



CPF VS. 401(K)

A TWENTY-FIVE YEAR COMPARISON (1995 - 2019)

IT'S NO CONTEST

CPF vs. 401(k)

THREE CRITICAL 401(K) CONSIDERATIONS WHEN A 401(k) PLAN IS YOUR PRIMARY SOURCE OF RETIREMENT INCOME:

- I. Life Expectancy
- II. Investment Costs
- III. The 4% Rule

CPF vs. 401(k)

I. CURRENT U.S. LIFE EXPECTANCIES:

- Men: At age 65 have 50% chance of living beyond age 85 --- and 25% chance of living beyond 90.
- Women: At age 65 have 50% chance of living beyond age 87 --- and 25% chance of living beyond age 92.
- Couples: At age 65 have 50% chance that one will live beyond age 90 and 25% chance that one will live beyond age 94.

CPF vs. 401(k)

II. INVESTMENT COSTS:

- Average Investment Costs in 401(k) Plans: 1.07%

III. THE “4% PAYOUT RULE”

- Experts Agree That in Retirement 401(k) Participants Should Pay Themselves No More than 4% Each Year
- Example: If 401(k) Balance at Retirement = \$500,000 Annual 4% Payout = \$20,000 a Year (\$1,667/month).
- This Payout Produces a 90% Chance of the Benefit Lasting 30 Years.

CPF vs. 401(k)

1995 - 2019

COMPARISON OF THE BENEFIT EARNED WITH CPF VERSUS A 401(K) USING THE FOLLOWING ASSUMPTIONS:

- CPF's benefit accrual rate had been 1.25% for all years (although for many years prior to 2009 the rate was higher)
 - Annual contributions to CPF and 401(k) of \$10,000 (2,000 hours @\$5/hour) for all years.
 - 401(k) invested in a portfolio of 100% S&P 500 Stock Index Fund (highest risk); or 50% S&P 500 Stock Index Fund and 50% Bloomberg Barclay's Aggregate Bond Index Fund (medium risk); or 100% Bloomberg Barclay's Aggregate Bond Index Fund (lowest risk) for all years.
 - A 1.07% average annual 401(k) investment cost for all years.
 - A 4% payout of the 401(k) benefit.
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S&P to CPF Benefit Comparison

1995 - 2019



Central Pension Fund			401(k)		
Year	Annual Contribution	Annual Balance	Annual Contribution	S&P 500 Index*	Annual Balance
1995	\$10,000	\$10,000	\$10,000	36.51%	\$13,651
1996	\$10,000	\$20,000	\$10,000	21.89%	\$28,828
1997	\$10,000	\$30,000	\$10,000	32.29%	\$51,367
1998	\$10,000	\$40,000	\$10,000	27.51%	\$78,248
1999	\$10,000	\$50,000	\$10,000	19.97%	\$105,872
2000	\$10,000	\$60,000	\$10,000	-10.17%	\$104,083
2001	\$10,000	\$70,000	\$10,000	-12.96%	\$99,303
2002	\$10,000	\$80,000	\$10,000	-23.17%	\$83,977
2003	\$10,000	\$90,000	\$10,000	27.61%	\$119,928
2004	\$10,000	\$100,000	\$10,000	9.81%	\$142,677
2005	\$10,000	\$110,000	\$10,000	3.84%	\$158,543
2006	\$10,000	\$120,000	\$10,000	14.72%	\$193,359
2007	\$10,000	\$130,000	\$10,000	4.42%	\$212,356
2008	\$10,000	\$140,000	\$10,000	-38.07%	\$137,710
2009	\$10,000	\$150,000	\$10,000	25.39%	\$185,220
2010	\$10,000	\$160,000	\$10,000	13.99%	\$222,538
2011	\$10,000	\$170,000	\$10,000	1.04%	\$234,960
2012	\$10,000	\$180,000	\$10,000	14.93%	\$281,541
2013	\$10,000	\$190,000	\$10,000	31.32%	\$382,852
2014	\$10,000	\$200,000	\$10,000	12.62%	\$442,430
2015	\$10,000	\$210,000	\$10,000	0.31%	\$453,850
2016	\$10,000	\$220,000	\$10,000	10.89%	\$514,363
2017	\$10,000	\$230,000	\$10,000	20.76%	\$633,221
2018	\$10,000	\$240,000	\$10,000	-5.45%	\$608,165
2019	\$10,000	\$250,000	\$10,000	30.42%	\$806,211
Current Benefit **		\$3,125	Monthly Benefit ***		\$2,687

* S&P 500 Index reduced by average annual 401(k) fee of 1.07% (Source 401k Averages Book, Avg of Large and Small Plan 2019)

