San Diego City Employees' Retirement System

San Diego Unified Port District

Actuarial Valuation Report as of June 30, 2019

Produced by Cheiron

December 2019

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December 24, 2019

Board of Administration
San Diego City Employees' Retirement System
401 West A Street, Suite 400
San Diego, CA 92101

Re: San Diego Unified Port District June 30, 2019 Actuarial Valuation

Dear Members of the Board:

We are pleased to submit the June 30, 2019, Actuarial Valuation Report for the Unified Port District (UPD, the "Plan") of the San Diego City Employees' Retirement System (SDCERS).

The purpose of this report is to present the annual actuarial valuation of the SDCERS-Unified Port District Defined Benefit Plan. This report is for the use of the SDCERS Board and its auditors in preparing financial reports in accordance with applicable law and accounting requirements.

In preparing our report, we relied on information (some oral and some written) supplied by SDCERS' staff. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

Future results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the assumptions; changes in assumptions; and changes in plan provisions or applicable law.

This report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.

This actuarial valuation report was prepared for the San Diego City Employees' Retirement System for the purposes described herein and for the use by the plan auditor in completing an audit related to the matters herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to such other users.

Sincerely,
Cheiron

Gene Kalwarski, FSA, MAAA, EA
Principal Consulting Actuary

Alice Alsberghe, ASA, MAAA, EA
Associate Actuary

SECTION I – BOARD SUMMARY

The primary purpose of the actuarial valuation is to disclose, as of the valuation date, on the following:

- The financial condition of the SDCERS-Unified Port District Defined Benefit Plan,
- Past and expected trends in the financial condition of SDCERS-Unified Port District,
- Disclosures related to risks of SDCERS-Unified Port District,
- The UPD's Actuarially Determined Contribution (ADC) for Fiscal Year 2021, and
- Information required for the Comprehensive Annual Financial Report (CAFR).

In this Section, we present a summary of the principal valuation results. This summary includes the basis upon which the June 30, 2019 valuation was completed and an examination of the current financial condition of SDCERS-Unified Port District. In addition, we present a review of the key historical trends followed by the projected financial outlook for SDCERS-Unified Port District.

A. Valuation Basis

In January 2019, the SDCERS Board adopted two changes to the SDCERS-Unified Port District funding policy effective with the June 30, 2019 Actuarial Valuation. First, a contribution floor on the unfunded actuarial liability (UAL) amortization payment was adopted. The annual amortization payment, which is a component of the actuarially determined contribution (ADC), will be at minimum $13,270,628. This UAL payment floor was based on the Fiscal Year 2020 amortization payment as determined by the results of the June 30, 2018 Actuarial Valuation. Second, the amortization period for future assumption and method changes was reduced to 20 years, down from the prior policy of 30 years for amortization of assumption and method changes. Otherwise, the basis of the June 30, 2019 Actuarial Valuation remains the same as the 2018 valuation.

The results of this valuation did not necessitate a recalculation of the employee contribution rates for Safety "New Members" under PEPRA or for General Miscellaneous "New Members" under PEPRA. Under the provisions of PEPRA, if the aggregate normal cost rate changes by more than 1% of payroll since the time the prior rates were established, then a recalculation of employee contribution rates is required. The aggregate normal cost rate for both PEPRA membership groups did not increase or decrease by more than 1% of payroll; therefore, the employee contribution rates remain unchanged.

There were no changes in assumptions, methods, or plan provisions. All assumptions and methods can be found in Appendix B of this report. A summary of plan provisions can be found in Appendix C.

Numbers in the tables of this report may not always add exactly to the dollar due to rounding.

B. Experience between June 30, 2018 and June 30, 2019

The following discussion summarizes the key results of the June 30, 2019 valuation and how they compare to the results from the June 30, 2018 valuation.

1. SDCERS-UPD Assets, Liabilities and Contributions

Table I-1 presents a comparison between the June 30, 2019 and June 30, 2018 SDCERS-Unified Port District assets, liabilities, unfunded actuarial liability, funding ratios and contributions.

The key results shown in Table I-1 indicate that given the increase in total actuarial liability of 3.8% compared to the actuarial value of assets increase of 5.9%, the funding ratio increased from 74.2% as of June 30, 2018 to 75.6% as of June 30, 2019. SDCERS employs a commonly used actuarial smoothing method on the market value that dampens market volatility, so the actuarial value of assets increased by 5.9% whereas the market value of assets increased by 4.9%. Measuring the funding ratio on a market value of assets basis, the ratio would be 77.6% as of June 30, 2019, resulting in an improvement from a market value funding ratio of 76.9% as of June 30, 2018. On a rate of return basis, the market value of assets earned 6.35% and the actuarial value of assets earned 7.49%. Section III-3 of this report provides additional information explaining the development of the actuarial value of assets.

There was an increase in the Actuarially Determined Contribution (ADC), from $19.3 million to $19.7 million. The components of this change are shown in Table I-3. The ADC shown in the table below assumes payment at the beginning of the year. Contribution amounts assuming payment throughout the year may be found in Table V-1.

Table I-1
SDCERS - Unified Port District - Assets, Liabilities and Contributions

		June 30, 2019		June 30, 2018	% Change
Actuarial Liability	$	599,822,515	$	577,844,033	3.8%
Actuarial Value Assets	$	453,709,146	$	428,619,281	5.9%
Unfunded Actuarial Liability-Actuarial Value	$	146,113,369	$	149,224,752	-2.1%
Funding Ratio-Actuarial Value		75.6%		74.2%	1.4%
Market Value Assets	$	465,667,070	$	444,097,308	4.9%
Unfunded Actuarial Liability-Market Value	$	134,155,445	$	133,746,725	0.3%
Funding Ratio-Market Value		77.6%		76.9%	0.7%
Actuarially Determined Contribution (ADC) [1]	$	19.7	$	19.3	2.2%

[1]*ADC reported in millions*

SECTION I – BOARD SUMMARY

2. Components of UAL Change between June 30, 2018 and June 30, 2019

The unfunded actuarial liability (UAL) for SDCERS-Unified Port District decreased by $3.1 million, from $149.2 million to $146.1 million. Table I-2 below presents the specific components of the change in the UAL.

The Plan's UAL was expected to decrease by $7.6 million, assuming no assumption changes and all assumptions were met. The Plan experienced a liability loss of $4.2 million, due to actual demographic experience – rates of retirement, death, disability, and termination, as well as salary increases – deviating from the underlying assumptions. Net asset experience was slightly unfavorable, increasing the UAL by $0.3 million.

Table I-2
SDCERS - Unified Port District - Change in UAL
(In Millions)

1.	**UAL at June 30, 2018**	**$**	**149.2**
2.	Expected change in UAL		(7.6)
3.	Asset experience		
	a. Anticipated investment loss/(gain)		(4.3)
	b. Actual investment loss/(gain)[1]		(3.9)
	c. Member contributions paid greater than expected		(0.1)
	d. Net asset experience (b - a + c)		0.3
4.	Liability experience loss[1]		4.2
5.	Change in assumptions or methods		0
6.	Other miscellaneous		0
7.	Total change in UAL: 2 + 3d + sum of 4 through 6		(3.1)
8.	**UAL at June 30, 2019: 1 + 7**	**$**	**146.1**

[1] Net impact of asset and liability experience is an actuarial loss of $0.3 million ($3.9 million actual investment gain less $4.2 million actual liability experience loss).

3. SDCERS-UPD Change in Contributions

The Unified Port District's actuarially determined contribution (ADC) for FY 2021 increased by $0.4 million; from $19.3 million to $19.7 million. The ADC would have been expected to remain constant, assuming continued phase-in of investment experience from prior years and no changes in assumptions.

The net asset experience had no impact on the ADC. The ADC increased by $0.4 million due to the liability experience loss.

In Table I-3 below, we present the specific components of the change in the ADC. We provide more detail on the development of this contribution in Section V.

Table I-3
SDCERS - Unified Port District - Change in ADC
(In Millions)

1.	**ADC at June 30, 2018**	**$**	**19.3**
2.	Expected change in ADC		(0.0)
3.	Asset experience		
	a. Anticipated investment loss/(gain)		(0.4)
	b. Actual investment loss/(gain)		(0.3)
	c. Member contributions paid greater than expected		(0.0)
	d. Net asset experience (b - a + c)		0.0
4.	Liability experience loss		0.4
5.	Change in assumptions or methods		0
6.	Other miscellaneous		0
7.	Total change in ADC: 2 + 3d + sum of 4 through 6		0.4
8.	**ADC at June 30, 2019: 1 + 7**	**$**	**19.7**

SECTION I – BOARD SUMMARY

4. SDCERS-UPD Membership

Table I-4 shows that total membership in SDCERS-Unified Port District increased by 0.7% from 2018 to 2019. There was a decrease in active counts of 1.1%. There was an increase of 2.2% in retirees. Expected active member total payroll increased by 3.0% from 2018 to 2019, and the average pay per active member increased by 4.2%. Total annual benefits in pay status increased by 5.5% from 2018 to 2019, with the average benefit increasing by 3.5%.

Note: The payroll figures shown below are the expected amounts for the fiscal year beginning July 1, 2019.

Table I-4
SDCERS - Unified Port District - Membership Total

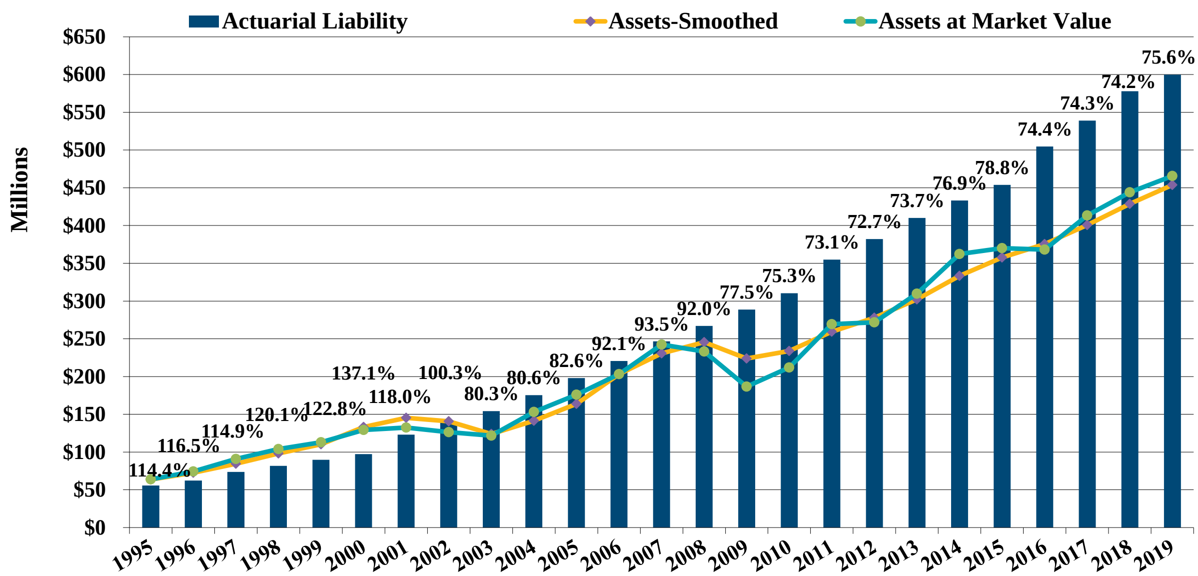
Valuation as of:	June 30, 2019	June 30, 2018	% Change
Active Counts	361	365	-1.1%
Terminated Vested	277	276	0.4%
Disabled	55	56	-1.8%
Retirees	455	445	2.2%
Beneficiaries	89	87	2.3%
Total UPD Members	1,237	1,229	0.7%
Active Member Payroll	$ 36,810,149	$ 35,732,609	3.0%
Average Pay per Active Member	$ 101,967	$ 97,898	4.2%
Benefits in Pay Status	$ 28,429,092	$ 26,957,893	5.5%
Average Benefit	$ 47,461	$ 45,847	3.5%

C. Historical Trends SDCERS-Unified Port District

Despite the primary focus given each year on the most recently computed unfunded actuarial liability (UAL), funding ratio, and the UPD's contribution (ADC), it is important to remember that each valuation is merely a snapshot of the long-term progress of a pension plan. It is more important to judge a current year's valuation results relative to historical trends, and trends expected into the future.

In the chart below, we present the historical trends for the market value and smoothed assets compared to actuarial liabilities with SDCERS-Unified Port District funding ratios since 1995.

SDCERS- Unified Port District Assets and Liabilities 1995-2019



The UPD funding ratio was over 100% in the early years of the chart, but dropped to 80.3% in 2003. The funding ratio improved significantly over the next several years, primarily due to strong investment performance. In 2009, the funding ratio declined significantly due to investment losses and continued to decrease for several years as the investment loss was gradually recognized in the actuarial value of assets. From 2013 through 2015 the funding ratio steadily increased, primarily due to better than expected investment performance.

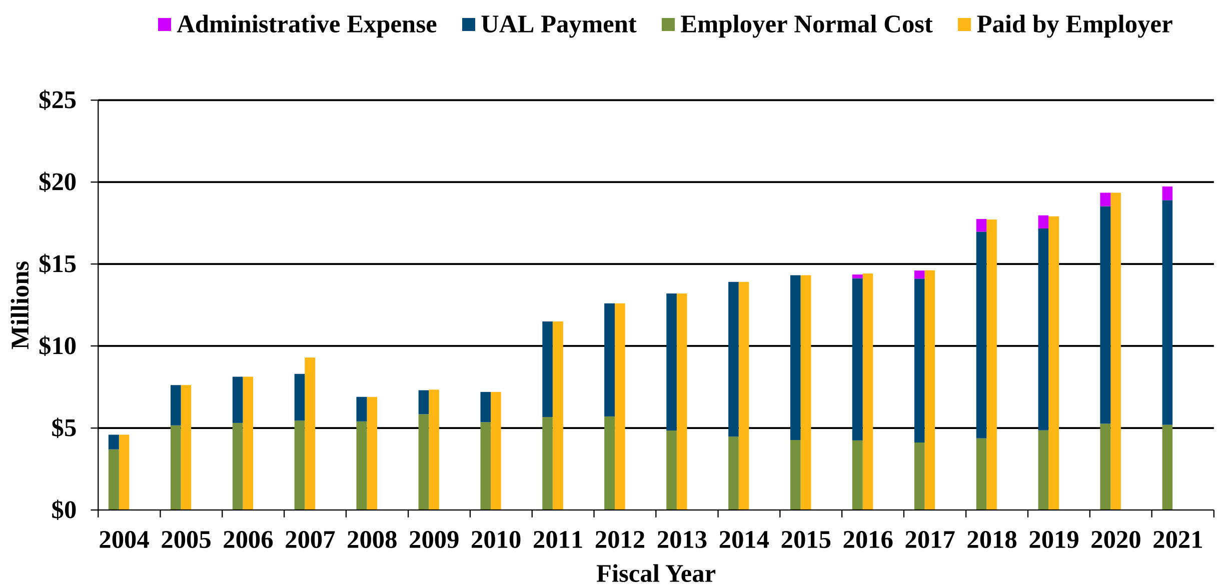
The drop in the funding ratio in 2016, from 78.8% to 74.4%, was primarily due to changes in both demographic and economic assumptions. The discount rate assumption changes in 2017 and 2018 also decreased the funding ratio. With no further changes in assumptions, the 2019 funding ratio improved over 2018 to 75.6%.

As mentioned earlier, the funding ratios represent the ratio of the smoothed (actuarial) assets over the actuarial liabilities. If the market value of assets were used instead, the funding ratio as of June 30, 2019 would be 77.6%.

SECTION I – BOARD SUMMARY

In the next chart below, we present the historical trends for the SDCERS-Unified Port District contributions: actual contributions paid by the UPD and the actuarially determined contributions (ADC).

