

Institutional Use of Commodities & CTAs

Case Study: US Pensions and Ontario Teachers' Pension Plan

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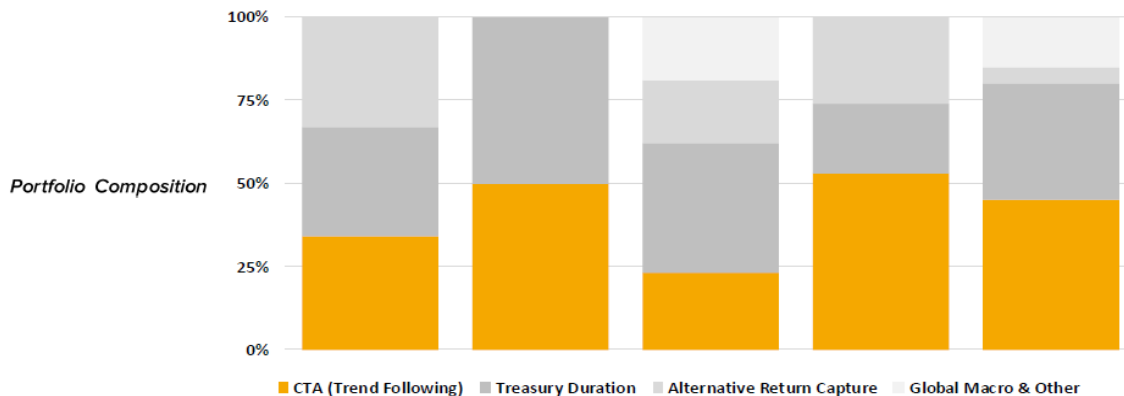
1 – CTAs: Crisis Risk Offset / Risk Mitigating Strategies

Recently many US public pensions have stood out as innovators and thought leaders. Notably, the introduction of “Crisis Risk Offset” or “Risk Mitigating” portfolios have been a key differentiator.

Whereas many institutional investors include CTAs in hedge fund portfolios, these pensions are making CTAs part of their portfolio allocation, **representing anywhere from 5-10% of pensions assets**. Generally, the largest component in these innovative, risk reducing portfolios is CTA Trend Followers. See Exhibit 1 below:

Exhibit 1 – US Pension Plan Crisis Risk Offset and Risk Mitigating Portfolios

Institutional Investor:	SJCERA	ERSRI	HIERS	IL SURS	CalSTRS
Total Plan AUM (USD):	3.2bn	10.5bn	18bn	24bn	312.2bn
Launch:	Jan-16	May-17	Apr-17	Dec-19	Jan-16
Portfolio Name:	Crisis Risk Offset	Crisis Protection Class	Diversifying strategies	Crisis Risk Offset	Risk Mitigating Strategies
% of Total Portfolio:	15%	10%	25%	19%	10%



***CTA (Trend Following) tends to be the largest allocation in these portfolios.**

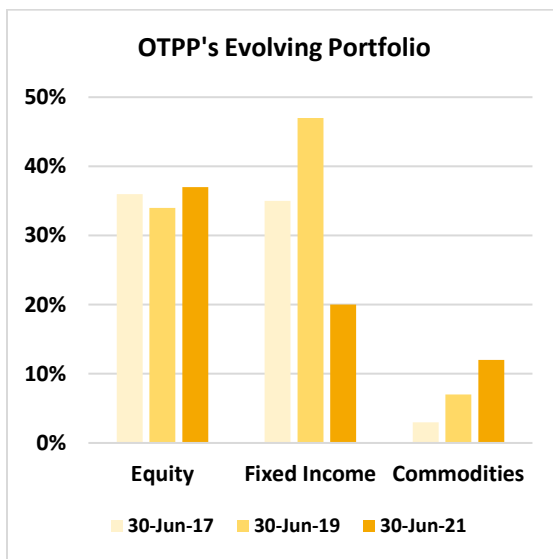
Source: Auspice, see References for more. Note: % of Total Portfolio and Portfolio Composition represent long term targets except for HIERS in which June 30th, 2021 holdings are used.

2 – Commodities: Ontario Teachers’ Pension Plan (OTPP)

OTPP is one of the most respected pensions globally, posting an impressive 9.6% return since inception, and a 9.3% return over the most recent 10 years. Notably, they are known for being a first mover – many peers follow their lead. They were one of the early pioneers to embrace CTAs and managed accounts - their first CTA investment took place in the early 2000s, and then scaled up managed accounts from \$250mm in 2008 to over \$10bn in 2016.

As of their [Q2 2021 Interim Report](#) commodity derivatives currently represent 11.3% of OTPP’s portfolio, and commodities in aggregate represent 12%. This is up from 7% two years ago, and 3% five years ago. This increase comes as fixed income was reduced to 20%.