** CPF benefit based on 1.25% benefit accrual rate for all contributions

*** 401(k) benefit based on annual payout rate of 4% of fixed account balance

BB Aggregate to CPF Benefit Comparison

1995 - 2019



Central Pension Fund			401(k)		
Year	Annual Contribution	Annual Balance	Annual Contribution	BC Aggregate Index*	Annual Balance
1995	\$10,000	\$10,000	\$10,000	17.41%	\$11,741
1996	\$10,000	\$20,000	\$10,000	2.54%	\$22,294
1997	\$10,000	\$30,000	\$10,000	8.61%	\$35,076
1998	\$10,000	\$40,000	\$10,000	7.60%	\$48,503
1999	\$10,000	\$50,000	\$10,000	-1.90%	\$57,391
2000	\$10,000	\$60,000	\$10,000	10.56%	\$74,508
2001	\$10,000	\$70,000	\$10,000	7.36%	\$90,725
2002	\$10,000	\$80,000	\$10,000	9.20%	\$109,991
2003	\$10,000	\$90,000	\$10,000	3.04%	\$123,636
2004	\$10,000	\$100,000	\$10,000	3.27%	\$138,004
2005	\$10,000	\$110,000	\$10,000	1.36%	\$150,019
2006	\$10,000	\$120,000	\$10,000	3.27%	\$165,249
2007	\$10,000	\$130,000	\$10,000	5.90%	\$185,583
2008	\$10,000	\$140,000	\$10,000	4.17%	\$203,739
2009	\$10,000	\$150,000	\$10,000	4.86%	\$224,128
2010	\$10,000	\$160,000	\$10,000	5.47%	\$246,939
2011	\$10,000	\$170,000	\$10,000	6.77%	\$274,338
2012	\$10,000	\$180,000	\$10,000	3.14%	\$293,266
2013	\$10,000	\$190,000	\$10,000	-3.09%	\$293,895
2014	\$10,000	\$200,000	\$10,000	4.90%	\$318,786
2015	\$10,000	\$210,000	\$10,000	-0.52%	\$327,076
2016	\$10,000	\$220,000	\$10,000	1.58%	\$342,392
2017	\$10,000	\$230,000	\$10,000	2.47%	\$361,103
2018	\$10,000	\$240,000	\$10,000	-1.06%	\$367,170
2019	\$10,000	\$250,000	\$10,000	7.65%	\$406,023
Current Benefit **		\$3,125	Monthly Benefit ***		\$1,353

* BB Aggregate Index reduced by average annual 401(k) fee of 1.07% (Source 401k Averages Book, Avg of Large and Small Plan 2019)

** CPF benefit based on 1.25% benefit accrual rate for all contributions

*** 401(k) benefit based on annual payout rate of 4% of fixed account balance

50-50 to CPF Benefit Comparison

1995 - 2019



Central Pension Fund			401(k)		
Year	Annual Contribution	Annual Balance	Annual Contribution	50% Stock-50% Bond Blend*	Annual Balance
1995	\$10,000	\$10,000	\$10,000	26.96%	\$12,696
1996	\$10,000	\$20,000	\$10,000	12.22%	\$25,469
1997	\$10,000	\$30,000	\$10,000	20.45%	\$42,723
1998	\$10,000	\$40,000	\$10,000	17.56%	\$61,979
1999	\$10,000	\$50,000	\$10,000	9.04%	\$78,483
2000	\$10,000	\$60,000	\$10,000	0.19%	\$88,654
2001	\$10,000	\$70,000	\$10,000	-2.80%	\$95,892
2002	\$10,000	\$80,000	\$10,000	-6.99%	\$98,495
2003	\$10,000	\$90,000	\$10,000	15.33%	\$125,122
2004	\$10,000	\$100,000	\$10,000	6.54%	\$143,960
2005	\$10,000	\$110,000	\$10,000	2.60%	\$157,966
2006	\$10,000	\$120,000	\$10,000	9.00%	\$183,077
2007	\$10,000	\$130,000	\$10,000	5.16%	\$203,040
2008	\$10,000	\$140,000	\$10,000	-16.95%	\$176,932
2009	\$10,000	\$150,000	\$10,000	15.13%	\$215,211
2010	\$10,000	\$160,000	\$10,000	9.73%	\$247,129
2011	\$10,000	\$170,000	\$10,000	3.91%	\$267,175
2012	\$10,000	\$180,000	\$10,000	9.04%	\$302,222
2013	\$10,000	\$190,000	\$10,000	14.12%	\$356,292
2014	\$10,000	\$200,000	\$10,000	8.76%	\$398,379
2015	\$10,000	\$210,000	\$10,000	-0.10%	\$407,958
2016	\$10,000	\$220,000	\$10,000	6.23%	\$444,012
2017	\$10,000	\$230,000	\$10,000	11.62%	\$506,750
2018	\$10,000	\$240,000	\$10,000	-3.26%	\$499,930
2019	\$10,000	\$250,000	\$10,000	19.04%	\$606,995
Current Benefit**		\$3,125	Monthly Benefit ***		\$2,023

* Stock returns from S&P 500 Index; Bond returns from Bloomberg Barclays Aggregate Bond Index
 Both reduced by average annual 401(k) fee of 1.07% (Source 401k Averages Book, Avg of Large and Small Plan 2019)

** CPF Benefit Accrual Rate @ 1.25% For All Years

** 401 (k) Benefit Paid @ 4% of Account Balance Annually

CONCLUSION

Using the last 25 years of market returns, and even assuming CPF's accrual rate was 1.25% for all years, would have provided a guaranteed lifetime monthly benefit that is higher than could be expected from a 401(k) account, which is NOT guaranteed, under any scenario.

\$3,125 versus \$2,687 a month, or
\$3,125 versus \$2,023 a month, or
\$3,125 versus \$1,353.

IT'S NO CONTEST!