SDCERS-Unified Port District Contributions FY 2004-2021

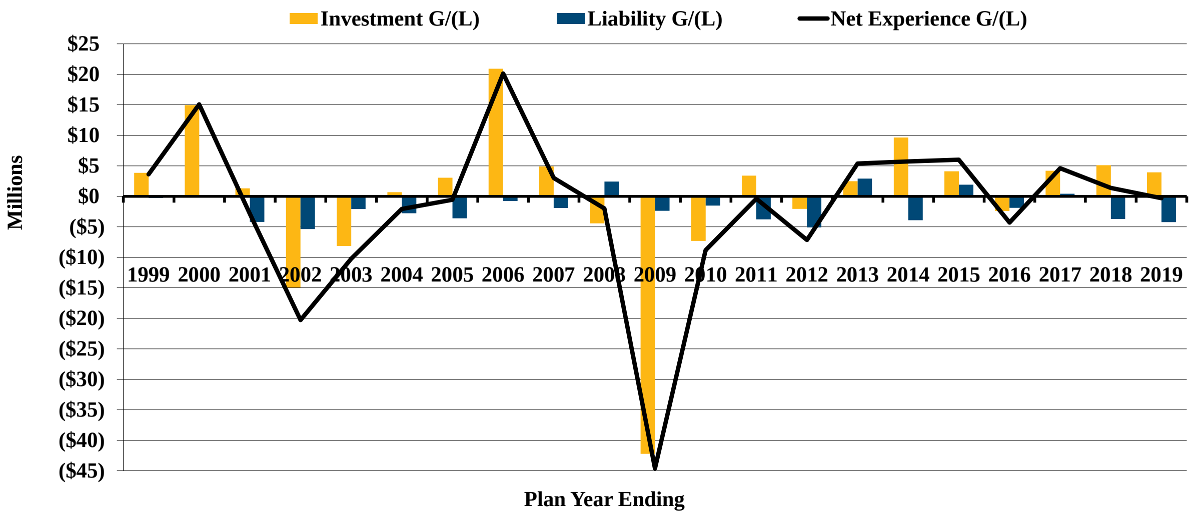


This chart compares the actual contributions made by the Unified Port District (gold bars) to the actuarially determined contributions (ADC). The ADC is broken out by component - Employer Normal Cost, plus UAL payment, plus administrative expense. The contributions paid by the UPD are based on the Board's adopted funding practice of Normal Cost plus amortization of the various UAL components, including the requirement beginning in FY 2009 that there is no negative amortization and the requirement beginning in FY 2016 to fund the administrative expenses. The chart indicates that the Unified Port District has been consistently paying at or above the ADC for the entire period shown.

SECTION I – BOARD SUMMARY

The chart below for SDCERS-Unified Port District presents the pattern of annual experience gains and losses, broken into the investment and liability components. The chart does not include any changes in SDCERS' assets and liabilities attributable to changes in actuarial methods, procedures, assumptions, or to changes in plan benefits.

SDCERS-Unified Port District Historical Gain/(Loss) 1999-2019



The key insights from this chart are:

- In 2002 and 2003 the System experienced large investment losses (gold bars), depicted on an actuarial value of assets basis, which were offset by investment gains from 2004 to 2007. However, the investment losses of 2008 through 2010 more than offset those gains.

- The investment loss in 2009 was by far the most significant gain or loss during the period shown.

- During the period shown there has generally been a pattern of liability losses, which have been small relative to total liabilities. In more recent years however, liability experience has fluctuated between gains and losses.

- The small liability experience loss in 2019 was approximately 0.7% of the total liability. This loss is attributed to actual demographic experience – rates of retirement, death, disability, and termination, as well as salary increases – deviating from the underlying assumptions.

D. Projected Financial Trends

Our analysis of SDCERS-Unified Port District projected financial trends is a very important part of this valuation. These projections based on the June 30, 2019 valuation results are presented in terms of benefit security (assets over liabilities) and the UPD's expected cost progression.

In the chart that follows, we project the SDCERS-Unified Port District assets and liabilities and the UPD's contributions. The upper chart compares the assets (green and yellow lines) and liabilities (gray bars) and the lower chart shows contributions in dollars (employer contributions in yellow bars and member contributions in green bars). The left side of the exhibit shows the returns assumed each year followed by the annual ADC and UAL in dollar amounts.

These projections assume a 6.50% investment return and discount rate, as well as all experience conforming to the Plan's assumptions.

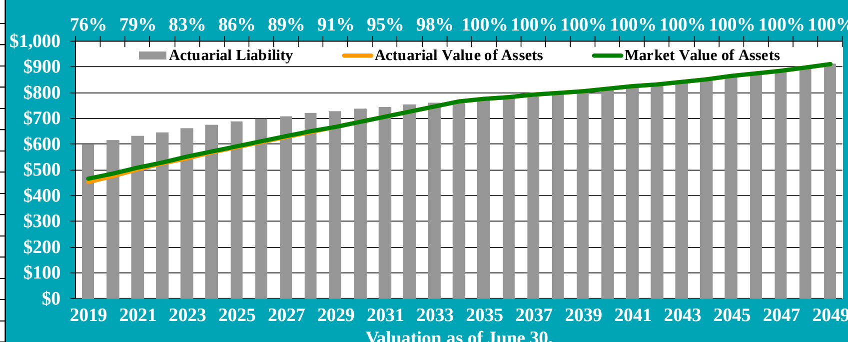
SDCERS-Unified Port District Projections FY 2020-2051 (earnings as assumed)

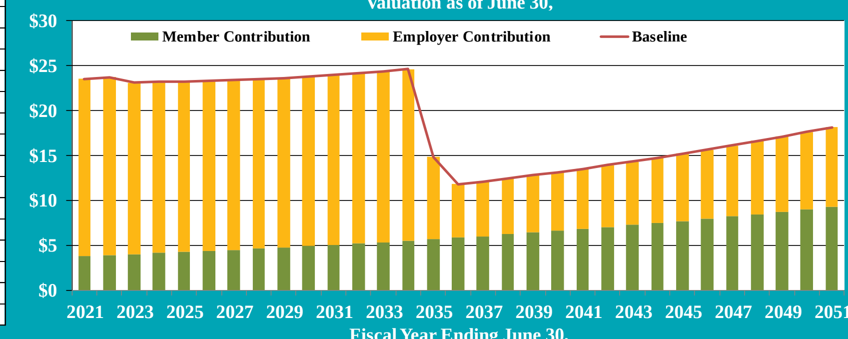
FYE	Return	Liab (G)/L	(mil) ADC	(mil) UAL	Disc Rate
2020	6.50%	0.0%	$ 19.3	$149.20	6.50%
2021	6.50%	0.0%	$ 19.7	$146.10	6.50%
2022	6.50%	0.0%	$ 19.8	$139.12	6.50%
2023	6.50%	0.0%	$ 19.1	$131.07	6.50%
2024	6.50%	0.0%	$ 19.1	$122.78	6.50%
2025	6.50%	0.0%	$ 19.0	$115.00	6.50%
2026	6.50%	0.0%	$ 18.9	$107.05	6.50%
2027	6.50%	0.0%	$ 18.9	$ 98.84	6.50%
2028	6.50%	0.0%	$ 18.9	$ 90.30	6.50%
2029	6.50%	0.0%	$ 18.9	$ 81.38	6.50%
2030	6.50%	0.0%	$ 18.9	$ 72.01	6.50%
2031	6.50%	0.0%	$ 18.9	$ 62.13	6.50%
2032	6.50%	0.0%	$ 19.0	$ 51.70	6.50%
2033	6.50%	0.0%	$ 19.0	$ 40.66	6.50%
2034	6.50%	0.0%	$ 19.1	$ 28.96	6.50%
2035	6.50%	0.0%	$ 9.2	$ 16.53	6.50%
2036	6.50%	0.0%	$ 6.0	$ 3.34	6.50%
2037	6.50%	0.0%	$ 6.1	$ -	6.50%
2038	6.50%	0.0%	$ 6.2	$ -	6.50%
2039	6.50%	0.0%	$ 6.4	$ -	6.50%
2040	6.50%	0.0%	$ 6.5	$ -	6.50%
2041	6.50%	0.0%	$ 6.7	$ -	6.50%
2042	6.50%	0.0%	$ 6.9	$ -	6.50%
2043	6.50%	0.0%	$ 7.1	$ -	6.50%
2044	6.50%	0.0%	$ 7.3	$ -	6.50%
2045	6.50%	0.0%	$ 7.5	$ -	6.50%
2046	6.50%	0.0%	$ 7.7	$ -	6.50%
2047	6.50%	0.0%	$ 7.9	$ -	6.50%
2048	6.50%	0.0%	$ 8.2	$ -	6.50%
2049	6.50%	0.0%	$ 8.4	$ -	6.50%
2050	6.50%	0.0%	$ 8.7	$ -	6.50%
2051	6.50%	0.0%	$ 8.9	$ -	6.50%
N	6.50%	= average return			

Investment Returns | **Plan**

BASELINE | U | UAL Payment Floor | $ 13,270,628 | Assumps \| G/(L) | 20 | 15

HISTORICAL | 1930





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Based on the assumed earnings and the UAL contribution floor amortization method, the UPD's funded status (percentages at the top of the upper graph) is projected to reach 100% by the June 30, 2034 valuation at which time the FY 2036 ADC declines sharply. The UPD's ADC is then projected to increase gradually with growing normal costs of the Plan for the remainder of the period shown.

However, it is very important to note that these projections, while valid as baseline projections, **are not going to occur** as experience never conforms exactly to assumptions from year to year. As a result, in Section II of this report, *Disclosures Related to Risk*, we present a stress testing projection based on assuming varying returns in the future, which are 6.50% on average.

SECTION II – DISCLOSURES RELATED TO RISK

Introduction

Actuarial Standard of Practice (ASOP) No. 51 was recently published by the Actuarial Standards Board to provide guidance to actuaries on the assessment and disclosure of risks related to the possibility that future pension plan experience will deviate from assumptions. This standard does not introduce new concepts to actuarial work; it simply attempts to provide some codification of the practice. Our reports have routinely included stress testing of the valuation results showing the impact of future experience deviating from the underlying assumptions. However, with this ASOP becoming effective for this June 30, 2019 Actuarial Valuation Report, we have taken this as an opportunity to consolidate the information regarding assessment and disclosure of the pension plan's risks in this Section II as well as add a number of additional items helping to communicate and demonstrate these risks.

The pension plan's actuarial valuation results are dependent on assumptions about future economic and demographic experience. Based on actuarial standards of practice, the assumptions represent a reasonable estimate for future experience. However, actual experience will never conform exactly to the assumptions and may differ significantly from the assumptions. This deviation is the risk that pension plan sponsors undertake in relying on a pension plan's actuarial valuation results.

This section of this report is intended to identify the primary drivers of these risks, provide background information and assessments about these identified risks and communicate the significance of these risks to this plan.

Identification of Risks

For pension plans, the three primary valuation results that can significantly differ from those expected are in the assets, liabilities, and employer contributions. While there are several factors that could lead to these results being different, we believe the primary risks to this plan are:

- Investment risk,
- Longevity and other demographic risks,
- Plan change risk,
- Contribution risk, and
- Assumption change risk,

Other risks that we have not identified may also turn out to be important.

Investment Risk is the potential for investment returns to deviate from what is expected. When actual investment returns are lower than the investment assumption used in the actuarial valuation, the unfunded liability will increase and the period of time over which the unfunded liability is expected to be paid will increase. But, when actual returns exceed the assumption, the resulting unfunded liability measurements and resulting amortization period will be lower than anticipated.

SECTION II – DISCLOSURES RELATED TO RISK

Longevity and Other Demographic Risk is the potential for mortality or other demographic experience to be different than expected. Generally, longevity and other demographic risks emerge slowly over time as the actual experience deviates from expected. In addition, the extensive number of assumptions related to longevity and demographic experience often result in offsetting factors contributing to the System's overall liability experience. As such, these risks are often dwarfed by other risks, particularly those due to the investment returns. The historical gain loss charts on page 8 shows that this has been true for this System, with the magnitude of the gains and losses from liability experience significantly smaller than those from investment experience, assumption changes, and plan changes.

Plan Change Risk is the potential for the provisions of the System to be changed such that the funding or benefits are changed materially. In addition to the actual payments to and from the System being changed, future valuation measurements can also be impacted, with plan changes leading to deviations between actual future measurements and those expected by the current valuation.

Contribution Risk is the potential for actual future contributions to deviate from expected future contributions, or that the anticipated contributions will be inadequate to fund the plan benefits. There are different sources of contribution risk ranging from the sponsor choosing to not make contributions in accordance with the funding policy to material changes in the contribution base (e.g., covered employees, covered payroll, sponsor revenue) that affect the amount of contributions the plan can collect.

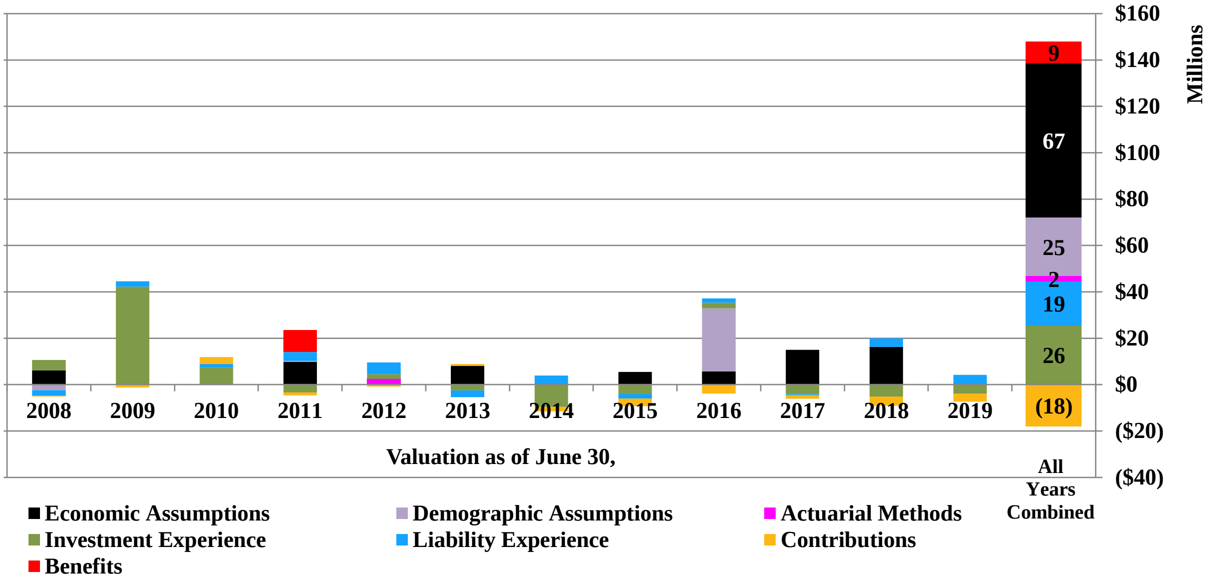
Assumption Change Risk is the potential for the environment to change such that future valuation assumptions are adjusted to be different than the current assumptions. For example, declines in interest rates over time may result in a change in the assumed rates of return used in the valuation. A healthier workforce may result in changes in employee behavior such that retirement rates are adjusted to reflect employees working longer. Assumption change risk is an extension of the risks previously identified, but rather than capturing the risk as it is experienced, it captures the cost of recognizing a change in the environment when the current assumption is no longer reasonable.

Historical Review

In understanding the impact of some of these risks, it is useful to look at what factors contributed to the System's Unfunded Actuarial Liability (UAL). These factors consist of annual actuarial experience gains and losses, assumption changes, plan changes, and contribution shortfalls or excesses. The following chart shows how these factors have contributed, at each valuation date, to the UPD's UAL growth since 2008.

SECTION II – DISCLOSURES RELATED TO RISK

Factors Contributing to UAL Changes since 2008



As is evident in this chart, net experience (investments and liabilities) losses and assumption changes have been by far the most significant factors contributing to the UPD's UAL.

Over this period, net experience losses increased the UAL by $45 million, and economic and demographic assumption changes increased the UAL by $92 million. All other sources of change served to decrease the UAL by $7 million.

Plan Maturity Measures

As pension plans become more mature, the identified risks become of more significant concern. As a result, it has become increasingly important to examine measures that indicate a pension plan's maturity level.

The balance of this section discloses and examines three maturity measures: the asset leverage ratio, the support ratio, and the net cash flow ratio.

