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FOCUS **RISK MANAGEMENT**

The comfort factor

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David White

European pension funds are beginning to realise that they should place risk management at the centre of their investment strategies rather than at the periphery if they want to achieve their objectives. One pension scheme that has taken a countrywide lead with this approach is Rome-based Inarcassa, winner of a country leader award for investment at the IPE Awards in 2002.

Inarcassa was set up in 1961 as the pension fund for Italy's self-employed engineers and architects, and now has almost 100,000 members and €2bn assets. Until it was privatised in 1995, its investment strategy was dictated by the state. However, privatisation meant that asset management had to become more efficient, with the setting of targets for expected returns over a given period of time. As a pension fund, Inarcassa has an 'infinite' time horizon policy, with an average investment horizon of three to five years to roll over.

Establishing risk tolerance was the necessary first step in this process, says Paolo Tosi, the manager of the Inarcassa pension fund and architect of its risk management policy. "If you don't establish your risk tolerance you cannot target your average return in the future. So we used the risk tolerance as the starting point. Once we had decided our risk tolerance, we could set an average expected return over an infinitive number of years."

However, this was not as straightforward as it sounded. "The only instrument we had to set risk tolerance was figures on the annual standard deviation of the pension funds. But in Italy we didn't have any pension funds to compare because no-one else was using standard deviations."

Instead Inarcassa looked for data to pension funds that had been in the market for 40 to 50 years, especially in the US and UK. "We searched for studies that demonstrated that annual standard deviation of those pension funds went, for example, from six to 12%, and we set our risk tolerance within these numbers."

Since it is a pension fund, Inarcassa had no option but to adopt and follow a risk aversion policy. This implied a number of restraints on asset allocation, says Tosi. "The restraints were mainly cultural. The chief restraint was on the weight of real estate. Inarcassa is a fund for engineer and architects, so of course real estate is a very important asset class. At the time we decided to set up an asset allocation strategy, real estate was around 25% of the portfolio. So we decided as the first restraint to maintain the weight of real estate.

"The second restraint was the decision to avoid equity markets that were culturally and geographically too far away. We decided to avoid Asia and emerging markets because we were not prepared to be in markets which were too far removed from our culture.

We also had to consider the nature of our liabilities. Our liabilities are based on the Italian economy and Italian inflation, so it could be too risky to put our asset into markets with different economies and different inflations."

On the credits side, Inarcassa limited itself to investment grade bonds "so we were not tempted to go into high yield markets like South America". There is also an embargo on leveraging and short selling. Under the fund's investment rules, no asset class may have a negative component or a financial leverage greater than one.

Tosi says this restraint was largely a response to public concern about hedge funds a few years ago. "We were in the period when everyone was talking about Long Term Capital Management and hedge funds. So to avoid the risk that the financial sector could invest by leveraging the portfolio, we said we couldn't go short in any class."

However, the constraints on asset allocation constraints are not immutable, he adds. "This is a progressive asset allocation, and every year we try to add some changes. For example we started to use options in equity. When you use options they're not always covered so you have to use a little leverage. But this is different from using derivatives. When we said we must have a negative component in any asset class we meant that we couldn't use instruments like securities lending or going short when not covered."

A risk aversion policy needs constant monitoring, and for the past three years Inarcassa has used an external risk manager, Mangusta Risk. Mangusta carries out three tasks for Inarcassa: the review of asset allocation, the measurement of external risk, and the analysis of the performance of the fund's external investment managers.

The review of asset allocation is carried out once a year, although in exceptional situations this may be done over a shorter period. Measurement of external risk is carried out every three months. The main factors that are analysed are correlation indices, duration and convexity of the fixed income portfolio, and Value at Risk (VaR) by single currency or portfolio section.

"The VaR is analysed in every single asset class and every single sub-class. Equities for example is sub-divided into Europe, Japan and US and the VaR is measured in each of these. If the VaR is considered to have moved out of line with our objec-

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Tosi: 'we avoid equity markets that are too far away'

tives the risk manager will suggest modifying the asset class, adding or reducing risk," says Tosi.

The risk manager submits recommendations in a report to Inarcassa's board of directors.

"These recommendations, which are seriously considered by the board, are based only on the risk analysis. They are not tactical recommendations. The risk manager will not, for example, suggest increasing our weight in equities because the equity markets are supposed to go up."

Mangusta Risk also carries out a quarterly performance attribution analysis of Inarcassa's external fund managers. Inarcassa has a multi-manager and multi-strategy management philosophy. The core investment manager works in-house and looks after the European equity and bond mandates and Italian-based real estate investments. Satellite managers are appointed externally to manage the US and Japanese equity mandates and their respective corporate bond markets.

In its performance analysis, Mangusta Risk rates each manager according to a valuation report. This considers factors such as alpha and beta, market timing, volatility, tracking error, and information ratio. Following Mangusta's report, Inarcassa may ask managers to come and discuss the results with them and propose measures they can take to correct the errors in their management performance.

"The report may suggest that a fund manager's Sharpe ratio is very low because they are using too much risk to increase the value of the portfolio. But we don't give orders to the managers. The most interesting thing for us is comparing the data we have with their own risk management data. Most of the time they correspond."

Tosi says the value of this analysis is that it ensures that managers do what they say they are going to do. "The most important thing is that they feel themselves controlled by us. This is a crucial point because I know that some managers take actions that are different from their promises."

Inarcassa's thorough approach to risk management has attracted attention from other Italian pension funds, says Tosi. "In the world of pension funds, Inarcassa is going to be considered a benchmark. This is very important for us."

Italian funds are beginning to take their first steps towards risk measurement – setting up strategic asset allocation and performance measurement – but so far these have been small steps. Tosi suggests that if funds actually measured the risk of individual assets they would begin to question their past assumptions about risk. "The main problem pension funds in Italy have is that they consider some investment s risky or risk-free without really measuring the risk. Okay so equity is risky but that doesn't mean anything by itself. If I buy equities with 3% volatility it's not nearly as risky as buying some corporate bonds."

The real benefit of making risk management an integral part of asset management is that it gives comfort to the pension fund's board of directors, he says. "Before we hadn't a real structured process. Now when I go every month to the board of directors, we have the figures to support our proposals. If the strategic allocation provides for 18% in equities and we are currently at 12%, we can say to the board that we would like to reduce the underweight in equities because we think the asset class will perform well in 2003."

In short, the structured processes of risk management provide confidence to pension funds and the people who manage them – and confidence is badly needed at the present time.

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