CPF returns attractive versus risk: Institute of Policy Studies

20-year returns of 5.7% per annum similar to portfolio of 60% equities and 40% bonds, but with lower risk

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A newly published Institute of Policy Studies (IPS) paper lays out what financial planners and insurers have been saying: that the Central Provident Fund (CPF) provides an attractive return relative to its risk, when compared to other asset classes. ST PHOTO

A NEWLY published Institute of Policy Studies (IPS) paper lays out what financial planners and insurers have been saying: that the Central Provident Fund (CPF) provides an attractive return relative to its risk, when compared to other asset classes. (see infographic)

The CPF has similar returns, over 20 years, when compared to a typical balanced portfolio of 60 per cent equities and 40 per cent bonds, the paper said. But these returns of 5.7 per cent a year come with a standard deviation of just 1.4 per cent due to various guarantees in the system. By contrast, the standard deviation for the 60:40 portfolio is 12.3 per cent, with expected returns a tad higher at 5.9 per cent.

"Every time I come back to this, I think it's a pretty good deal," said Peter Ryan-Kane, one of the paper's authors. Mr Ryan-Kane is Asia-Pacific head of portfolio advisory at consultancy Towers Watson.

The standard deviation is a measure of risk, and describes the extent to which fluctuations around an expected average will take place.

An expected return of 5.7 per cent and a standard deviation of 1.4 per cent for the CPF means that there is roughly a two-third statistical chance that annual returns will fall between 4.3 per cent and 7.1 per cent.

An investor with S$100 in the CPF today will see that sum compound into S$303 in 20 years' time. A balanced portfolio yields S$315.

There is a 5 per cent chance that the CPF account holder will see his S$100 grow to just S$241 or below after 20 years. But if he is in the balanced portfolio, the 5th percentile return is much lower at S$140.

An all-bond portfolio offers markedly worse results. Equities offer higher expected returns, but these returns come with significantly higher volatility of 20 percentage points around the expected return.

An all-equities portfolio might lead to S$100 compounding to S$373 in 20 years' time. While there is a 5 per cent chance that the portfolio will have S$1,300 or more, there is also a 5 per cent chance of it being S$102 or below.

The downside risks of holding an equities portfolio outweigh the benefits, the authors argue.

They discussed two other scenarios by which CPF monies can be invested, concluding that maintaining the status quo works best.

A CPF member could move into a 60 per cent global equities portfolio to enjoy the potential upside, the authors said. But if he needs the money within say, five or 10 years, there is a wide range within which his returns could fall into, making him potentially worse off.

"Unlike the government, the CPF member does not have the resources to keep extending the time horizon following a downside event. Therefore, the ability for the member to withstand a downside event is less."

The authors considered using a straight put option to hedge the downside risk in a 60 per cent global equities portfolio. But they concluded that at a cost of 2.9 percentage points a year, hedging was not worth it.

The paper noted that through a combination of floor rates and an extra one per cent interest rate applied to certain balances, the government also adds some 140 basis points (1.4 percentage points) of value.

Asked if he has any suggestions to improve the CPF system, Mr Ryan-Kane said that the amount of CPF savings in the housing market needs to be examined. The authors point out that entering or exiting the housing market at different parts of the property cycle can substantially affect returns. The use of leverage can magnify returns as well as risks.

In times of market stress, there is liquidity risk, meaning the asset cannot be sold without incurring substantial losses. There are also concentration risks, given how a property is typically the single largest investment a Singaporean household would make.

The authors also say inflation risk needs to be looked into. However, there are not many obvious hedges.

The Canadian government once changed the return objective of their pension fund to include a real rate of return, said Mr Ryan-Kane. But in practice, their portfolios did not look very much different, he noted.

"Even if you build a real return objective, you will inevitably invest in nominal assets . . . Available market instruments to create a portfolio to achieve real returns don't exist," he said.