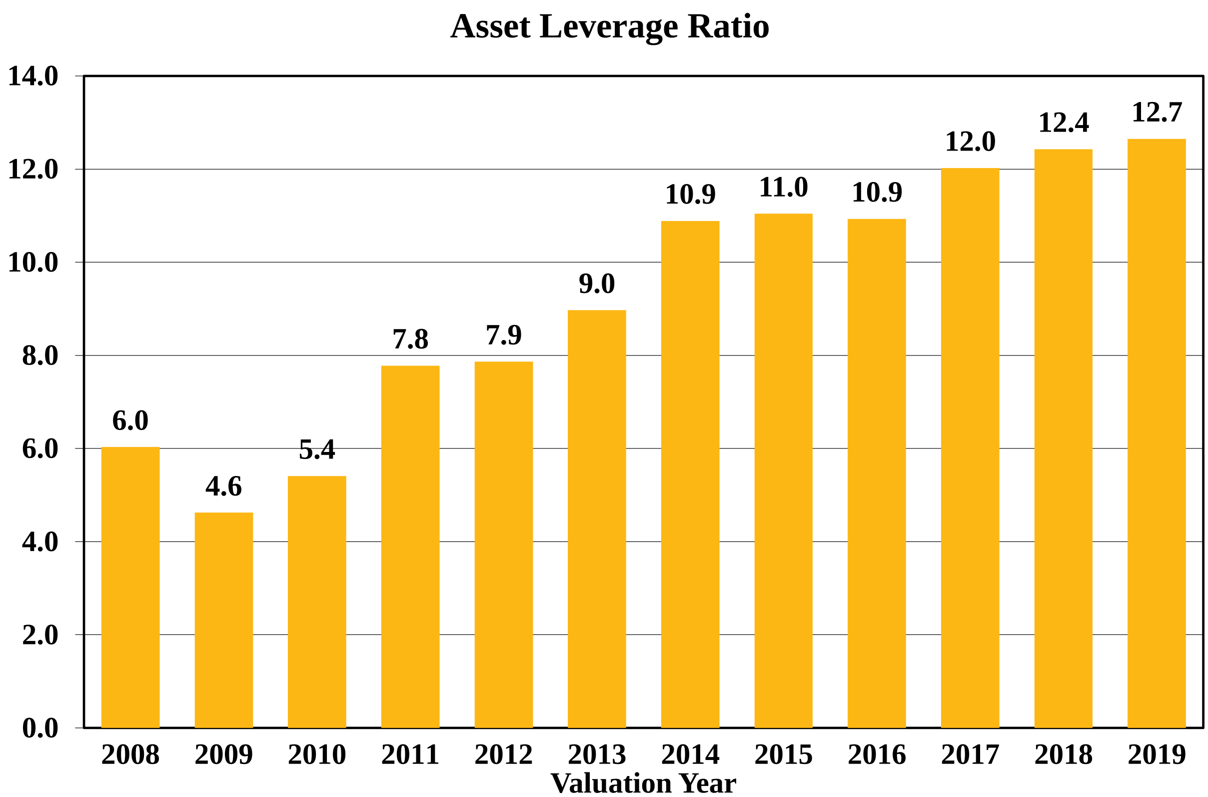
Asset Leverage Ratio

Typically one of the most important pension plan maturity measures is the asset leverage ratio — the Market Value of Assets divided by the Plan's payroll. The greater the plan's assets are relative to payroll, the more vulnerable the plan is to investment volatility. The following example demonstrates this.

SECTION II – DISCLOSURES RELATED TO RISK

($ in millions)		
	Plan A	**Plan B**
Plan Assets	$ 5,000	$ 5,000
Payroll	$ 500	$ 1,000
Asset Leverage Ratio	10.0	5.0
10% Investment Loss	$ 500	$ 500

This example shows two plans that both experience a 10% investment loss equaling $500 million. Although their assets are the same, because of the size of payroll for Plan A is half of that of Plan B, its asset leverage ratio is 10 and Plan B's ratio is 5. This means that the Plan A has to make up (i.e., amortize) that loss over a payroll that is half as large as Plan B's.

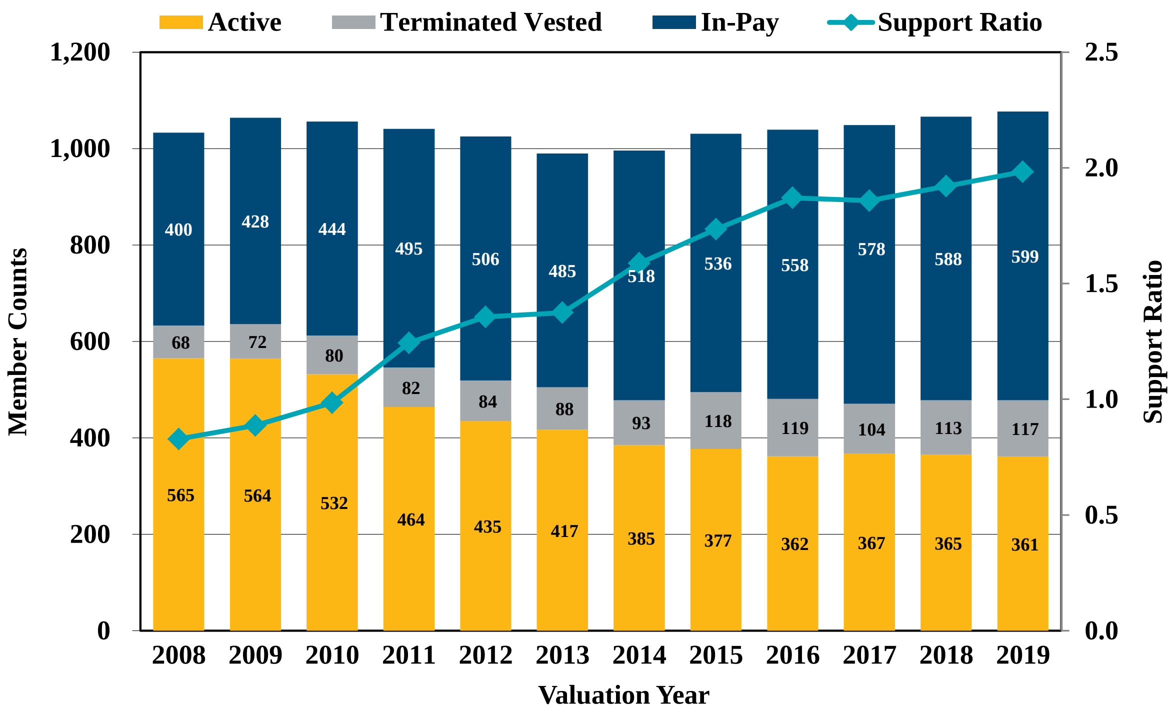


The chart above shows that the UPD's Asset Leverage ratio has more than doubled since 2008, growing from a ratio of 6 to a ratio of 12.7. This also means that the impact of another market turndown like the Great Recession of 2008/2009 would be more than double the impact it was then.

SECTION II – DISCLOSURES RELATED TO RISK

Support Ratio

A commonly used measure of plan maturity is the Support Ratio, the ratio of retired and inactive members or those receiving benefits or entitled to a deferred benefit to the number of active members or those currently accruing benefits in the Plan. The greater this ratio, the more likely that the Plan will develop negative cash flow.



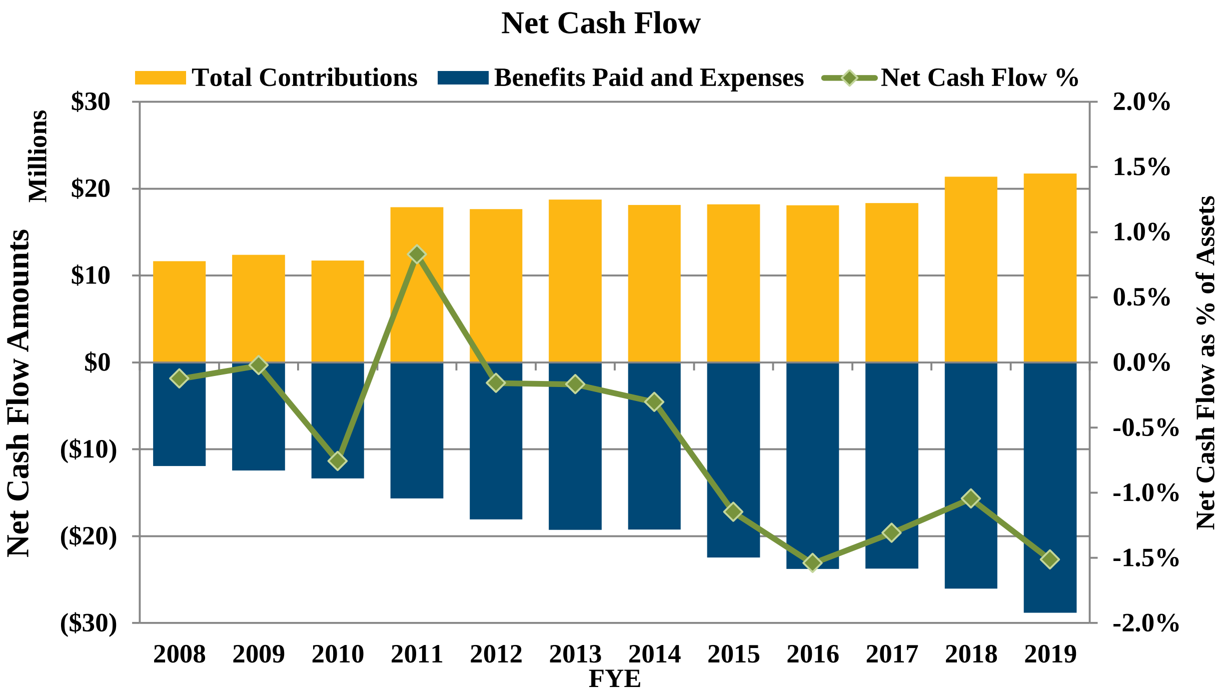
The light blue line in the chart above shows the historical support ratio for the UPD has grown from less than one to nearly two inactive participants per active participant. Growth in this ratio overtime is to be expected as the Plan matures.

Net Cash Flow Ratio

Another and more important measure of plan maturity is the ratio of the net cash flow out of the plan benefits and expenses less contributions, divided by the market value of plans assets. With shrinking workforces, aging Baby Boomers, and retirees living longer, plans pay out more in benefits than they receive in contributions, leading to negative net cash flows, excluding investment income.

When plans with negative net cash flows suffer investment losses, they need to liquidate enough assets to pay for benefits in excess of contributions. That means these plans will need to earn higher returns to rebuild their assets to the previous levels. Plans with significant negative cash flows are more vulnerable to market declines. However, negative cash flows are expected with maturing plans and a plan's asset allocation may be adjusted to minimize sensitivity to investment risk.

SECTION II – DISCLOSURES RELATED TO RISK



The UPD's net cash flow as a percentage of assets has largely trended more negative over the years, with the most recent ratio being at -1.5% of assets, This should not be of any significant concern. As with the support ratio, it is to be expected that the negative net cash flow would be increasing.

Assessment of Future Risks

Stress Testing the Plan's Funded Status and Contribution Levels

The fundamental risk to the Plan is that contributions will not adequately fund plan benefits. In assessing this risk, we performed stress tests on the Plan's funded status and contribution level assuming varying returns in the future which over the entire projection period average 6.5%.

With varying annual earnings the chart that follows shows the volatility in the plan's funded status (top graph) and in the Unified Port District's contributions (bottom chart). Note that this chart reflects an illustrative scenario and is not intended to reflect future expectations.

What these charts show is that whether the System is fully funded or poorly funded, subsequent returns can quickly alter the financial position of the Plan dramatically. It is impossible to judge the financial soundness of a System with a single year point measurement. What is more important to consider is the System's level of conservatism in funding the Plan, and the discipline and ability of the plan sponsor to consistently contribute the ADC as determined by the plan actuary. In SDCERS case, the System has been conservative relative to most other public pension funds, and since 2005 the UPD has contributed at least as much as the ADC, if not more.

SECTION II – DISCLOSURES RELATED TO RISK

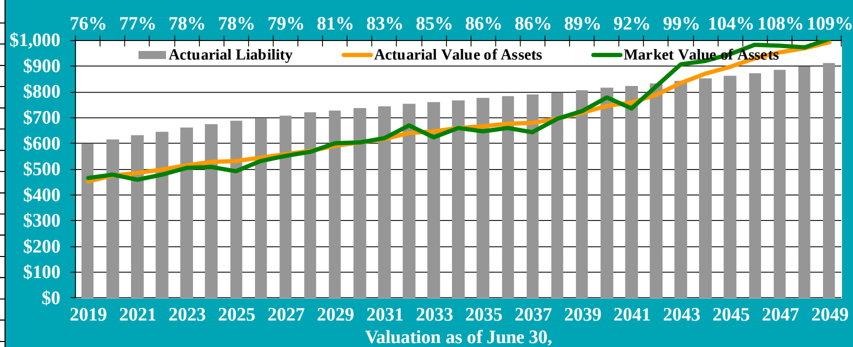
SDCERS-Unified Port District Projections FY 2020-2051 (earnings which vary by year)

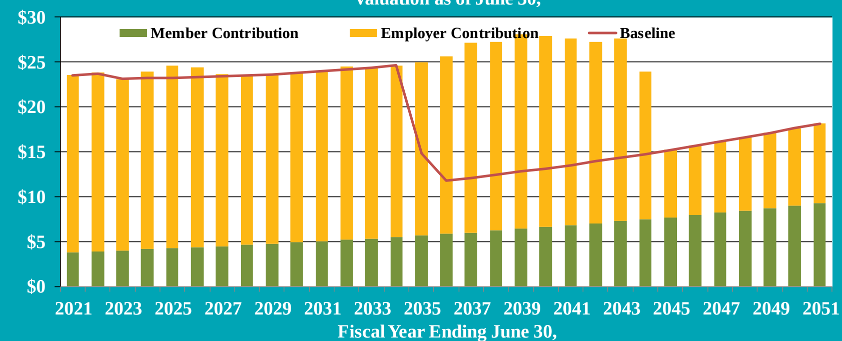
FYE	Return	Liab (G)/L	(mil) ADC	(mil) UAL	Disc Rate
2020	4.93%	0.0%	$ 19.3	$149.20	6.50%
2021	-1.90%	0.0%	$ 19.7	$146.10	6.50%
2022	6.46%	0.0%	$ 20.0	$140.97	6.50%
2023	8.23%	0.0%	$ 19.1	$144.68	6.50%
2024	3.65%	0.0%	$ 19.8	$146.44	6.50%
2025	-0.09%	0.0%	$ 20.3	$145.58	6.50%
2026	11.74%	0.0%	$ 20.0	$146.75	6.50%
2027	7.75%	0.0%	$ 19.2	$154.43	6.50%
2028	6.93%	0.0%	$ 19.0	$153.65	6.50%
2029	9.53%	0.0%	$ 18.9	$151.11	6.50%
2030	4.63%	0.0%	$ 18.9	$147.64	6.50%
2031	7.08%	0.0%	$ 18.9	$139.55	6.50%
2032	11.99%	0.0%	$ 19.4	$134.44	6.50%
2033	-2.54%	0.0%	$ 19.0	$128.13	6.50%
2034	10.07%	0.0%	$ 19.1	$112.69	6.50%
2035	2.25%	0.0%	$ 19.4	$113.55	6.50%
2036	6.35%	0.0%	$ 19.8	$107.38	6.50%
2037	1.98%	0.0%	$ 21.2	$107.50	6.50%
2038	12.51%	0.0%	$ 21.0	$106.02	6.50%
2039	8.08%	0.0%	$ 21.7	$109.27	6.50%
2040	10.99%	0.0%	$ 21.3	$100.89	6.50%
2041	-1.75%	0.0%	$ 20.8	$ 88.61	6.50%
2042	15.99%	0.0%	$ 20.2	$ 68.49	6.50%
2043	14.12%	0.0%	$ 20.4	$ 65.82	6.50%
2044	5.41%	0.0%	$ 16.5	$ 44.86	6.50%
2045	7.86%	0.0%	$ 7.5	$ 9.19	6.50%
2046	8.42%	0.0%	$ 7.7	$(17.09)	6.50%
2047	4.22%	0.0%	$ 7.9	$(34.92)	6.50%
2048	3.98%	0.0%	$ 8.2	$(55.01)	6.50%
2049	8.11%	0.0%	$ 8.4	$(67.32)	6.50%
2050	5.03%	0.0%	$ 8.7	$(72.61)	6.50%
2051	6.00%	0.0%	$ 8.9	$(81.91)	6.50%
N	6.50%	= average return			

Investment Returns — Plan

BASELINE	U
HISTORICAL	1930

UAL Payment Floor $ 13,270,628 | Assumps \| G/(L) 20 | 15





SECTION III – ASSETS

Like most other public pension plans, SDCERS uses two different asset measurements that are presented in this section of the report: the market value and the actuarial value of assets. The market value of assets represents, as of the valuation date, the value of the assets if they were liquidated on that date. The actuarial value of assets is a value that smooths annual investment performance over multiple years to reduce the impact of annual investment volatility on employer contributions. The actuarial value of assets is used in determining SDCERS' contributions for the three participating employer plans.

