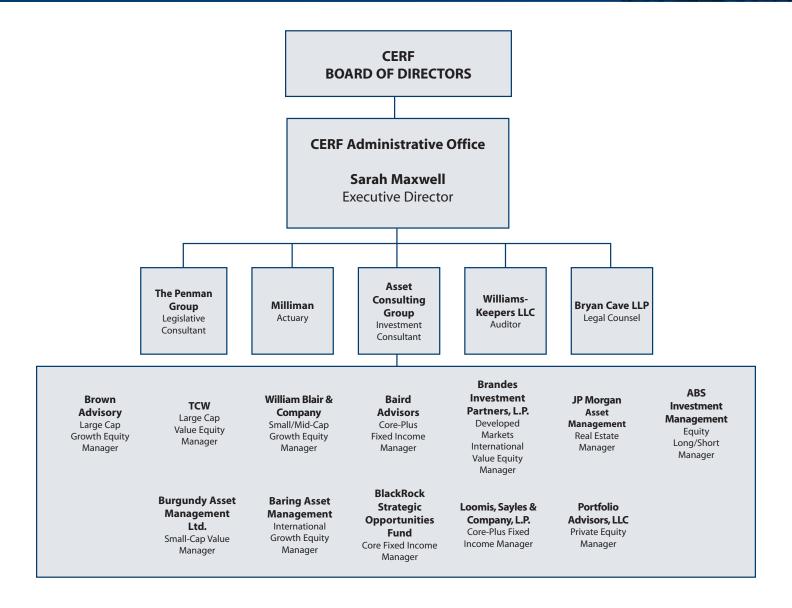
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ADMINISTRATIVE STRUCTURE



This Annual Report is distributed for informational purposes only. The full text of actuarial reports, financial statements and audit materials is available upon request pursuant to Missouri's Open Records Law. To obtain any of these documents, you may send a written request to the plan administrator at:

CERF Plan Administrator 2121 Schotthill Woods Drive Jefferson City, MO 65101

The actual language of the statutes and rules and regulations creating and implementing the County Employees' Retirement Fund controls and takes precedence over the material contained herein. In the event a member has any questions concerning the County Employees' Retirement Fund, the member should look to the statutes codified at Section 50.1000, RSMo (1994) et. seq. for guidance. Members should not rely on this summary in place of the actual text of the law.

CERF Pension Plan

Eligibility

Full-time employees (scheduled to work at least 1,000 hours a year) are eligible to participate in the Pension Plan. Part-time and seasonal employees become eligible on January 1 or July 1 after completion of 1,000 hours of service in a calendar year, or upon transfer to full-time status.

Participation

Participation is mandatory for eligible employees. Full-time employees begin participating in the plan immediately upon their date of hire. Part-time and seasonal employees begin participating once they become eligible.

Contributions

House Bill 1455 requires all participants hired on or after February 25, 2002, to contribute an additional 4% of gross salary to the plan, effective January 1, 2003. A non-LAGERS participant hired prior to February 25, 2002, contributes 2%; a non-LAGERS participant hired on or after February 25, 2002, contributes 6% to the plan. A LAGERS participant hired prior to February 25, 2002, is not required to make contributions; a LAGERS participant hired on or after February 25, 2002, contributes 4% to the plan. Nearly all of the funding for CERF comes from county receipts in the form of contributions, fees and penalties.

Vesting

A participant is vested after eight years of continuous creditable service during which pay is earned and received for at least 1,000 hours in each of those eight years.

Prior Service

Employees who were employed on June 10, 1999, and remained employed through January 1, 2000, do not have to purchase prior service. (Specific rules apply in certain rehire circumstances.) Members who terminated vested or retired prior to January 1, 2000, must purchase any service accrued prior to August 28, 1994, in order to include that service in their retirement benefit.

Early Retirement

Members have the option of retiring as early as age 55 (with eight years of continuous creditable service) and receiving an actuarially-reduced benefit. To be eligible for early retirement, a participant must terminate employment on or after January 1, 2000, and meet other eligibility requirements.

Cost-of-Living Adjustment

The Board may authorize a Cost-of-Living Adjustment (COLA) each year equal to 100% of the Consumer Price Index, up to 1%, for all members who have been receiving benefits for at least one year on the date the COLA becomes effective. COLAs will become effective on July 1 of each year.

Survivor Benefits

ACTIVE EMPLOYEES: If a participant dies while actively employed, his or her named beneficiary will receive a lump-sum death benefit of \$10,000.