Exhibit 2 – OTPP’s Increased Allocation to Commodities



“What we know historically is that inflation is not really kind to traditional asset classes ... stocks or bonds. Commodity prices, on the other hand, tend to rise when inflation is on an upward trajectory and provide a hedge against it”

– OTPP CIO Ziad Hindo

Source: <https://financialpost.com/fp-finance/ontario-teachers-pension-plan-looks-at-commodities-for-hedge-against-inflation>

Source: Auspice, see References for more.

This allocation to commodity derivatives is in addition to physical commodity, natural resource, and inflation hedge investments.

Note, all information and tables below sourced from OTPP’s Q2 2021 Interim Report. See References for more.

- Of \$46bn in aggregate inflation sensitive assets, commodities are the largest (\$26.5bn) followed by an inflation hedge (\$11.5bn) and natural resources (\$8bn).
- Inflation sensitive and absolute return strategies represent a minimum 19%, maximum 39% of total portfolio allocation (Exhibit 3).
 - **As of June 30th 2021 inflation sensitive and absolute return = 27% (Exhibit 5).**
- Commodity derivatives:
 - Excluding derivatives, commodities represent \$1.1bn of \$226bn in net investments (Exhibit 4).

- Including derivatives, commodities represent \$26.5bn of \$226bn in net investments (Exhibit 5).
 - Net commodity derivatives (\$25.5bn) = 11.3% of portfolio
- **Commodities increased from 8% of asset mix to 12% from December 31st, 2020, to June 30th, 2021 (Exhibit 5).**

Exhibit 3 – OTPP Asset Class Targets

	Asset Mix % Minimum	Asset Mix % Maximum
Equities	30%	40%
Fixed income	0%	67%
Inflation sensitive	15%	25%
Real assets	20%	30%
Innovation	0%	7%
Credit	5%	15%
Absolute return strategies	4%	14%
Money Market ⁷	(98)%	10%

⁷ The money market asset class provides funding for investments in other asset classes and includes term debt.

Exhibit 4 – Investments **before** allocating the effect of derivative contracts

(Canadian \$ millions)	As at June 30, 2021		As at December 31, 2020	
	Fair Value	Cost	Fair Value	Cost
Equity				
Publicly traded				
Canadian	\$ 1,842	\$ 1,486	\$ 1,260	\$ 1,089
Non-Canadian	24,361	18,822	24,411	17,835
Non-publicly traded				
Canadian	7,785	4,195	7,540	4,278
Non-Canadian	44,149	32,884	39,307	30,528
	78,137	57,387	72,518	53,730
Fixed income				
Bonds	60,649	60,833	57,262	51,859
Short-term investments	30,870	30,860	25,287	25,311
Canadian real-rate products	11,412	7,615	17,499	11,696
Non-Canadian real-rate products	3,904	3,884	6,386	6,552
	106,835	103,192	106,434	95,418
Alternative investments	20,686	17,841	18,818	15,975
Inflation sensitive				
Commodities	1,094	853	1,205	853
Timberland	2,207	1,300	2,256	1,300
Natural resources	5,937	6,717	5,183	6,553
	9,238	8,870	8,644	8,706
Real assets				
Real estate	30,879	22,237	30,742	23,326
Infrastructure	20,890	15,496	17,903	12,200
	51,769	37,733	48,645	35,526
	266,665	225,023	255,059	209,355

Exhibit 4 (continued) – Investments before allocating the effect of derivative contracts

(Canadian \$ millions)	As at June 30, 2021		As at December 31, 2020	
	Fair Value	Cost	Fair Value	Cost
Investment-related receivables				
Securities purchased under agreements to resell	\$ 21,475	\$ 21,437	\$ 10,862	\$ 10,838
Cash collateral deposited under securities borrowing arrangements	1,180	1,180	1,081	1,081
Cash collateral paid under credit support annexes	7	7	—	—
Derivative-related, net	6,982	2,901	7,704	2,137
	29,644	25,525	19,647	14,056
Total investments	296,309	250,548	274,706	223,411
Investment-related liabilities				
Securities sold under agreements to repurchase	(18,251)	(18,204)	(14,185)	(14,172)
Securities sold but not yet purchased				
Equities	(1,137)	(1,013)	(1,083)	(913)
Fixed income	(17,173)	(17,110)	(7,155)	(7,177)
Real estate ¹	(4,529)	(4,207)	(5,491)	(5,073)
Commercial paper	(2,748)	(2,770)	(3,637)	(3,761)
Term debt	(19,515)	(20,070)	(17,212)	(17,084)
Cash collateral received under credit support annexes	(2,092)	(2,092)	(3,356)	(3,356)
Derivative-related, net	(5,053)	(2,554)	(4,661)	(2,141)
	(70,498)	(68,020)	(56,780)	(53,677)
Net investments	\$ 225,811	\$ 182,528	\$ 217,926	\$ 169,734