Each employer receives a separate actuarial valuation report and cost determination. However, the assets of all employer plans are pooled for investment purposes. The apportionment of the assets among the employer plans directly impacts each employer's costs. Therefore, in the interest of ensuring transparency, this section discloses information on the total assets of SDCERS-All Employers. In addition, a brief explanation of how those assets are apportioned to the City of San Diego, the San Diego Unified Port District, and the San Diego County Regional Airport Authority is included.

On the following pages, detailed information is presented on SDCERS-All Employers assets, including:

A. Disclosure of the June 30, 2019 total SDCERS market value of assets, by asset class;
B. Market value of assets by Plan Sponsor;
C. Development of the actuarial value of assets; and
D. Disclosure of the investment performance for the year.

SECTION III – ASSETS

A. Disclosure of Market Value of Assets

The market value of assets represents a "snap-shot" value as of June 30, 2019, the last day of the fiscal year, which provides the principal basis for measuring financial performance from one year to the next. Market values, however, can fluctuate widely with swings in the investment markets. Because these fluctuations would cause volatility in employer contributions, an actuarial value of assets is developed. Table III-1 below discloses the market value by asset class of SDCERS – All Employers' gross assets on June 30, 2019.

Table III-1
SDCERS – All Employers
Summary of Reported Market Value of Total Defined Benefit Plan Assets

Cash	$	369,048,108
US Stocks		1,479,749,029
International Stocks		1,981,558,016
Private Equity		1,195,845,121
Bonds		2,691,188,821
Real Estate		929,907,689
Receivables		569,105,241
Miscellaneous		158,765,328
Accounts Payable		(927,386,658)
Market Value of Assets – June 30, 2019	**$**	**8,447,780,696**

B. Market Value of Assets by Plan Sponsor

As of July 1, 2007, the City, Unified Port District, and Airport Authority plans were separated into independent, qualified, single employer, governmental defined benefit plans and trusts. The assets of the three separate plans and trusts are pooled in the SDCERS Group Trust, which was established as of July 1, 2007. SDCERS invests and administers the Group Trust as a common investment fund and accounts separately for the proportional interest of each plan and trust that participates in the Group Trust. Cash flow activity for each plan is recorded directly to that plan, with investment activity and other cash flow activity not specific to any one plan being allocated based upon each plan's respective share of the Group Trust's total assets, with time-weighted adjustments for the plan-specific cash flows. Administrative expenses are allocated based on the proportion of participants of a participating trust to the number of total participants of all participating trusts on the first day of the plan year. Table III-2 below discloses the market value and actuarial value of assets by Plan.

Table III-2
Summary of Market and Actuarial Assets for Each Employer Group as of June 30, 2019

	Actuarial Value Total Assets June 30, 2019	Market Value Total Net Assets June 30, 2019	Market Value Total Net Assets June 30, 2018
City of San Diego	$ 7,595,073,335	$ 7,779,225,644	$ 7,456,337,491
Unified Port District	453,709,146	465,667,070	444,097,308
Airport Authority	199,385,847	202,887,982	186,556,143
Total-SDCERS	***$ 8,248,168,328***	***$ 8,447,780,696***	***$ 8,086,990,942***

C. Actuarial Value of Assets

To determine on-going funding requirements, most pension funds utilize an actuarial value of assets. Unlike the market value of assets, the actuarial value of assets represents an asset value based on averaging or smoothing year-to-year market value returns for purposes of reducing the resulting volatility on contributions.

The actuarial value of assets is equal to 100% of the expected actuarial value of assets as of June 30, 2019 plus 25% of the difference between the current actual market value of assets and the expected actuarial value of assets. (See Appendix B, Section B-2 for further explanation of the asset valuation method.) In no event will the actuarial value of assets ever be less than 80% of the market value of assets, nor greater than 120% of the market value of assets.

Table III-3
SDCERS - Unified Port District
Development of Actuarial Value of Assets at June 30, 2019
Expected Value of Assets Method

1. Actuarial Value of Assets at June 30, 2018	$	428,619,281
2. Amount in (1) with interest at 6.50% to June 30, 2019		456,479,534
3. Employer and Member contributions for the Plan Year ended June 30, 2019		21,760,615
4. Disbursements from Trust excluding investment expenses, June 30, 2018 through June 30, 2019		28,810,725
5. Interest on cash flows to June 30, 2019 at 6.50% per year		293,747
6. Expected Actuarial Value of Assets at June 30, 2019 = (2) + (3) – (4) + (5)		449,723,171
7. Actual Market Value of Assets at June 30, 2019		465,667,070
8. Excess of (7) over (6)		15,943,899
9. Preliminary Actuarial Value of Assets at June 30, 2019 = (6) + 25% of (8)	$	453,709,146
10. 80% Minimum Corridor on the Actuarial Value of Assets = 80% of (7)		372,533,656
11. 120% Maximum Corridor on the Actuarial Value of Assets = 120% of (7)		558,800,484
12. Final Actuarial Value of Assets at June 30, 2019 = (9), but no less than (10) and no more than (11)	$	453,709,146

D. Investment Performance

The return on the market value of assets, as reported by SDCERS' investment consultant Aon Hewitt Investment Consulting, was 7.0%. The return in FY 2018 was 8.9%.

On an actuarial (smoothed) value of assets basis, the return for FY 2019 was 7.49%. This return produced for SDCERS-All Employers an overall investment gain of $65.5 million for the year ending June 30, 2019. (Note: this reported gain is different than the investment gain of $3.9 million reported in Table I-2 of this report. $3.9 million is the gain only for SDCERS-Unified Port District).

SECTION IV – LIABILITIES

In this section, we present detailed information on liabilities for SDCERS-Unified Port District including:

- Disclosure of liabilities at June 30, 2018 and June 30, 2019, and
- Statement of changes in the unfunded actuarial liabilities during the year.

A. Disclosure

Several types of liabilities are calculated and presented in this report. Each type is distinguished by the purpose for which the figures are ultimately used. Note that these liabilities are not applicable for settlement purposes, including the purchase of annuities and the payment of lump sums.

- **Present Value of Future Benefits:** Used for measuring all future SDCERS-UPD obligations, represents the amount of money needed today to fully fund all benefits of SDCERS-UPD both earned as of the valuation date and those to be earned in the future by current plan members, under the current plan provisions.

- **Actuarial Liability-Entry Age Normal (EAN):** Used for determining employer contributions and GASB accounting disclosures. This liability is calculated taking the present value of all future benefits and subtracting the present value of future Member contributions and future employer normal costs as determined under the EAN actuarial funding method. It represents the portion of the present value of future benefits attributed to service prior to the valuation date by the Entry Age Normal method.

- **Present Value of Accrued Benefits:** This liability represents the present value of future benefits payable to all plan participants as of the valuation date, if future accruals and contributions stopped.

Table IV-1 on the following page discloses the first two of these liabilities for the current and prior year valuations. Table IV-2 breaks down these liabilities by tier; subtracting the actuarial value of assets from the actuarial liability results in a net surplus or an unfunded actuarial liability (UAL). Table IV-3 discloses the third of these liabilities, present value of accrued benefits, for the current and prior year valuations.

SECTION IV – LIABILITIES

Table IV-1 SDCERS - Unified Port District - Total				
Valuation as of:		**June 30, 2019**		**June 30, 2018**
Present Value of Future Benefits				
Actives	$	235,311,307	$	234,389,845
Terminated Vested		31,003,974		26,847,876
Disabled		24,842,852		23,001,835
Retirees		344,599,016		329,583,924
Beneficiaries		19,378,645		18,439,033
Total Unified Port District	**$**	**655,135,794**	**$**	**632,262,513**
Actuarial Liability - EAN				
Total Present Value of Future Benefits	$	655,135,794	$	632,262,513
Present Value of Future Normal Costs				
Employer Portion		32,171,598		32,204,839
Employee Portion		23,141,681		22,213,641
Actuarial Liability - EAN	**$**	**599,822,515**	**$**	**577,844,033**
Actuarial Value of Assets	$	453,709,146	$	428,619,281
Unfunded EAN Actuarial Liability	**$**	**146,113,369**	**$**	**149,224,752**

Table IV-2 shows the actuarial liability as of June 30, 2019 for General, Miscellaneous, Executive and Safety Members of SDCERS-Unified Port District.

Table IV-2 SDCERS - Unified Port District as of June 30, 2019	Total	General	Miscellaneous Classic	Miscellaneous PEPRA	Executives	Safety Pre-2010	Safety Post-2010	Safety-PEPRA
Present Value of Future Benefits								
Actives	$ 235,311,307	$ 133,148,119	$ 3,716,606	$ 1,398,397	$ 3,610,938	$ 69,422,831	$ 8,051,107	$ 15,963,310
Terminated Vested	31,003,974	22,639,179	153,872	269,593	475,843	6,629,800	809,723	25,965
Disabled	24,842,852	8,638,958	0	0	0	16,203,894	0	0
Retirees	344,599,016	189,899,350	0	0	26,448,032	127,916,582	335,051	0
Beneficiaries	19,378,645	15,034,926	0	0	0	4,343,719	0	0
Total Unified Port District	**$ 655,135,794**	**$ 369,360,532**	**$ 3,870,478**	**$ 1,667,990**	**$ 30,534,812**	**$ 224,516,827**	**$ 9,195,881**	**$ 15,989,274**
Actuarial Liability - EAN								
Actives	$ 179,998,028	$ 112,550,867	$ 1,199,538	$ 52,198	$ 3,197,838	$ 57,314,184	$ 3,446,341	$ 2,237,064
Terminated Vested	31,003,974	22,639,179	153,872	269,593	475,843	6,629,800	809,723	25,965
Disabled	24,842,852	8,638,958	0	0	0	16,203,894	0	0
Retirees	344,599,016	189,899,350	0	0	26,448,032	127,916,582	335,051	0
Beneficiaries	19,378,645	15,034,926	0	0	0	4,343,719	0	0
Total Unified Port District	**$ 599,822,515**	**$ 348,763,280**	**$ 1,353,410**	**$ 321,791**	**$ 30,121,713**	**$ 212,408,179**	**$ 4,591,114**	**$ 2,263,028**

SECTION IV – LIABILITIES

Table IV-3 shows the present value of accrued benefits as of June 30, 2019 for all Members of SDCERS-Unified Port District.

Table IV-3
SDCERS - Unified Port District - Present Value of Accrued Benefits

Valuation as of:	June 30, 2019	June 30, 2018	% Change
1. Present Value of Accrued Benefits			
a. Members Currently Receiving Payments	$ 388,820,513	$ 371,024,792	4.8%
b. Vested Terminated and Inactive Members	31,003,974	26,847,876	15.5%
c. Active Members	137,692,024	137,441,004	0.2%
d. Total PVAB	$ 557,516,511	$ 535,313,671	4.1%
2. Assets at Market Value	$ 465,667,070	$ 444,097,308	4.9%
3. Unfunded Present Value of Accrued Benefits, But Not Less Than Zero	$ 91,849,441	$ 91,216,363	
4. Ratio of Assets to Value of Benefits (2)/(1)(d)	83.53%	82.96%	0.5%

B. Changes in Unfunded Actuarial Liabilities

The UAL of any retirement plan is expected to change at each subsequent valuation for a variety of reasons. In each valuation, we report on those elements of change in the UAL that have particular significance or could potentially affect the long-term financial outlook of a retirement plan. Below we present key changes in liabilities since the last valuation.

Table IV-4
Development of 2019 Experience Gain/(Loss) SDCERS - Unified Port District
(In Thousands)

1.	Unfunded Actuarial Liability at June 30, 2018		$ 149,224.8
2.	Beginning of year Unfunded Actuarial Liability payment		(12,198.3)
3.	Interest accrued ((1+2) x 6.50%)		8,906.7
4.	Expected Unfunded Actuarial Liability at June 30, 2019 (1+2+3)		145,933.2
5.	Actual Unfunded Liability at June 30, 2019		146,113.4
6.	Difference: (4 - 5)		(180.2)
7.	Portion of difference (6) due to actuarial assumption or method changes		0
8.	Portion of difference (6) due to plan changes		0
9.	Portion of difference (6) due to contributions less than expected		131.8
10.	Portion of difference (6) due to net experience Gain/(Loss)		(312.0)
	a) portion of (10) due to investment experience	*$ 3,925.8*	
	b) portion of (10) due to liability experience	*$ (4,237.8)*	
	c) portion of (10) due to service purchases	*$ 0*	

SECTION IV – LIABILITIES

Table IV-5 shows the history of past experience gains and losses.

Table IV-5
Experience Gain/(Loss) - Historical SDCERS - Unified Port District [1]

Valuation Date	Gain/(Loss)	Beginning-of-Year Actuarial Liabilities	Gain/(Loss) % of Liability
6/30/1999	$ 3,601,033	$ 81,632,570	4.4%
6/30/2000	15,094,373	89,808,543	16.8%
6/30/2001	(2,899,896)	97,159,852	-3.0%
6/30/2002	(20,288,699)	123,125,659	-16.5%
12/31/2002 [1]	(11,097,105)	140,196,959	-7.9%
6/30/2003	(10,248,435)	137,824,047	-7.4%
6/30/2004	(2,070,099)	154,299,669	-1.3%
6/30/2005	(552,547)	175,366,198	-0.3%
6/30/2006	20,138,814	198,071,900	10.2%
6/30/2007	2,994,479	220,637,279	1.4%
6/30/2008	(1,999,505)	246,538,326	-0.8%
6/30/2009	(44,607,050)	267,036,729	-16.7%
6/30/2010	(8,831,078)	288,698,145	-3.1%
6/30/2011	(388,359)	310,467,297	-0.1%
6/30/2012	(7,152,892)	354,837,169	-2.0%
6/30/2013	5,648,661	382,013,160	1.5%
6/30/2014	5,568,248	410,026,471	1.4%
6/30/2015	6,000,467	433,271,687	1.4%
6/30/2016	(4,288,969)	453,773,528	-0.9%
6/30/2017	4,603,012	504,763,128	0.9%
6/30/2018	1,384,171	539,060,501	0.3%
6/30/2019	(311,990)	577,844,033	-0.1%

[1] *Airport Authority split as of December 31, 2002.*

SECTION V – CONTRIBUTIONS

In the process of evaluating the financial condition of any pension plan, the actuary analyzes the assets and liabilities to determine what level (if any) of contributions is needed to achieve and maintain an appropriate funded status of a plan. Typically, the actuarial process will use an actuarial funding method that attempts to create a pattern of contributions that is both stable and predictable.

The actuarial funding methodology employed is the Entry Age Normal (EAN) actuarial funding method. Under the funding method, there are three components to the total contribution: the normal cost, an amortization payment on the unfunded actuarial liability, and the expected administrative expenses. The normal cost for an individual employee is the ratio of their present value of future benefits to present value of future salaries at entry age, multiplied by their valuation salary. The gross normal cost rate for each sub-group is determined by dividing the sum of the individual normal costs by the total valuation salary for that sub-group. The gross normal cost rate is then reduced by the average employee contribution rate to determine the employer normal cost rate. Finally, the employer normal cost rate for each sub-group is multiplied by that group's projected FY 2021 payroll to determine the normal cost component of the FY 2021 ADC.

The EAN actuarial liability is the Plan's total present value of future benefits minus the total present value of future normal costs. The actuarial value of assets is allocated to each sub-group based on the proportion of the EAN actuarial liability for that sub-group. The difference between the EAN actuarial liability and the actuarial value of assets is the unfunded actuarial liability. The UAL for FY 2021 is to be amortized over several different periods. Table V-2 shows the outstanding balance, the FY 2021 payment and the remaining amortization period for each of these components. If necessary, there is an additional UAL cost component to ensure that there is no negative amortization in aggregate in any year.