NON-VESTED MEMBERS: Senate Bill 625, effective August 28, 2012, allows a refund of contributions to the beneficiary(ies) of active members who die after December 31, 2002, and before becoming vested.

MARRIED, VESTED MEMBERS: If a vested participant dies before his or her pension begins, his or her surviving spouse can apply for a 50% spousal pension benefit.

SINGLE, VESTED MEMBERS: House Bill 795, effective August 28 2004, allows a refund of contributions to the beneficiary(ies) of a single, vested member who dies on or after August 28, 2004.

RETIRED MEMBERS: Depending on which option the member chooses, the designated survivor will receive the appropriate amount of benefits under the survivor option selected on his or her benefit calculation. Members who terminated employment or retired on or after January 1, 2000, have the option to designate someone other than a spouse as the beneficiary of their retirement annuity.

CERF Savings Plan

Eligibility

A member must participate in the CERF Pension Plan in order to be eligible to participate in the CERF Savings Plan.

Automatic Contributions

Effective January 1, 2000, a member who is not in LAGERS is required to contribute .7% to the CERF Savings Plan. This pre-tax deduction is deposited automatically in the member's 401(a) account.

Voluntary Contributions

In 2018, participants may contribute up to the lesser of \$18,500, or 100% of their includible compensation to the 457 component of the plan. This limit includes contributions to other 457 plans as well.

Matching Contributions

Each year, the Board of Directors will determine the amount available for a matching contribution to the Savings Plan (up to plan limits). This matching amount will be added to member accounts for those who contributed to the 457 Plan, earn and receive pay for at least 1,000 hours during the year, retire at age 62, or die while employed by the county. The match will be deposited into the 401(a) component of member accounts as soon as administratively feasible after the plan year has ended.

Vesting

Members are always 100% vested in their automatic (.7%) and voluntary (457 plan) contributions, and are 100% vested in the matching contributions when they have 5 years of creditable service (from date of hire), or if they die during the plan year.

Investment Options

A broad range of investment options is available, including the option to pick individual funds or target date funds, or have your account managed for you.

Making Changes

Participants may change the amount of their contributions on a quarterly basis and can stop 457 plan deferrals completely at any time. Changes to investment options can be done at any time. Investment changes can be made on a same-day basis through either KeyTalk at 800-701-8255 or the website at www.empower-retirement.com. You will need to use your user ID and personal identification number (PIN) provided to you by Empower Retirement.

Payment Options

Payments from the 457 or 401(a) portion of the plan may be made through annuity payments, lump sum, or periodic distributions if the account balance is \$5,000 or more.

Rollovers and Plan Transfers

Members who have other qualified 457, 401(a) or 401(k) plans may transfer or roll over money from those plans to the appropriate component of the CERF Savings Plan. Likewise, if a member leaves employment, he or she may transfer or roll over his or her CERF Savings Plan balance to another qualified plan or IRA.

Need More Information

For more information on the CERF Savings Plan, please call the CERF Administrative Office.

Investments

CERF Investment Portfolio Background and Objectives

The purpose of CERF's investment program is to provide long-term benefits to the plan's participants, by investing the pension fund assets in the best interest of the fund's participants.

CERF's Board of Directors maintains an Investment Policy which articulates the fund's goals, objectives, and risk parameters. It states that the pension fund portfolio should be diversified among various investments, and should aim to achieve attractive investment returns within prudent risk parameters over a long-term time horizon.

Total Portfolio Asset Allocation

Asset allocation is employed as the primary tool for managing the long-term risk and return objectives for CERF's investment portfolio. CERF's portfolio is well-diversified, with exposure to several different investment strategies (asset classes).

CERF's portfolio is continually monitored by the investment consultant and Board of Directors for appropriateness, given the stated investment objectives and guidelines. Assets are periodically rebalanced to keep the exposures to various investments within the stated ranges defined in the investment policy. New assets classes are periodically added to the mix to enhance diversification.

The portfolio's current target asset allocation mix is 65% equity (stocks), 30% fixed income (bonds) and 5% real assets (real estate). Diversification goes beyond these broad asset classes, however, as the portfolio is invested in several subasset classes and investment managers, each with their own set of diversification attributes.

Equity Portfolio Design

CERF is invested in equities for the growth opportunities they provide. CERF owns different types of equities (domestic stocks, international stocks, hedged equity funds, and private equity), in different sizes (small, mid, and large capitalization stocks), in different styles (value and growth stocks) and with different investment management organizations.