Exhibit 5 – Investment asset mix including derivatives

	As at June 30, 2021		As at December 31, 2020	
	Effective Net Investments at Fair Value (\$ millions)	Asset Mix %	Effective Net Investments at Fair Value (\$ millions)	Asset Mix %
Equity				
Publicly traded	\$ 38,165	17 %	\$ 42,471	19 %
Non-publicly traded	45,227	20	41,773	19
	83,392	37	84,244	38
Fixed income				
Bonds	33,653	15	17,148	8
Real-rate products	11,292	5	17,399	8
	44,945	20	34,547	16
Inflation sensitive				
Commodities	26,589	12	17,649	8
Natural resources	8,117	4	7,439	4
Inflation hedge	11,484	5	11,536	5
	46,190	21	36,624	17
Real assets				
Real estate	26,171	12	25,200	12
Infrastructure	20,858	9	17,786	8
Real-rate products	948	—	1,919	1
	47,977	21	44,905	21
Innovation	5,658	3	3,474	2
Credit	18,705	8	17,977	8
Absolute return strategies	13,896	6	13,596	6
Overlay	331	—	828	—
Money Market ⁶	(35,283)	(16)	(18,269)	(8)
Net investments	\$ 225,811	100 %	\$ 217,926	100 %

References

Exhibit 1 – US Pension Plan Crisis Risk Offset and Risk Mitigating Portfolios

SJCERA (San Joaquin Country Employees' Retirement Association), April 2021

1. https://www.sjcera.org/new_website/15board-retirement/documents/B20210409.pdf
 - a. See pages 6 and 11.

ERSRI (Employees' Retirement System of Rhode Island), December 2016

2. <http://data.treasury.ri.gov/dataset/6d1a23b6-1e4f-4c0f-b7fe-9e4864253774/resource/031e209d-b26c-4c47-93b0-4d66b59a8d74/download/RI-Crisis-Risk-Offset-Portfolio-IPS-d-5-CS.pdf>
 - a. See pages 1 – 2.

HIERS (State of Hawaii Employees' Retirement System), June 2021

3. <https://ers.ehawaii.gov/wp-content/uploads/2021/07/HIERS-IPS-June-2021.pdf>
 - a. See "DIVERSIFYING STRATEGIES APPENDIX" pages 2 – 5 for target portfolio construction
4. <https://ers.ehawaii.gov/wp-content/uploads/2021/09/2021-Q2-HIERS-Mgrs-AUM.pdf>
 - a. *We have calculated the portfolio composition and weightings presented in Exhibit 1 based off these exposures.

Illinois SURS (State Universities Retirement System of Illinois), August 2021

5. <https://207ar92ygmcaxw5e93d1in2k-wpengine.netdna-ssl.com/wp-content/uploads/invupdate.pdf>
6. <https://207ar92ygmcaxw5e93d1in2k-wpengine.netdna-ssl.com/wp-content/uploads/sursinvplan.pdf>
 - a. See page 8 "Crisis Risk Offset Continued Implementation".

CalSTRS (California State Teachers' Retirement System), July 2021

7. <https://www.calstrs.com/sites/main/files/file-attachments/r-rms-investment-policy.pdf>
 - a. See "POLICY" page 3.
8. <https://www.calstrs.com/sites/main/files/file-attachments/investmentpolicyandmanagementplan.pdf?1630366352>
 - a. See "Review of Asset Allocation Policy" pages 11 – 12 and "RISK MITIGATING STRATEGIES (RMS) STRUCTURE" page 16.

Exhibit 2 – Commodities: Ontario Teachers' Pension Plan (OTPP)

9. <https://www.otpp.com/corporate/ontario-teachers-reporting/reports-archive>
 - a. Chart in Exhibit 2 constructed by Auspice from data from yearly "Mid-Year Results" and "Mid-Year Financials" linked financial documents for 2017 and 2019, For 2019 data derived from <https://www.otpp.com/documents/10179/1274961/Q2+2021+Interim+Report/6d27c0df-4033-4070-bcda-dbfdf8e81ee6>
10. <https://financialpost.com/fp-finance/ontario-teachers-pension-plan-looks-at-commodities-for-hedge-against-inflation>

Exhibit 3 – OTPP Asset Class Targets

11. <https://www.otpp.com/documents/10179/1274961/Q2+2021+Interim+Report/6d27c0df-4033-4070-bcda-dbfdf8e81ee6>
 - a. Page 13.

Exhibit 4 – Investments **before** allocating the effect of derivative contracts

12. <https://www.otpp.com/documents/10179/1274961/Q2+2021+Interim+Report/6d27c0df-4033-4070-bcda-dbfdf8e81ee6>
 - a. Page 7.

Exhibit 5 – Investment asset mix **including** derivatives

13. <https://www.otpp.com/documents/10179/1274961/Q2+2021+Interim+Report/6d27c0df-4033-4070-bcda-dbfdf8e81ee6>
 - a. Page 12.