In January 2015, the Board voted to account for expected administrative expenses explicitly in the actuarially determined contribution (ADC). The administrative expense component is $839,975 for FY 2021 (assuming payment at the beginning of the year). This amount is assumed to increase by 2.5% per year.

In September 2017, the Board adopted a five-year layering method for the 2009 experience loss amortization base, in order to improve the projected stability of future employer contributions. Details are shown in Table V-2 of this section.

In January 2019, the Board adopted a UAL contribution floor amortization method, setting a minimum of $13,270,628 on the UAL payment until the Plan achieves a 100% funding ratio. This UAL payment floor was based on the Fiscal Year 2020 amortization payment as determined by the results of the June 30, 2018 actuarial valuation.

Table V-1 on the following page shows how the Unified Port District's contribution rate for SDCERS for FY 2021 is developed.

SECTION V – CONTRIBUTIONS

Table V-1
SDCERS - Unified Port District
Development of the UPD's Contribution as of June 30, 2019 for FY 2021
(dollars in millions)

		WEIGHTED	Non-Safety					Safety			
		TOTAL UPD	Weighted Total	General	Misc CLASSIC	Misc PEPRA	Executives	Weighted Total	Safety Pre-2010	Safety Post-2010	Safety PEPRA
1.	Total Normal Cost Rate as of June 30, 2019	**25.35%**	21.39%	24.92%	9.47%	10.82%	20.51%	31.60%	32.78%	36.19%	28.43%
2.	Member Contribution Rate as of June 30, 2019	**10.14%**	7.98%	9.81%	0.00%	6.60%	9.20%	13.56%	12.70%	13.37%	14.83%
3.	Employer Normal Cost Rate as of June 30, 2019 (1-2)	**15.21%**	13.41%	15.11%	9.47%	4.22%	11.31%	18.04%	20.08%	22.82%	13.60%
4.	Actuarial Liability	**$ 599.8**	$ 380.6	$ 348.8	$ 1.4	$ 0.3	$ 30.1	$ 219.3	$ 212.4	$ 4.6	$ 4.6
5.	Actuarial Assets	**$ 453.7**	$ 287.9	$ 263.8	$ 1.0	$ 0.2	$ 22.8	$ 165.9	$ 160.7	$ 3.5	$ 3.5
6.	Total Unfunded Actuarial Liability (UAL) (4-5) [1]	**$ 146.1**	$ 92.7	$ 85.0	$ 0.3	$ 0.1	$ 7.3	$ 53.4	$ 51.7	$ 1.1	$ 1.1
7.	Preliminary FY21 UAL amortization [1]	**$ 13.7**	$ 8.7	$ 8.0	$ 0.0	$ 0.0	$ 0.7	$ 5.0	$ 4.9	$ 0.1	$ 0.1
8.	Negative Amortization Test for FY21										
	a. Total UAL on 6/30/19 less FY20 UAL payment	**$ 132.8**	$ 84.3	$ 77.2	$ 0.3	$ 0.1	$ 6.7	$ 48.6	$ 47.0	$ 1.0	$ 1.0
	b. Interest on 8a. To 6/30/20	**$ 8.6**	$ 5.5	$ 5.0	$ 0.0	$ 0.0	$ 0.4	$ 3.2	$ 3.1	$ 0.1	$ 0.1
	c. Preliminary FY21 UAL amortization (line 7)	**$ 13.7**	$ 8.7	$ 8.0	$ 0.0	$ 0.0	$ 0.7	$ 5.0	$ 4.9	$ 0.1	$ 0.1
	d. Negative interest (8b - 8c, not less than zero)	**$ 0.0**	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ 0.0
9.	Total FY21 UAL payment on 7/01/20 (8c + 8d)	**$ 13.7**	$ 8.7	$ 8.0	$ 0.0	$ 0.0	$ 0.7	$ 5.0	$ 4.9	$ 0.1	$ 0.1
10.	Total FY21 UAL payment throughout year	**$ 14.1**	$ 9.0	$ 8.2	$ 0.0	$ 0.0	$ 0.7	$ 5.2	$ 5.0	$ 0.1	$ 0.1
11.	Total Expected Payroll for FY21	**$ 38.5**	$ 23.8	$ 14.5	$ 3.5	$ 5.5	$ 0.3	$ 14.7	$ 6.6	$ 1.6	$ 6.4
12.	FY21 Normal Cost paid throughout the year	**$ 5.4**	$ 2.8	$ 2.2	$ 0.3	$ 0.2	$ 0.0	$ 2.6	$ 1.3	$ 0.4	$ 0.9
13.	FY21 Normal Cost paid at start of year	**$ 5.2**	$ 2.7	$ 2.1	$ 0.3	$ 0.2	$ 0.0	$ 2.5	$ 1.3	$ 0.4	$ 0.8
14.	Administrative Expenses paid throughout the year	**$ 0.9**	$ 0.5	$ 0.5	$ 0.0	$ 0.0	$ 0.0	$ 0.3	$ 0.3	$ 0.0	$ 0.0
15.	Determination of FY21 ADC %										
	a. Employer Normal Cost Rate (12 divided by 11)	**13.93%**	11.70%	15.11%	9.47%	4.22%	11.31%	17.55%	20.08%	22.82%	13.60%
	b. UAL Rate (line 10 divided by line 11)	**36.72%**	37.65%	56.83%	0.91%	0.14%	224.46%	35.21%	75.62%	6.65%	1.68%
	c. Admin Expense Rate (line 14 divided by line 11)	**2.25%**	2.19%	3.20%	0.46%	0.19%	10.48%	2.36%	4.25%	1.31%	0.68%
	d. Total employer ADC % (15a + 15b + 15c)	**52.90%**	51.54%	75.13%	10.85%	4.55%	246.25%	55.12%	99.95%	30.78%	15.96%
16.	Determination of FY21 ADC dollars										
	a. FY21 ADC if paid throughout year	**$ 20.4**	$ 12.3	$ 10.9	$ 0.4	$ 0.3	$ 0.8	$ 8.1	$ 6.6	$ 0.5	$ 1.0
	b. FY21 ADC if paid at beginning of year	**$ 19.7**	$ 11.9	$ 10.5	$ 0.4	$ 0.2	$ 0.8	$ 7.8	$ 6.4	$ 0.5	$ 1.0

[1] *See Table V-2 for components of these amounts.*
Note: Numbers may not add due to rounding.

SECTION V – CONTRIBUTIONS

Table V-2 shows information on each layer of the June 30, 2019 UAL.

Table V-2
SDCERS - Unified Port District
Schedule of Amortization Bases as of July 1, 2019
Used in Development of the UPD's Contribution for FY 2021

Type of Base	Date Established	Initial Amount	Initial Amortization Years	July 1, 2019 Outstanding Balance	FY 2021 Outstanding Balance (BOY) [1]	Remaining Amortization Years	FY 2021 Amortization Payment (BOY)
1. June 30, 2007 UAL	7/1/2007	$ 15,953,422	14	$ 6,172,101	$ 4,309,655	2	$ 2,190,304
2. Assumption Change	7/1/2008	3,749,736	30	4,398,190	4,369,546	19	304,338
3. Experience Loss	7/1/2008	865,441	15	515,799	432,109	4	113,420
4. Experience Loss	7/1/2009	43,763,842	15				
- Layer 1				5,916,597	5,162,663	5	1,101,631
- Layer 2				6,039,235	5,419,747	6	979,254
- Layer 3				6,134,462	5,619,391	7	884,208
- Layer 4				6,210,502	5,778,829	8	808,295
- Layer 5				6,272,588	5,909,025	9	746,296
5. Experience Loss	7/1/2010	8,786,725	15	6,550,096	5,878,205	6	1,062,089
6. Experience Gain	7/1/2011	(488,764)	15	(393,645)	(360,593)	7	(56,739)
7. Plan Change (ERIP)	7/1/2011	9,482,154	20	9,271,435	8,955,595	12	888,730
8. Assumption Change	7/1/2011	10,225,742	30	11,703,841	11,704,342	22	735,621
9. Experience Loss	7/1/2012	6,509,649	15	5,589,635	5,201,116	8	727,489
10. Method Change	7/1/2012	2,411,525	30	2,733,703	2,738,757	23	167,044
11. Experience Gain	7/1/2013	(3,358,988)	15	(3,037,424)	(2,861,373)	9	(361,385)
12. Assumption Change	7/1/2013	8,088,814	30	9,066,918	9,098,682	24	539,524
13. Experience Gain	7/1/2014	(5,340,373)	15	(5,053,028)	(4,807,802)	10	(555,089)
14. Experience Gain	7/1/2015	(5,825,601)	15	(5,720,715)	(5,487,952)	11	(585,024)
15. Assumption Change	7/1/2015	5,479,948	30	6,024,160	6,062,864	26	341,436
16. Experience Loss	7/1/2016	4,128,942	15	4,184,271	4,041,730	12	401,091
17. Assumption Change	7/1/2016	32,900,945	30	35,791,161	36,067,456	27	1,983,718
18. Experience Gain	7/1/2017	(4,479,007)	15	(4,662,575)	(4,530,143)	13	(421,392)
19. Assumption Change	7/1/2017	15,033,270	30	16,183,879	16,328,226	28	878,203
20. Experience Gain	7/1/2018	(1,282,116)	15	(1,365,454)	(1,333,355)	14	(116,939)
21. Assumption Change	7/1/2018	16,228,868	30	17,283,745	17,457,153	29	919,259
22. Experience Loss	7/1/2019	303,893	15	303,893	323,646	15	26,897
TOTAL				**$ 146,113,369**	**$ 141,477,519**		**$ 13,702,279**

[1] *July 1, 2019 outstanding balance adjusted to the FY 2020 beginning of year (BOY), July 1, 2019.*

SECTION VI – COMPREHENSIVE ANNUAL FINANCIAL REPORT INFORMATION

Tables VI-1 and VI-2 are exhibits required for the System's Comprehensive Annual Financial Report (CAFR). The Government Finance Officers Association (GFOA) recommends showing at least six years of experience in each of these exhibits in the CAFR. Table VI-1 presents an analysis of financial experience for the valuation year, and Table VI-2 presents the Schedule of Funded Liabilities by Type which shows the portion of actuarial liability covered by assets.

The disclosures needed to satisfy the new requirements of Governmental Accounting Standards Board (GASB) Statement Nos. 67 and 68 are contained in our separate GASB 67/68 report as of June 30, 2019, issued on October 7, 2019.

Table VI-1
SDCERS - Unified Port District
ANALYSIS OF FINANCIAL EXPERIENCE
Gain and Loss in Actuarial Liability During Years Ended June 30
Resulting from Differences Between Assumed Experience and Actual Experience

Type of Activity	Gain (or Loss) for Year ending June 30, 2019
Investment Income	$ 3,925,776
Combined Liability Experience	(4,237,766)
Gain (or Loss) During Year from Financial Experience	$ (311,990)
Non-Recurring Gain (or Loss) Items (e.g., Contributions, Assumption Changes)	131,809
Composite Gain (or Loss) During Year	$ (180,181)

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SECTION VI – COMPREHENSIVE ANNUAL FINANCIAL REPORT INFORMATION

Table VI-2
SDCERS - Unified Port District

Schedule of Funded Liabilities by Type
($ in thousands)

Valuation Date June 30,	(A) Active Member Contributions	(B) Retirees And Beneficiaries	(C) Remaining Active Members' Liabilities	Reported Assets [1]	Portion of Actuarial Liabilities Covered by Reported Assets (A)	(B)	(C)
2019 [5]	$ 22,757	$ 388,821	$ 188,245	$ 453,709	100%	100%	22.38%
2018 [5]	22,945	371,025	183,875	428,619	100	100	18.84
2017 [5]	23,006	346,947	169,108	400,674	100	100	18.17
2016 [5]	22,964	318,513	163,286	375,301	100	100	20.71
2015 [5]	21,857	285,175	146,742	357,600	100	100	34.46
2014	22,613	261,029	149,630	333,229	100	100	33.14
2013 [5]	23,744	230,880	155,402	302,322	100	100	30.69
2012	21,236	218,954	141,824	277,822	100	100	26.53
2011 [5]	19,138	207,854	127,845	259,315	100	100	25.28
2010	21,999	150,188	138,280	233,788	100	100	44.55
2009	20,784	137,803	130,112	223,879	100	100	50.18
2008 [5]	19,397	123,029	124,611	245,580	100	100	82.78
2007 [4]	18,374	115,021	113,143	230,585	100	100	85.90
2006 [3]	16,140	101,542	102,955	203,286	100	100	83.15
2005	15,122	86,242	96,708	163,691	100	100	64.45
2004	12,885 [2]	75,994	86,487	141,375	100	100	60.70

[1] *Actuarial Value of Assets.*
[2] *Estimated.*
[3] *Reflects contingent liabilities (13th check), DROP reserves, and IRC Section 415 limits.*
[4] *The actuarial liability on June 30, 2007 and after is based on the entry age actuarial funding method. All prior years are based on the projected unit credit actuarial funding method.*
[5] *Reflects revised actuarial and economic assumptions.*

APPENDIX A – MEMBERSHIP INFORMATION

Table A-1
Reconciliation of Member Data
Unified Port District

	Active	Terminated Vested	Terminated Non-Vested	Disabled	Retired	Beneficiaries	DROP	Totals
Participants as of 7/1/2018	**365**	**113**	**163**	**56**	**397**	**87**	**48**	**1,229**
New Entrants	24	1	4	0	0	0	0	29
Returned to Work	0	0	0	0	0	0	0	0
Vested Terminations	(7)	7	0	0	0	0	0	0
Non-Vested Terminations	(2)	0	2	0	0	0	0	0
Retirements	(5)	(5)	(1)	0	24	0	(13)	0
DROP	(11)	0	0	2	0	0	11	2
Disabilities	0	0	0	0	0	0	0	0
New Continuants	0	0	0	0	0	8	0	8
New Dissolutions [1]	0	0	0	0	2	0	0	2
Benefits Ceased [2]	(1)	0	(1)	(3)	(12)	(6)	0	(23)
Lump Sum Cashout	(4)	(1)	(7)	0	0	0	0	(12)
Transfers In/Out	2	2	0	0	0	0	0	4
Miscellaneous Adjustments	0	0	0	0	0	0	0	0
Participants as of 7/1/2019	**361**	**117**	**160**	**55**	**411**	**89**	**46**	**1,239**

[1] *Includes participants who may have previously had a frozen benefit and retired from a different plan.*

[2] *Includes deaths and benefits that were terminated or suspended.*

APPENDIX A – MEMBERSHIP INFORMATION

Table A-2
SDCERS - Unified Port District
Active Member Data

	June 30, 2019	June 30, 2018	% Change
Total			
Count	361	365	-1.1%
Average Current Age	46.4	46.6	-0.5%
Average Service	12.1	12.3	-1.6%
Average Pensionable Earnings	$ 101,967	$ 97,898	4.2%
Annual Pensionable Earnings	$ 36,810,149	$ 35,732,609	3.0%
Average Valuation Compensation[1]	$ 101,967	$ 97,898	4.2%
Annual Valuation Compensation[1]	$ 36,810,149	$ 35,732,609	3.0%
Average Service Without Purchased Service	11.6	11.8	-1.1%
Members with Paid Purchased Service	37	43	-14.0%
Members with Any Purchased Service	41	47	-12.8%
Years of Paid Purchased Service	145	167	-13.0%
Years of Total Purchased Service	158	184	-14.0%
General			
Count	234	244	-4.1%
Average Current Age	50.6	50.2	0.8%
Average Service	13.6	13.4	1.5%
Average Pensionable Earnings	$ 97,340	$ 92,801	4.9%
Annual Pensionable Earnings	$ 22,777,456	$ 22,643,565	0.6%
Average Valuation Compensation[1]	$ 97,340	$ 92,801	4.9%
Annual Valuation Compensation[1]	$ 22,777,456	$ 22,643,565	0.6%
Average Service Without Purchased Service	13.1	12.9	1.6%
Members with Paid Purchased Service	26	29	-10.3%
Members with Any Purchased Service	29	32	-9.4%
Years of Paid Purchased Service	104	115	-9.4%
Years of Total Purchased Service	116	127	-8.5%
Safety			
Count	127	121	5.0%
Average Current Age	38.6	39.2	-1.5%
Average Service	9.2	9.9	-7.1%
Average Pensionable Earnings	$ 110,494	$ 108,174	2.1%
Annual Pensionable Earnings	$ 14,032,693	$ 13,089,044	7.2%
Average Valuation Compensation[1]	$ 110,494	$ 108,174	2.1%
Annual Valuation Compensation[1]	$ 14,032,693	$ 13,089,044	7.2%
Average Service Without Purchased Service	8.9	9.4	-5.3%
Members with Paid Purchased Service	11	14	-21.4%
Members with Any Purchased Service	12	15	-20.0%
Years of Paid Purchased Service	41	52	-21.0%
Years of Total Purchased Service	42	57	-26.3%