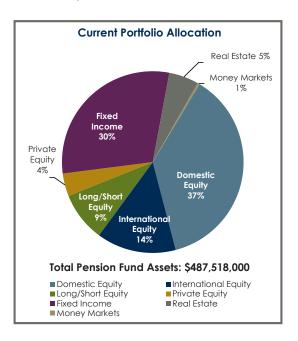
Fixed Income Portfolio Design

CERF invests in fixed income to enhance diversification, as over time, bonds are generally less volatile than stocks. Much like the equity allocations, the complementary fixed income strategies are designed to provide broad exposure to the global fixed income markets, including diversification by quality, sector, geography, and security type.

Real Asset Portfolio Design

Real assets typically behave differently than stocks and bonds, and their low correlation to these other asset classes provides even further diversification to the investment portfolio. CERF's portfolio includes an allocation to real estate through a diversified real estate fund. The real estate portfolio is invested in different geographic locations and different property types, while maintaining strict quality requirements for each property, including leverage and occupancy rates.

The chart below depicts the pension fund's total assets and asset allocation posture as of December 31, 2018:



2018 Year in Review

Despite ongoing central bank policy normalization and concerns around trade, the global economy extended its post-crisis recovery. The calm and resilience exhibited by financial markets in 2017 finally broke as global equity markets experienced multiple episodes of heightened volatility. Concerns of "peak growth" intensified throughout the year. Emerging market stocks served as the epicenter of risk, with a slowdown in China spreading to economies and markets throughout the world. With a strong risk-off rally late in the year, US bonds did well to finish flat or slightly up.

Cash outperformed both stocks and bonds as the Federal Reserve's short-term rate increases finally restored positive real yields. Amid strong earnings momentum, the S&P 500 index was setting new all-time highs into late-September, before entering a major correction by year-end. The Russell 2000 index of small cap stocks shared a similar fate, ultimately experiencing double-digit losses. As such, valuations became more favorable throughout 2018.

Investments

Non-US markets underperformed US equities, with international developed markets (MSCI EAFE) and Emerging Markets (MCSI EM) down roughly 13% and 14%, respectively. Both were hindered by notable appreciation in the US dollar (USD) and concern around future growth prospects.

Bonds generated slightly positive total returns, having to overcome both rising US Treasury rates and wider credit spreads during 2018.

Total Portfolio Asset Allocation

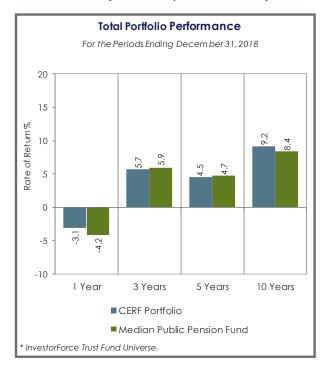
The success of the investment program is defined by its adherence to the investment policy guidelines, and its performance compared to the stated return objectives and risk parameters. The chart below shows the pension fund's annualized performance and risk since its inception compared to the stated objectives:

Total Pension Fund Performance vs. Objectives

(December 31, 1994 - December 31, 2018)

	Benchmark	CERF
Return Objectives		
At a minimum, it is the objective of CERF to exceed its actuarial interest rate assumption on an ongoing basis.	7.5%	8.4%
The pension fund's annualized total return should equal or exceed the annualized rate of inflation as indicated by the Consumer Price Index by 5%.	7.3%	8.4%
The pension fund's total return should exceed the total return of an index composed as follows:		
65% MSCI ACWI Index 30% BloomBar US Aggregate Bond Index 5% NFI ODCE Index	8.2%	8.4%
Risk Objective		
The pension fund's level of risk, as measured by Standard Deviation, should be consistent with the risk of the index noted above.	9.5%	9.4%

The following chart compares CERF's investment performance over the one, three, five, and ten year periods ending December 31, 2018. CERF's portfolio outperformed the median public pension fund in 2018 and on a 10-year basis, and fell closely in line with peers on a 3 and 5-year basis.



Ongoing Monitoring

The CERF Board of Directors works closely with their investment consultant to oversee all aspects of the investment program, including investment policy design and review, asset allocation, and ongoing investment manager due diligence.

CERF's investment managers provide regular updates on their portfolios to the consultant and CERF's staff. In addition, each investment manager presents a formal update to the Board on a periodic basis.

CERF's Board of Directors and their consultant meet each calendar quarter to review the investment portfolio in detail and to discuss and address specific issues. In addition, interim meetings are held as needed. This ensures that the monitoring and oversight process for CERF's investment portfolio is ongoing.