[1] *The definition of valuation compensation differs from pensionable earnings due to IRS 401(a).*

APPENDIX A – MEMBERSHIP INFORMATION

Table A-3
SDCERS - Unified Port District
Non-Active Participant Data

	Count			Average Age		
	June 30, 2019	June 30, 2018	%Change	June 30, 2019	June 30, 2018	%Change
Total						
Retired [1]	455	445	2.2%	68.3	68.1	0.3%
Disabled	55	56	-1.8%	64.7	64.2	0.7%
Beneficiaries	89	87	2.3%	73.9	75.0	-1.5%
Payee Total	599	588	1.9%	68.8	68.8	0.1%
DROP Participants	46	48	-4.2%	59.7	59.6	0.1%
Deferred Vested [2]	277	276	0.4%	51.6	51.4	0.4%
Vested < 5 (10) yrs svc [3]	160	163	-1.8%			
General						
Retired [1]	352	348	1.1%	70.5	70.3	0.3%
Disabled	32	34	-5.9%	69.0	68.3	1.0%
Beneficiaries	75	75	0.0%	77.5	77.4	0.1%
Payee Total	459	457	0.4%	71.6	71.4	0.3%
DROP Participants	33	35	-5.7%	62.0	61.6	0.6%
Deferred Vested [2]	229	229	0.0%	53.0	52.7	0.6%
Vested < 5 (10) yrs svc [3]	130	134	-3.0%			
Safety						
Retired [1]	103	97	6.2%	60.8	60.3	0.8%
Disabled	23	22	4.5%	58.7	57.9	1.4%
Beneficiaries	14	12	16.7%	54.4	59.9	-9.2%
Payee Total	140	131	6.9%	59.8	59.8	0.0%
DROP Participants	13	13	0.0%	53.7	54.4	-1.3%
Deferred Vested [2]	48	47	2.1%	44.9	45.1	-0.4%
Vested < 5 (10) yrs svc [3]	30	29	3.4%			

[1] *Includes DROP Participants.*
[2] *Includes all Participants having a contribution balance still on account with SDCERS.*
[3] *10 years of service required for vesting if terminated prior to December 31, 2002.*

APPENDIX A – MEMBERSHIP INFORMATION

Table A-4
SDCERS - Unified Port District
Non-Active Participant Data

	Total Annual Benefit			Average Annual Benefit		
	June 30, 2019	June 30, 2018	%Change	June 30, 2019	June 30, 2018	%Change
Total						
Retired [1]	$ 24,702,939	$ 23,467,215	5.3%	$ 54,292	$ 52,735	3.0%
Disabled	1,805,008	1,680,937	7.4%	32,818	30,017	9.3%
Beneficiaries	1,921,145	1,809,741	6.2%	21,586	20,802	3.8%
Payee Total	$ 28,429,092	$ 26,957,893	5.5%	$ 47,461	$ 45,847	3.5%
DROP Participants	$ 2,971,944	$ 2,902,075	2.4%	$ 64,607	$ 60,460	6.9%
Deferred Vested [2]	$ 7,833,874	$ 7,101,466	10.3%	$ 28,281	$ 25,730	9.9%
General						
Retired [1]	$ 16,757,568	$ 16,072,071	4.3%	$ 47,607	$ 46,184	3.1%
Disabled	721,492	728,204	-0.9%	22,547	21,418	5.3%
Beneficiaries	1,625,732	1,521,023	6.9%	21,676	20,280	6.9%
Payee Total	$ 19,104,792	$ 18,321,297	4.3%	$ 41,623	$ 40,090	3.8%
DROP Participants	$ 2,018,954	$ 1,886,967	7.0%	$ 61,180	$ 53,913	13.5%
Deferred Vested [2]	$ 6,210,347	$ 5,590,036	11.1%	$ 27,119	$ 24,411	11.1%
Safety						
Retired [1]	$ 7,945,371	$ 7,395,145	7.4%	$ 77,140	$ 76,239	1.2%
Disabled	1,083,516	952,733	13.7%	47,109	43,306	8.8%
Beneficiaries	295,414	288,718	2.3%	21,101	24,060	-12.3%
Payee Total	$ 9,324,300	$ 8,636,597	8.0%	$ 66,602	$ 65,928	1.0%
DROP Participants	$ 952,990	$ 1,015,108	-6.1%	$ 73,307	$ 78,085	-6.1%
Deferred Vested [2]	$ 1,623,528	$ 1,511,430	7.4%	$ 33,823	$ 32,158	5.2%

[1] *Includes DROP Participants.*
[2] *Includes all Participants having a contribution balance still on account with SDCERS. Annual benefit for Deferred Vested Participants is the total contribution balance in account as of the valuation date.*

APPENDIX A – MEMBERSHIP INFORMATION

Table A-5
SDCERS - Unified Port District
Distribution of Active Members (Excludes DROP Participants) as of June 30, 2019
Total UPD

	Years of Service										Total	Average
Age	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and up	Count	Salary
Under 25	1	-	-	-	-	-	-	-	-	-	1	$ 74,943
25 to 29	8	17	-	-	-	-	-	-	-	-	25	90,781
30 to 34	8	15	2	2	-	-	-	-	-	-	27	93,661
35 to 39	1	11	5	17	4	-	-	-	-	-	38	104,358
40 to 44	4	14	4	27	15	2	-	-	-	-	66	107,894
45 to 49	3	7	-	19	27	13	1	-	-	-	70	111,808
50 to 54	-	6	1	15	16	11	5	-	-	-	54	104,089
55 to 59	1	1	1	11	10	11	6	2	-	-	43	95,610
60 to 64	-	6	3	8	11	3	-	-	-	-	31	94,536
65 to 69	-	2	-	1	1	-	-	-	-	-	4	170,981
70 and up	-	-	-	1	1	-	-	-	-	-	2	80,009
Total Count	26	79	16	101	85	40	12	2	-	-	361	
Avg. Salary	$ 97,102	$ 101,651	$ 109,951	$ 97,346	$ 103,293	$ 120,595	$ 104,902	$ 142,137	$ -	$ -		$ 103,305

APPENDIX A – MEMBERSHIP INFORMATION

Table A-6
SDCERS - Unified Port District
Retirees (Includes DROP Participants), Disabled, and Beneficiaries Tabulated by Attained Age/Benefit Effective Date
Total UPD

	Age										
Plan Year	Under 50	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	90 and up	Total
Pre-2000	-	2	6	3	7	2	15	14	17	9	75
2000	-	1	-	-	-	5	1	6	-	3	16
2001	-	2	-	1	-	-	4	3	2	1	13
2002	-	-	1	2	1	10	4	2	-	-	20
2003	-	-	-	-	1	5	5	3	-	1	15
2004	-	1	-	-	-	10	6	5	-	1	23
2005	-	-	-	3	3	9	3	-	-	-	18
2006	-	1	-	3	2	7	2	2	-	-	17
2007	-	-	-	1	7	15	3	1	1	1	29
2008	-	-	1	2	6	5	2	1	-	-	17
2009	-	1	-	3	8	14	6	1	-	-	33
2010	-	1	2	5	5	8	-	-	-	-	21
2011	-	-	14	21	17	12	2	1	2	-	69
2012	-	-	-	7	10	2	2	-	1	2	24
2013	-	-	6	10	1	3	1	-	1	-	22
2014	1	1	9	11	11	1	1	-	-	1	36
2015	-	7	4	8	10	1	1	-	-	-	31
2016	-	3	8	6	5	1	-	1	-	-	24
2017	-	9	5	13	4	1	1	1	2	-	36
2018	2	5	8	8	3	1	2	-	2	-	31
2019	3	5	11	5	1	2	2	-	-	-	29
Total	6	39	75	112	102	114	63	41	28	19	599

Average Age at Retirement/Disability	58.0
Average Current Age	68.8
Average Annual Pension	$ 47,461

APPENDIX A – MEMBERSHIP INFORMATION

Data Assumptions and Practices

In preparing our data, we relied on information supplied by the SDCERS' staff. This information includes, but is not limited to, plan provisions, employee data, and financial information. Terms in quotations below are column headings in the data provided by SDCERS. Our methodology for obtaining the data used for the valuation is based upon the following assumptions and practices:

- Benefit service for Actives and Inactives was calculated using "SDCERS Srv Credit." An adjusted date of hire is retroactively calculated from the valuation date based on benefit service. Purchased Service that has been paid for is already included in the "SDCERS Srv Credit" field. Purchased Service that has been contracted for, but not paid as of the valuation date is assumed to be paid in full, and this service will be reflected in the projected benefit.

- Valuation Salary will be the maximum of "Current Fiscal Year Pensionable Salary" and an annualized last pay period "Pensionable Salary," carried forward with assumed salary increases. Historical salaries, "1 Yr Prior Fiscal Year Pensionable Salary," "2 Yr Prior Fiscal Year Pensionable Salary," "3 Yr Prior Fiscal Year Pensionable Salary," and "4 Yr Prior Fiscal Year Pensionable Salary," are considered in the calculation of the projected benefit.

- "Current Contrib Rate" was updated to reflect the new contribution rates for active employees. If the "Current Contrib Rate" was not provided, the prior year contribution for the member was used to update and reflect the new rate.

- For accounts having duplicate records in the Actives and Inactives by Social Security Number, the information from the latest payroll date is regarded as most up to date. The other record is treated as out of date and invalid.

- Records on the provided "Member" file are considered to be Active if they have no "Death Date," no "Separation Date," do not have a retiree record and they received pay in the last pay period (Last Pay Period = 26 or 27) of the current FY.

- Records on the "Member" file are considered to be Inactive if they do not have a "Death Date," do not have a retiree record, and either have a "Separation Date" or have a "Last Pay Period" earlier than the last pay period of the current FY.

- For Inactives, the "Final Average Salary" as provided in the Member file was used for calculating projected benefits as applicable. If this field was missing a value, the "Highest Pensionable Salary" as provided in the supplemental file was used. If an amount was not available in either of these, the maximum of the annualized pay over the prior year and the last four fiscal years' pensionable salaries was used.

- We assume that any active member found in the inactive data last year has returned to work and should be valued as active.

APPENDIX A – MEMBERSHIP INFORMATION

- Records on the "Payee" file are considered in pay status if their benefit is not suspended.

- For duplicate records (based on SSN and Benefit Type) in the payee file, records having the same plan and same benefit type but different benefit amounts, we have added those benefit amounts together.

- Pension Benefit for retirees for each plan was calculated by summing "Monthly Pension," "Monthly Annuity," "COLA Annuity," "Surv Spouse Annuity," and "COLA Pension" and subtracting "DRO Reduction Amt." The "DRO Reduction Amt" field is mainly for Qualified Domestic Relations Order purposes. The "13^{th} Check Supplement Amount" field is added as an annual benefit. It is assumed the payment is annual for retirees already in pay status prior to this valuation.

- Members retiring since the prior valuation date and not having a "13^{th} Check Supplement Amount" will have their projected "13^{th} Check Supplement Amount" calculated assuming \$30 multiplied by the "13th Check Supplement Years," provided they are eligible based on "13th Check Supplement Years."

- Payees' "Taxable COLA" and "Taxable Star COLA" do not include a COLA as of July 1, 2019. These COLA increases were provided in a supplemental file and incorporated into the benefit amounts.

- Members may retire and receive benefits from multiple plans (e.g., a Unified Port District member could have also worked for the Airport Authority); we will value each Member's blended benefit individually. This will result in the counts being slightly higher than actual counts due to people having more than one benefit payable from multiple plans.

- We assume any retiree found in last year's "Payee" file and not in this year's file has died without a beneficiary and should be removed from the valuation data.

- We assume all deceased retirees with payments continuing to a beneficiary have already been accounted for in the "Payee" file.

- We exclude any payee receiving \$0.00 from a blended benefit plan.

- The Final 415 Regulations were used to calculate the present value of Member benefits over the Internal Revenue Service Code 415 Benefit Limits.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

A. Actuarial Assumptions

The SDCERS Board has the authority to select economic and demographic assumptions for the plan. The investment return, inflation, and COLA assumptions reflect the results of an economic experience study performed by Cheiron and presented to the SDCERS Board in September 2017. All other assumptions reflect the results of a full experience study performed by Cheiron covering the period July 1, 2010 through June 30, 2015, and adopted by the SDCERS Board in September 2016.

1. Investment Return

SDCERS' assets are assumed to earn 6.50% net of investment expenses.

2. Inflation Rate

An inflation assumption of 3.05% compounded annually is used for projecting the total annual payroll growth for amortization of the UAL.

3. Administrative Expense

Administrative expenses are assumed to be $839,975 for FY 2021 (assuming payment at the beginning of the year), increasing by 2.50% annually.

4. Interest Credited to Member Contributions

6.50%, compounded annually.

5. Salary Increase Rate

Inflation component: 3.05%

The additional merit component:

Table B-1

Years of Service at Valuation Date	General	Safety
0	5.00%	8.00%
1	4.00%	7.00%
2	3.00%	6.00%
3	2.00%	3.50%
4	1.00%	2.00%
5+	0.50%	0.50%

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

6. Cost-of-Living Increase in Benefits

Assumed to be 1.9% per annum, compounded.

7. COL Annuity Benefit

For both active and terminated vested Members, the actuarial liability for the COL annuity benefit is valued by adding one-sixth of accumulated member contribution accounts. For active Members, a 2.5% load is applied on the normal cost for future member contributions. For PEPRA Participants, the normal cost of the COL annuity benefit is equal to one-sixth of the employee contribution rate.

Members of the Miscellaneous Plan who are not New Members under PEPRA are assumed to not receive a COL annuity benefit.

8. Member Refunds

All or part of the employee contribution rate is subject to potential "offset" by the employer. That "offset" and the related accumulated interest are not to be refunded to employees at termination. However, such offsets are not directly reflected in either the employee contributions or related refund calculations.

100% of non-vested and 0% of vested deferred Members is assumed to elect a refund of Member contributions at termination.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

9. Rates of Termination

Table B-2
SDCERS - Unified Port District
Rates of Termination

Service	General	Safety
0	11.00%	14.00
1	10.00	12.00
2	9.00	10.00
3	8.00	8.00
4	7.00	5.00
5	6.50	4.25
6	6.00	4.25
7	5.50	4.25
8	5.25	4.25
9	5.00	4.25
10	4.75	4.00
11	4.75	4.00
12	4.75	4.00
13	4.75	4.00
14	4.75	4.00
15	4.50	3.75
16	4.50	3.75
17	4.50	3.75
18	4.50	3.75
19	4.50	3.75
20+	4.25	3.50

10% of terminating employees, with 5+ years of service at termination (10+ years of service if terminated prior to December 31, 2002), are assumed to subsequently work for a reciprocal employer and receive 3.55% pay increases per year.

No terminations are assumed once retirement eligible.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

10. Rates of Disability

Table B-3
SDCERS - Unified Port District
Rates of Disability at Selected Ages

Age	General	Safety
20	0.01%	0.15%
25	0.02	0.18
30	0.03	0.20
35	0.04	0.27
40	0.05	0.37
45	0.08	0.47
50	0.15	0.57
55	0.20	0.67
60	0.30	--

75% of the General disabilities and 90% of the Safety disabilities are assumed to be industrial disability retirements. Non-industrial disability retirement is subject to a service requirement.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

11. Rates of Mortality for Active Lives

Active Members use the CalPERS Pre-Retirement Mortality Table base rates from the CalPERS January 2014 Experience Study, projected 20 years from the 2009 base year using a variation of Scale MP-2015 from the Society of Actuaries. The scale was modified using the Society of Actuaries' model implementation tool with rates converging to the ultimate rate in 2019 (instead of 2029) and an ultimate rate of improvement of 0.75% (instead of 1.0%) up to age 85 and decreasing to 0.60% (instead of 0.85%) at age 95.