The CERF Board's primary focus regarding the retirement funds is to develop and implement an investment program which is designed to achieve the stated investment objectives in a prudent manner over a long-term time horizon.

Actuarial

PLAN MEMBERSHIP	AS OF JANUARY 1, 2019
Covered Payroll Average Pay per Active Member	\$433,125,201 \$37,287
ACTUARIALLY DETERMINED CONTRIBUTION (ADC)	
Unfunded Actuarial Accrued Liability (UAAL)	\$219,809,063
Amortization of UAAL, with interest to mid-year Normal Cost, with interest to mid-year	sar* \$ 21,010,298 \$ 24,527,620
Reduction in Normal Cost for Member Contributions	\$ 15,742,312
Annual Required Contributions as a percent of payroll	\$ 29,795,606 6.85%
PLAN ASSETS	
Actuarial Value	\$529,029,220
Market Value	\$493,302,868
FUNDED STATUS	
Entry Age Normal Actuarial Accrued Liability	\$748,838,283
Funded Ratios Funded Percentage on Actuarial Value of Astronomy Funded Percentage on Market Value of As	

^{*} Until July 1, 2011, the UAAL was being amortized as a level percentage of payroll over a 30-year period beginning January 1, 1995. As of July 1, 2011, the UAAL amortization was started fresh over a 20-year period. New components of the UAAL will be amortized over new 20-year periods as such components arise.

Financial Statements

STATEMENT OF FIDUCIARY NET POSITION DECEMBER 31, 2018

ASSETS

Cash	\$	4,140,965	
Receivables: Member contributions Member prior service contributions County contributions Receivable for pending investment sales Accrued interest and dividends Total receivables		467,354 137,225 3,720,574 182,024 159,099 4,666,276	
Investments, at fair value: Common stocks Fixed income mutual funds Hedge funds International equities funds Real estate fund Private equity Cash equivalents Total investments	_	175,421,496 145,582,728 43,085,909 69,059,855 22,299,504 20,428,681 8,499,857 484,328,030	
Invested securities lending collateral Capital assets, net of accumulated depreciation of \$1,892,84	3	64,745,149 5,418,029	
Total assets		563,298,449	
LIABILITIES			
Accounts payable Accrued defined contribution plan funding Other accrued expenses Unearned revenue Payable for pending investment purchases Collateral for securities on loan Total liabilities Net position – restricted for pension benefits		630,575 3,698,619 151,532 39,388 140,118 65,335,349 69,995,581	
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The notes to financial statements are an integral part of these statements and are available on CERF's website, or by contacting the CERF Administrative Office.

Financial Statements

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION FOR THE YEAR ENDED DECEMBER 31, 2018

ADDITIONS: Contributions: County receipts By members For members, paid by counties Members, purchase of prior service	\$ 28,517,335 13,303,261 2,300,484 94,579
Total contributions	44,215,659
Investment income: Investing activities: Net depreciation in fair value of investments Fixed income securities Equity securities Other miscellaneous income Total investment loss Investment expenses	(22,934,405) 4,089,616 4,823,631 160,263 (13,860,895) (2,698,006)
Net loss from investing activities	(16,558,901)
Securities lending activities: Income Expenses	1,336,995 (1,160,561)
Net income from securities lending activities	176,434
Total net investment loss	(16,382,467)
Other income	8,808
Total additions	27,842,000
DEDUCTIONS: Benefits Refunds of member contributions Defined contribution plan matching contribution Administrative expense	33,439,139 3,810,029 3,698,619 3,121,552
Total deductions	44,069,339
Net decrease	(16,227,339)
Net position – restricted for pension benefits Beginning of year	509,530,207
End of year	\$ 493,302,868

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CERF Demographics

(Data as of December 31, 2018)

Active Participants	11,616
Retired Members and Beneficiaries	5,321
Terminated Vested Participants	2,468
Sum of Death Benefits (since inception) Sum of Remaining Buy Back Balances Sum of Benefit Payments, Taxes and	\$ 5,270,000 \$ 137,225
Buy Back Payments (since inception)	\$319,191,268
Average Gross Monthly Benefit	\$ 529

Summary of County Receipts for 2018

Assessor Late Fees	Collector Merchant License Fees	Collector Delinquent Fees	Delinquent Land List Fees	County Interest	Employee Contributions	County Contributions	Recorder Document Fees
\$7,767,778	\$1,042,619	\$13,827,358	\$948,285	\$87,801	\$13,303,261	\$2,300,484	\$4,843,494