Sample rates are as follows (including mortality improvement projection):

Table B-4
SDCERS - Unified Port District
Rates of Mortality for Active Lives at Selected Ages

	General and Safety	
Age	Male	Female
20	0.02%	0.02%
25	0.03	0.02
30	0.04	0.02
35	0.05	0.03
40	0.06	0.04
45	0.09	0.06
50	0.13	0.09
55	0.21	0.14
60	0.31	0.19
65	0.42	0.27
70	0.58	0.38

50% of active Member deaths for Safety Members are assumed to be industrial deaths and all active Member deaths for General Members are assumed to be non-industrial deaths.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

12. Rates of Mortality for Retired Healthy Lives & Terminated Vested Members

Retired healthy and terminated vested Members use the CalPERS Post-Retirement Healthy Mortality Table base rates from the CalPERS January 2014 Experience Study, with a 10% increase to female rates, projected 20 years from the 2009 base year using a variation of Scale MP-2015 from the Society of Actuaries. The scale was modified using the Society of Actuaries' model implementation tool with rates converging to the ultimate rate in 2019 (instead of 2029) and an ultimate rate of improvement of 0.75% (instead of 1.0%) up to age 85 and decreasing to 0.60% (instead of 0.85%) at age 95.

Sample rates are as follows (including mortality improvement projection):

Table B-5
SDCERS - Unified Port District
Rates of Mortality for Retired Healthy Lives at Selected Ages

Age	Male	Female
40	0.09%	0.09%
45	0.18	0.19
50	0.42	0.46
55	0.54	0.45
60	0.71	0.50
65	0.88	0.67
70	1.44	1.13
75	2.42	1.98
80	4.30	3.38
85	7.76	6.13
90	13.54	11.42

13. Rates of Mortality for Retired Disabled Lives

Disabled Members use the CalPERS Work-Related Disability Mortality Table base rates from the CalPERS January 2014 Experience Study, projected 20 years from the 2009 base year using a variation of Scale MP-2015 from the Society of Actuaries. The scale was modified using the Society of Actuaries' model implementation tool with rates converging to the ultimate rate in 2019 (instead of 2029) and an ultimate rate of improvement of 0.75% (instead of 1.0%) up to age 85 and decreasing to 0.60% (instead of 0.85%) at age 95.

Sample rates are as follows (including mortality improvement projection):

Table B-6
SDCERS - Unified Port District
Rates of Mortality for Disabled Lives at Selected Ages

Age	Male	Female
40	0.19%	0.17%
45	0.26	0.24
50	0.42	0.42
55	0.54	0.41
60	0.75	0.54
65	1.19	0.86
70	1.80	1.44
75	3.11	2.42
80	5.41	4.14
85	8.55	6.64
85	13.54	10.38

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

14. Rates of Retirement

Rates of Retirement are shown in the table below. Retirement rates include both service retirements and entry into DROP.

Table B-7
SDCERS - Unified Port District
Rates of Retirement by Service Years

	General Plans		Miscellaneous PEPRA Plan		Safety Plans	
Service	Prior to age 62	Age 62 or greater	Prior to age 62	Age 62 or greater	Prior to age 55	Age 55 or greater
5-9	--	33.0%	16.5%	33.0%	--	9.0%
10	--	40.0	20.0	40.0	--	40.0
11	--	40.0	20.0	40.0	--	40.0
12	--	40.0	20.0	40.0	--	40.0
13	--	40.0	20.0	40.0	--	40.0
14	--	40.0	20.0	40.0	--	40.0
15	--	42.5	21.25	42.5	--	40.0
16	--	42.5	21.25	42.5	--	40.0
17	--	42.5	21.25	42.5	--	40.0
18	--	42.5	21.25	42.5	--	40.0
19	--	42.5	21.25	42.5	--	40.0
20	40.5%	50.0	40.5	50.0	45.0%	50.0
21	33.3	50.0	33.3	50.0	35.0	50.0
22	35.1	50.0	35.1	50.0	40.0	50.0
23	36.9	50.0	36.9	50.0	45.0	50.0
24	38.7	50.0	38.7	50.0	50.0	50.0
25	40.5	50.0	40.5	50.0	55.0	60.0
26	42.3	50.0	42.3	50.0	60.0	60.0
27	44.1	50.0	44.1	50.0	65.0	60.0
28	45.9	50.0	45.9	50.0	70.0	60.0
29	47.7	50.0	47.7	50.0	75.0	60.0
30	49.5	50.0	49.5	50.0	100.0	100.0
31	51.3	50.0	51.3	50.0	100.0	100.0
32	53.1	50.0	53.1	50.0	100.0	100.0
33	54.9	50.0	54.9	50.0	100.0	100.0
34	56.7	50.0	56.7	50.0	100.0	100.0
35+	100.0	100.0	100.0	100.0	100.0	100.0

All members are assumed to retire at the later of current age or age 70, regardless of service.

For terminated vested Members, we assume that retirement will occur provided they have at least five years of service (at least ten years of service if terminated prior to December 31, 2002) on the later of attained age or:

General Members: Earlier of age 62 or age 55 and 20+ years of service.

Safety Members: For those hired before January 1, 2010, earlier of age 55 or age 50 and 20+ years of service. For those hired on or after January 1, 2010, earlier of age 55 or any age and 30+ years of service. For PEPRA Members, age 50 and 5 years of service.

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

15. Family Composition

80% of men and 55% of women were assumed married at retirement. A female spouse is assumed to be three-years younger than her male spouse.

Actual data is used for current pensioners, if available.

16. Member Contributions for Spousal Continuance

All active Members contribute towards a 50% survivor continuance. However, Members who are unmarried at retirement may either be refunded that specific part of their contributions, or they may leave such contributions on account and receive an incremental benefit that is the actuarial equivalent of such contributions.

17. Deferred Member Benefit

The benefit was estimated based on information provided by SDCERS staff. The data used to value the estimated deferred benefit were date of birth, date of hire, date of termination, and last pay. Based on the data provided, service credit, highest average salary, and deferred retirement age were estimated. The estimates were used to compute the retirement benefit, upon which the liabilities are based. For those participants without sufficient data or service, accumulated participant contribution balances, with interest, were used as the actuarial liability.

18. DROP Account Balances

For DROP participants still working, the liability for the account balances in the asset information received from SDCERS staff was adjusted to assume average commencement in 2½ years and an interest crediting rate of 2.0%. Thereafter, it was assumed the account balance would be converted to an annuity at an interest rate of 2.8% over an average period of 10 years. The 10-year period was selected to average among the available DROP payment elections, including a lump sum, life expectancy, and 20 years. The liability for pre-2006 DROP account balances still left on account was valued assuming they would be paid out until age 70½, with an interest crediting rate of 2.0%. The liability for the remaining account balances was adjusted based on the DROP annuity rate in effect at the Member's benefit effective date.

These adjustments are applied to the DROP account balance values provided in the financial statements. The account balance liability is allocated to each individual Tier (e.g., General) based on the total amount of the DROP account balances for that Tier in the valuation data.

19. Other

The contribution requirements and benefit values of a plan are calculated by applying actuarial assumptions to the benefit provisions and Member information furnished, using the actuarial funding methods described in this report.

Actual experience of SDCERS will not coincide exactly with assumed experiences, regardless of the choice of the assumptions, the skill of the actuary, or the precision of the many calculations made. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments to the computed contribution rate. From time to time it becomes appropriate to modify one or more of the assumptions to reflect experience trends, but not random year-to-year fluctuations.

20. Changes Since Last Valuation

Effective January 1, 2020, the DROP interest crediting rate used to value the liability for account balances is decreased from 2.7% to 2.5%, and the DROP annuity rate is increased from 3.0% to 3.1%, to reflect the Board's adoption of these rates at its November 2019 meeting.

B. Actuarial Methods

1. Actuarial Funding Method

The Entry Age Normal funding method was used for active employees, whereby the normal cost rate is computed as the average level annual percent of pay required to fund the retirement benefits for all Members between their dates of hire and assumed dates of retirement. The EAN actuarial liability is the difference between the Plan's total present value of future benefits and the present value of future normal costs, calculated for each sub-group (e.g., General). The unfunded actuarial liability is the difference between the actuarial liability and the actuarial value of assets, and is allocated to each sub-group based on its liability.

The unfunded actuarial liability is amortized by annual payments. The payments are determined so that they will be a level percentage of pay, assuming payroll increases 3.05% per year. The UAL is amortized over different closed periods depending on the source of the loss. The entire UAL as of June 30, 2007 is amortized over 14 years. Subsequent gains and losses are amortized over 15 years. Changes in assumptions and methods were being amortized over 30 years and will be amortized over 20 years as of June 30, 2019. Changes in benefits over 20 years (or period over which benefit changes are paid, if shorter). Funding surplus, if any, is amortized over 30 years.

Effective with the June 30, 2017 valuation, the remaining balance of the 2009 experience loss was re-amortized using a five-year layering approach, in which one-fifth of the

APPENDIX B – ACTUARIAL ASSUMPTIONS AND METHODS

remaining balance continues to be amortized over the same period, while each additional one-fifth is amortized over an additional year. For details, see Table V-2.

In January 2019, the Board adopted a UAL contribution floor amortization method, setting a minimum of $13,270,628 on the UAL payment until the Plan achieves a 100% funding ratio. This UAL payment floor was based on the Fiscal Year 2020 amortization payment as determined by the results of the June 30, 2018 actuarial valuation.

Finally, if necessary, there is an additional UAL cost component to ensure that there is no negative amortization in any year.

Expected administrative expenses are included in the actuarially determined contribution (ADC). The administrative expense component is $839,975 for FY 2021 (assuming payment at the beginning of the year). This amount is assumed to increase by 2.50% per year.

2. Asset Valuation Method

For the purposes of determining the Unified Port District's actuarially determined contribution to SDCERS, we use a smoothed actuarial value of assets. The asset smoothing method dampens the volatility in asset values that could occur because of the fluctuations in market conditions. Use of an asset smoothing method is consistent with the long-term nature of the actuarial valuation process. Assets are assumed to be used exclusively for the provision of retirement benefits and expenses.

The actuarial value of assets is equal to 100% of the *expected actuarial value of assets** plus 25% of the difference between the current market value of assets and the expected actuarial value of assets. In no event will the actuarial value of assets ever be less than 80% of the market value of assets nor greater than 120% of the market value of assets.

3. Changes Since Last Valuation

There were two changes to the amortization method as of June 30, 2019. First, the Board adopted a UAL contribution floor amortization method, setting a minimum of $13,270,628 on the UAL payment until the Plan achieves a 100% funding ratio. This UAL payment floor was based on the Fiscal Year 2020 amortization payment as determined by the results of the June 30, 2018 actuarial valuation. Second, changes in assumptions and methods will be amortized over 20 years, down from 30 years.

* *The expected actuarial value of assets is equal to the prior year's actuarial value of assets increased with actual contributions made, decreased with actual disbursements made, all items (prior assets, contributions and disbursements) further adjusted with expected investment returns for the year.*

APPENDIX C – SUMMARY OF PLAN PROVISIONS

In 1963, the San Diego Unified Port District (UPD) contracted with the City of San Diego to have its employees participate in the City's SDCERS-administered retirement plan. In 2002, the voters of the City of San Diego voted to add section 149 to the City Charter, allowing public agencies to contract directly with SDCERS to participate in the SDCERS trust fund, and to have SDCERS administer the retirement benefits established by each contracting employer. Pursuant to Charter section 149, the Port has contracted directly with SDCERS to administer the retirement plan for its employees since January 1, 2003. The change in contracting parties brought about by this Charter amendment did not affect any rights or benefits that UPD employees earned before 2003.

1. Membership Requirement

Membership is mandatory from the first day of employment for all Safety Members and for General Members hired before January 1, 2009. (§0103) For Miscellaneous Members hired on or after January 1, 2009, the Member is a participant for purposes of establishing reciprocity, but does not begin earning service credit until the 1st day of their 6th year of employment (§0102). Any new employee who becomes a member on or after January 1, 2013 is subject to the provisions of California Public Employees' Pension Reform Act of 2013 (PEPRA). (California Government Code Section 7522 et seq. and Assembly Bill (AB) 197)*

2. Monthly Compensation Base for Benefits

Highest one-year average for General Members hired before October 1, 2006, and Safety Members hired before January 1, 2010. For General Members hired on or after October 1, 2006, and all Miscellaneous Members, highest three-year average. (§0102)

For Safety Members hired on or after January 1, 2010, the highest three-year average during his or her final three-year period while contributing to the Plan. (§0102 and Amendment 1)

For Miscellaneous Members and Safety Members hired on or after January 1, 2013, the highest average annual pensionable compensation earned by the member during a period of at least 36 consecutive months. For Safety Members under PEPRA, compensation is limited to the PEPRA Compensation Limit for members participating in the federal system ($124,180 for 2019) (Gov. Code §7522.32)

Subject to a 10% increase for General Members who joined the SDCERS plan before November 9, 2001 and were contributing to the Plan on January 1, 2002 and all Safety Members, if the Member elects such increase in lieu of an increased benefit formula.

* All "§" references are to the Unified Port District Plan Document.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

3. Service Retirement

Eligibility

General Members:
Age 62 with five years of service (excludes five year permissible purchased service), or age 55 with 20 years of service. Miscellaneous Members begin earning service credit during their sixth year of employment (§0300).

Safety Members:
For Safety Members hired before January 1, 2010, age 55 with five years of service (excludes five year permissible purchased service), or age 50 with 20 years of service. For Safety Members hired on or after January 1, 2010, age 55 with five years of service (excludes five year permissible purchased service), or any age with 30 years of service with the UPD (§0301). For Safety Members hired on or after January 1, 2013, age 50 with 5 or more years of earned service. (Gov. Code §7522.25)

Benefit

General Members:
For General Members hired before November 10, 2001, choice of (1) formula in place on December 31, 2001 with 10% increase in Final Average Compensation, (2) "Andrecht" formula effective as of January 1, 2002, or (3) "2.5% at 55" multiplier with a benefit cap of 90% of Final Average Compensation (§0300(g)).

For General Members hired on or after November 10, 2001 and before January 1, 2009, "2.5% at 55" multiplier with a benefit cap of 90% of Final Average Compensation (§0300(h)).

For Miscellaneous Members hired on or after January 1, 2009, the formula is (not to exceed 90% of final compensation): (1) for years 1-5 of service credit, 0.75% of Final Compensation per year; (2) for years 6-10 of service credit, 1% of Final Compensation per year; (3) for years 11-15 of service credit, 1.25% of Final Compensation per year; and (4) beginning with service credit year 16, 1.5% of Final Compensation per year (§0301(g)).

Executive General Members hired before January 1, 2009 receive "3% at 55" multiplier without an increase in Final Average Compensation. (§0300)

Executive Members who take office on or after January 1, 2013 - a blended benefit based on their two categories of service. (§0300)

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Safety Members:
For Safety Members hired before January 1, 2010 choice of formula in place on December 31, 2001 with a 10% increase in Final Average Compensation or "Andrecht" 3% formula without increases in Final Average Compensation. Effective April 1, 2004, there is a benefit cap of 90% of Final Average Compensation.

Safety Members hired on or after January 1, 2010 receive a 3% multiplier without an increase in Final Average Compensation, not to exceed 90% of final compensation.

Safety Members hired on or after January 1, 2013 receive 2% per year of service at age 50, increasing to 2.7% at age 57, not to exceed 90% of final compensation. (Gov. Code §7522.25)

For all employees, with the exception of Miscellaneous members hired between January 1, 2009 and December 31, 2012, there is an additional benefit equal to the annuitized Member COL Annuity contributions at retirement date.

In all cases, there is an integration feature which provides for 2/3 of the formula multiplier on the first $400 of monthly Final Average Compensation. The 2/3 equals the Social Security integration factor.

Table C-1
SDCERS - Unified Port District
Member Service Retirement Accrual Factors

	General Members hired prior to 1/1/2009				Safety	
Age	**Pre 12/31/2001**	**Andrecht**	**Post 4/1/2004**	**Management**	**Pre 12/31/2001**	**Andrecht**
50	--	--	--	--	2.50%	3.00%
51	--	--	--	--	2.54%	3.00%
52	--	--	--	--	2.58%	3.00%
53	--	--	--	--	2.62%	3.00%
54	--	--	--	--	2.66%	3.00%
55	2.00%	2.25%	2.50%	3.00%	2.70%	3.00%
56	2.00%	2.25%	2.60%	3.00%	2.70%	3.00%
57	2.00%	2.25%	2.70%	3.00%	2.70%	3.00%
58	2.00%	2.25%	2.80%	3.00%	2.70%	3.00%
59	2.08%	2.25%	2.90%	3.00%	2.70%	3.00%
60	2.16%	2.30%	3.00%	3.00%	2.70%	3.00%
61	2.24%	2.35%	3.00%	3.00%	2.70%	3.00%
62	2.31%	2.40%	3.00%	3.00%	2.70%	3.00%
63	2.39%	2.45%	3.00%	3.00%	2.70%	3.00%
64	2.47%	2.50%	3.00%	3.00%	2.70%	3.00%
65 and up	2.55%	2.55%	3.00%	3.00%	2.70%	3.00%

APPENDIX C – SUMMARY OF PLAN PROVISIONS

GENERAL:

Table C-2 SDCERS - Unified Port District	
For Vested Members hired before January 1, 2009 who terminated----	**--the accrual factors are--**
Prior to January 1, 1997	See Table C-4
January 1, 1997 - December 31, 2001	Pre 12/31/2001 factors above
January 1, 2002 - March 31, 2004	Pre 12/31/2001 factors above with 10% increase in Final Average Compensation, Andrecht, or Executives (if applicable)
April 1, 2004 - Present	Pre 12/31/2001 factors above with 10% increase in Final Average Compensation, Andrecht, Post 4/1/2004 or Executives (if applicable)

SAFETY:

Table C-3 SDCERS - Unified Port District	
For Vested Members who terminated--	**--the accrual factors are--**
Prior to January 1, 2002	See Table C-4
January 1, 2002 - Present	Pre 12/31/2001 factors above with 10% increase in Final Average Compensation or Andrecht

APPENDIX C – SUMMARY OF PLAN PROVISIONS

Table C-4
SDCERS - Unified Port District
Pre-1997[1] Member Service Retirement Accrual Factors

Age	General	Safety
50	--	2.00%
51	--	2.10%
52	--	2.22%
53	--	2.34%
54	--	2.47%
55	1.48%	2.62%
56	1.55%	2.62%
57	1.63%	2.62%
58	1.72%	2.62%
59	1.81%	2.62%
60	1.92%	2.62%
61	1.99%	2.62%
62	2.09%	2.62%
63	2.20%	2.62%
64	2.31%	2.62%
65 and up	2.43%	2.62%

[1] Safety Members have the same calculation factors through December 31, 2001

Maximum Benefit

General Members hired before January 1, 2009: 90% of Final Average Compensation if Post 4/1/2004 factor is chosen.

General Members hired on or after January 1, 2009: 90% of Final Average Compensation

General Executive Members: 90% of Final Average Compensation

Safety Members: 90% of Final Average Compensation

Unmodified Form of Payment

Monthly payments continued for the life of the Member, with 50% continuance to the eligible surviving spouse, domestic partner, or dependent child under 21 years of age upon Member's death. If there is no eligible spouse at the time of retirement, the Member may receive either a lump sum payment equal to the accumulated surviving spouse contributions or use those contributions to provide a larger annuity. (§0600)

Note: Unified Port District employees participate in Social Security.

4. Non-Industrial Disability

Eligibility

Ten years of service. Miscellaneous Members hired on or after January 1, 2009 who do not begin to accrue service credit until their sixth year of employment, must have 10 years of service credit, which means 15 years of Port employment (§0504).

Benefit

General Members:
For General Members hired before January 1, 2009, the greater of 1.5% per year of service, one-third of final compensation, or the earned service retirement benefit (§0506).

For Miscellaneous Members hired on or after January 1, 2009, the greater of 11% of Final Compensation or earned service retirement benefit (§0507).

Safety Members:
Greater of 1.8% per year of service, one-third of final compensation, or the earned service retirement benefit (§0505).

5. Industrial Disability

Eligibility

No age or service requirement for Members hired before January 1, 2009. Miscellaneous Members hired on or after January 1, 2009 must have five years of Port employment to be eligible for an industrial disability benefit (§0500).

Benefit

General Members:
For General Members hired before January 1, 2009, greater of one-third of final compensation, or the earned service retirement benefit, if eligible (§0502).
For Miscellaneous Members hired on or after January 1, 2009, the greater of 11% of Final Compensation or earned service retirement benefit, if eligible (§0503).

Safety Members:
Greater of one-half of final compensation, or the earned service retirement benefit (§0501).

6. Non-Industrial Death Before Eligible to Retire

Refund of employee contributions with interest plus one month's salary for each completed year of service to a maximum of six months' salary. Miscellaneous Members hired on or after January 1, 2009 must have five years of Port employment to be eligible for a non-industrial death benefit (§0701).

7. Non-Industrial Death After Eligible to Retire for Service

50% of earned benefit payable to eligible surviving spouse, domestic partner, or dependent child under 21 years of age. General Members hired on or after January 1, 2009 must have five years of Port employment to be eligible for a non-industrial death benefit (§0701, §0703).

8. Industrial Death

50% of the final average compensation preceding death, payable to eligible surviving spouse, domestic partner, or dependent child under 21 years of age. Miscellaneous Members hired on or after January 1, 2009 must have five years of Port employment to be eligible for an industrial death benefit.

9. Death After Retirement

Maximum Benefit

Continuance to surviving beneficiary depending on benefit selection made at retirement.

$2,000 payable in lump sum to the beneficiary or the estate of the retiree (§0708).

10. Withdrawal Benefits

Pre-12/8/76 Hires

If contributions left on deposit, entitled to earned benefits, commencing any time after eligible to retire.

Post-12/7/76 Hires

Less than five years of service (ten years of service if employee terminated before December 31, 2002) – Refund of accumulated employee contributions with interest, or may keep deposits with SDCERS and earn additional interest, and use service with a reciprocal system to establish eligibility for earned benefits upon concurrent retirement from reciprocal system. (§0205, 0401).

All Members

Five or more years of service (ten or more years of service if employee terminated before December 1, 2002); there will be a one-time Andrecht-related 7% increase in benefit.

11. Post-Retirement Cost-of-Living Benefit

General and Safety Members:
Based on changes in Consumer Price Index, to a maximum of 2% per year (§1301).

12. COL Annuity

Actuarial equivalent of accumulated contributions in cost-of-living annuity account at time of retirement (§0300).

13. Member Contributions

Vary by age at time of entrance into SDCERS (§0200). While a significant portion of these contributions may be "offset," such offsets are not directly reflected in either the employee contributions or related refund calculations. Rates include cost of providing spouse's continuance, cost of providing COL Annuity, and cost of funding final one-year average in lieu of final three-year average (§0102, 0200, 0201).

For General and Safety Members hired prior to January 1, 2013, the current contribution rates have been in place since at least the 2004 valuation. Miscellaneous Plan Members hired prior to January 1, 2013 do not make contributions. Employee contribution rates for Miscellaneous Members hired on or after January 1, 2013 under the California Public Employees' Pension Reform Act (PEPRA) were recalculated with the June 30, 2017 valuation. Employee contribution rates for Safety New Members under PEPRA were recalculated with the June 30, 2018 valuation.

The employee contribution rates for Safety Members and Miscellaneous Members under the California Public Employees' Pension Reform Act (PEPRA) are determined based on 50/50 cost-sharing of the total normal cost rate (excluding the COL Annuity) at each entry age. In addition, the rates include the full expected cost of the Cost-of Living (COL) Annuity, which results in PEPRA Members paying more than half of the total normal cost rate. These rates are rounded to the nearest quarter of 1%. The COL Annuity contribution rate is equal to 20% of the sum of other employee contributions, in accordance with the plan document. Under the provisions of PEPRA, if the aggregate normal cost rate changes by more than 1% of payroll since the time the prior rates were established, then a recalculation of employee contribution rates is required.

For Miscellaneous Members under PEPRA, the assumptions used to calculate the employee contribution rates were the same as those used for the General Plan in the June 30, 2017 valuation with two exceptions. The mortality tables for Miscellaneous Members and beneficiaries were blended 50/50 between male and female rates. Also, the retirement rates for Members who are younger than 62 and have less than 20 years of service are equal to one-half of the General Plan post-62 retirement rate with the same number of years of service. No recalculation was required with the June 30, 2019 valuation since the normal cost rate did not change by more than 1% of payroll.

APPENDIX C – SUMMARY OF PLAN PROVISIONS

For Safety Members under PEPRA, the assumptions used to calculate the employee contribution rates are the same as in the June 30, 2018 valuation, except that mortality tables for Safety Members were blended 90/10 between male and female rates, and the mortality table for beneficiaries of Safety Members were blended 10/90 between male and female rates. No recalculation was required for Safety Members with the June 30, 2019 valuation since the aggregate normal cost rate did not change by more than 1% of payroll since the time the prior employee contribution rates were established.

Table C-5
SDCERS - Unified Port District
Employee Contribution Rates

	Hired Before January 1, 2013				Hired On or After January 1, 2013		
	General Integrated Members		Safety Integrated Members		Safety Integrated Members		Miscellaneous Non-Integrated
Entry Age	First $400/Mo.	Over $400/Mo.	First $400/Mo.	Over $400/Mo.	First $400/Mo.	Over $400/Mo.	All
20	5.52%	8.28%	7.75%	11.63%	7.50%	11.25%	5.00%
21	5.59	8.38	7.86	11.79	7.75	11.75	5.00
22	5.66	8.49	7.95	11.93	8.00	12.00	5.25
23	5.73	8.60	8.06	12.09	8.25	12.50	5.50
24	5.80	8.70	8.16	12.24	8.50	12.75	5.50
25	5.89	8.83	8.27	12.41	8.75	13.25	5.75
26	5.97	8.95	8.37	12.56	9.00	13.50	5.75
27	6.04	9.06	8.49	12.73	9.25	14.00	6.00
28	6.12	9.18	8.59	12.89	9.75	14.50	6.00
29	6.20	9.30	8.71	13.06	10.00	15.00	6.25
30	6.28	9.42	8.81	13.22	10.25	15.25	6.25
31	6.37	9.55	8.93	13.39	10.50	15.75	6.50
32	6.45	9.67	9.03	13.55	10.75	16.25	6.50
33	6.53	9.79	9.15	13.72	11.00	16.50	6.50
34	6.61	9.91	9.27	13.90	11.25	17.00	6.75
35	6.70	10.05	9.39	14.08	11.75	17.50	6.75
36	6.79	10.18	9.50	14.25	12.00	18.00	6.75
37	6.88	10.32	9.62	14.43	12.25	18.50	6.75
38	6.97	10.45	9.75	14.62	12.50	19.00	6.75
39	7.05	10.58	9.87	14.80	13.00	19.25	7.00
40	7.15	10.72	9.99	14.99	13.25	19.75	7.00
41	7.24	10.86	10.12	15.18	13.75	20.50	7.00
42	7.33	10.99	10.24	15.36	14.00	21.00	7.00
43	7.42	11.13	10.37	15.56	14.50	21.50	7.00
44	7.52	11.28	10.51	15.76	14.75	22.00	7.00
45	7.61	11.42	10.63	15.94	15.00	22.50	6.75
46	7.71	11.56	10.77	16.15	15.00	22.50	6.75
47	7.81	11.71	10.90	16.35	15.00	22.75	6.75
48	7.91	11.86	11.03	16.54	15.00	22.50	6.75
49	8.01	12.01	11.16	16.74	14.75	22.25	6.50
50	8.10	12.15					6.50
51	8.21	12.32					6.50
52	8.31	12.47					6.25
53	8.42	12.63					6.25
54	8.53	12.79					6.25
55	8.63	12.95					6.00
56	8.74	13.11					6.00
57	8.87	13.31					6.00

14. Internal Revenue Code Compliance

Benefits provided by the SDCERS' Trust Fund are subject to the limitations set forth in Section 415 in accordance with the "grandfather" election in Section 415(b) (10) of the Internal Revenue Code.

As of the June 30, 2006 valuation, active participants' benefit payments were limited by Section 415 of the Internal Revenue Code. As of the June 30, 2007 valuation, all benefit payments were limited by Section 415 of the Internal Revenue Code.

15. Deferred Retirement Option Plan

Effective April 1, 1997, a deferred retirement option plan (DROP) was created and offered to UPD Members under the SDCERS Plan as an alternative method of benefit accrual. The DROP provision is effective under this Plan on January 1, 2003 (§1200). Members eligible for service retirement are eligible to participate in DROP, but only those hired before October 1, 2005 may enter the program (§1201).

A participant in DROP may leave DROP at any time before the end of his or her designated DROP participation period by voluntarily leaving Port employment (§1202). The maximum DROP participation period is 60 months (§1201).

A DROP participation account is a nominal account established with the Retirement System, which is credited with the following amounts (§1203):

- The Member's monthly service retirement allowance, credited monthly, calculated at the date of DROP entry and increased each year by a cost-of-living adjustment.
- The Member's supplemental 13th check benefit, if applicable, credited annually.
- 3.05% of base compensation, payable by the Unified Port District and credited bi-weekly.
- 3.05% of base compensation, payable by the Member and credited bi-weekly.
- Interest on the above amounts, as determined by the Board.

When a Member leaves DROP and Port employment, they begin to collect their monthly service retirement allowance, their supplemental 13th check benefit (if applicable), and the amounts credited to their DROP participation account, payable as a single lump sum distribution, as a 240-month annuity with equal payments, or any other form approved by the Board and subject to applicable provisions of the Internal Revenue Code (§1206).

DROP is not intended to jeopardize the tax-qualified status of the retirement system under the rules and regulations of the Internal Revenue Service. Benefits provided under this division are subject to the limitations of Section 415 of the Internal Revenue Code relating to the amount of benefits that can be paid (§1207).

16. Blended Benefit with Participating Agencies

Members may retire and receive benefits from multiple Plans (e.g., a Unified Port District employee could have also worked for the Airport Authority).

17. Changes Since Last Valuation

None.

Note: The summary of major plan provisions is designed to outline principal plan benefits. If the SDCERS staff should find the plan summary not in accordance with the actual provisions, the actuary should immediately be alerted so the proper provisions are valued.

APPENDIX D – GLOSSARY OF TERMS

1. Actuarial Liability

The Actuarial Liability is the difference between the present value of all future System benefits and the actuarial value of future normal costs. This is also referred to by some actuaries as "accrued liability" or "actuarial accrued liability."

2. Actuarial Assumptions

Estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Actuarial assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

3. Accrued Service

Service credited under the System which was rendered before the date of the actuarial valuation.

4. Actuarial Equivalent

A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.

5. Actuarial Cost Method

A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of retirement System benefits between future normal cost and actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

6. Actuarial Gain/(Loss)

The difference between actual experience and actuarial assumption anticipated experience during the period between two actuarial valuation dates.

7. Actuarial Present Value

The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest, and by probabilities of payment.

APPENDIX D – GLOSSARY OF TERMS

8. Actuarially Determined Contribution (ADC)

Contribution determined each year based on the SDCERS Board's adopted funding policy. The term also exists in GASB 67 and 68 as a contribution determined by the actuary in accordance with Actuarial Standards of Practice, but no further guidance are provided.

9. Amortization

Paying off an interest-discounted amount with periodic payments of interest and principal — as opposed to paying off with lump sum payment.

10. Normal Cost

The actuarial present value of retirement System benefits allocated to the current year by the actuarial funding method.

11. Unfunded Actuarial Liability (UAL)

The difference between actuarial liability and the actuarial value of assets.

Most retirement systems have unfunded actuarial liability. They arise each time new benefits are added and each time an actuarial loss is realized.

The existence of unfunded actuarial liability is not in itself bad, any more than a mortgage on a house is bad. Unfunded actuarial liability does not represent a debt that is payable today. What is important is the ability to amortize the unfunded actuarial accrued liability, and the trend in its amount (after due allowance for devaluation of the dollar).

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