

Sponsor's Desk

Leverage ... The Good, the Bad and the Benign

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The NSAHO Pension Plan is a \$3.7 billion pension fund that provides pension benefits for about 33,000 healthcare workers in Nova Scotia.

Q. Where was the plan prior to the decision to use leverage to de-risk?

Going back perhaps a dozen years ago, our investment strategies started to move away from the traditional 60/40 per cent asset mix. We started to expand into various alternative strategies. That decision was really taking place through 2007 and early 2008, before the financial crisis had occurred.

It had been a while since we had done a comprehensive review of our investment strategies and we started off with an investment policy review without really knowing in advance where we were going to end up. It really was not a review that was founded in desperation or financial hardship. If you look back to those days before 2008, most pension plans were in fairly good financial shape so it was much more of a thorough, but a routine review that we were going through.

Q. So how did you end up going in this particular direction?

A very key part of our review was to go through an asset liability study. We modeled several different alternatives relative to what we were currently using. One of those alternatives was to include a fixed income overlay. In the past, we had already done what some people are referring to as LDI version one. We already had fixed income, which was long duration with the idea of it matching fairly well with our liabilities, but it was just in our physical exposures. We had not gone into synthetic or unfunded or leveraged exposures.

Part of our asset liability study was to extend that into the synthetic or unfunded realm and look at what it would do to our expected risk and to our expected return and to include additional fixed income exposure without being constrained to using physicals.

And the results, as least on a model basis, were remarkable. Most of us are used to thinking anything that gives you a higher expected return as having higher risk attached to it. The model results were quite convincing of it going in the opposite direction. It was higher expected returns and lower risk. It was a rather disorienting result, but it came from having more fixed income exposure without taking away our asset allocation from any other exposures. We were not investing in more fixed income at the expense of some of our allocations. We were investing in more fixed income in addition to our other



exposures, something that, obviously, leverage allows you to do and without leverage, you could not do.

The extra fixed income exposure, I think in a common sense way, gives you a reduction in risk and it helps your assets and your liabilities to be better matched so the risk of changes to your funded position is reduced, but an unintended side benefit is to have an increased expected rate of return to the extent that you believe that bonds will outperform the financing costs.

Q: Could you explain what fixed income and leverage are?

Fixed income is the phrase that we use almost interchangeably with bonds. In our case, we are investing primarily in various kinds of government bonds such as Canada bonds or provincial issues. From a risk management perspective, that systematic schedule of payments over time is very parallel to that systematic flow of payments that we are obligated to pay to our pension beneficiaries. That is the fixed income part of things.

Leverage is the ability to get that exposure without actually putting up any cash to get that exposure on an unfunded basis. Normally, if you were to buy a bond in the physical environment, you would perhaps take some amount of dollars, let us say \$100, and you would buy a bond and, hopefully, that bond would go up over time. Whether you realized any capital gains or losses, you get a coupon off of it and that flow of payments, at least to some degree, matches up with your pension payments.

When we talk about buying it on a leveraged basis or on an unfunded basis, what we mean is to get that exposure to a bond without actually putting up any cash.

There are various derivative ways in which you can do that. The approaches that we use are bond forwards or what some will call delayed settlement bonds. The other alternative is to buy a physical bond and repossess it, which is essentially buying the physical bond, but then getting your cash back instantaneously.

As soon as you start talking about derivatives and what have you, it all becomes very technical and for some readers, complex. I do not really think that the precise derivative instruments that are used is as key as the fact that you are using derivative instruments to get that exposure without putting the cash up. The great thing about using derivatives as a way of doing this, you get to do it on an unfunded basis. The implicit cost of borrowing is very, very cheap.

The credit spread that the counterparty charges is next to nothing. For example, last year in 2010, our average cost of leverage was only about 0.777 per cent, less than one per cent. That is remarkable. That is one nice thing about using derivatives. It is a way of getting the exposure on an unfunded basis.

The other nice thing about getting exposure is pure compliance. A registered pension plan in Canada is very much restricted because of rules under the Income Tax Act about borrowing under the conventional sense. This is effectively the same thing as borrowing, but you are not borrowing. You are, in fact, getting exposure using a derivative. The main point we are trying to get across is you are trying to get the exposure on an unfunded basis which is so essential because it is the only way to get that extra matching between your assets and liabilities and, at the same time, not have a reduction in the amount of your investment exposure in one area or another and, therefore, a reduction in your returns. This does not reduce your expected returns. In fact, we believe it increases your expected returns. But, you are able to get extra exposure to cancel out some of that interest risk that is imbedded in your liabilities.

Q: Why is this approach within reach for small plans?

When we implemented all of this at the end of 2008, we were only about \$2 billion at that time. I will also say that our staffing levels are much less than what you would tend to see in plans of \$2 billion. At that time when we implemented all of this, there were only three of us involved on the investment side, myself and two other individuals that are very involved in terms of back office function. None of the three of us worked on a full-time basis on investments. All of us had other roles within the plan so in terms of dedicated bodies dealing with the investment function; probably three-quarters of three people is what we were dealing with.

There would be an awful lot of plans, including a lot of plans that are much smaller than we are, that would have more internal resources than what I just described. Beyond that, even if a plan is really quite small, and I am talking maybe \$100 million or so, there are various approaches that are different than what we used which are simply to outsource a lot of the implementation. In our case, all of the derivative exposures that I described for the fixed income – the bond forwards, the late settlement bonds, and the repossessed bonds – was implemented by our fixed income manager. In that case, I suppose it was more work for us in terms of developing the policy. It was more work for us in terms of dealing with the cash flow management that came from putting in place these strategies.

But in terms of actually managing the book of derivatives, we do not do any of that. We do have a book of derivatives, but not related to the fixed income overlay. Even in our case with a small staff, moderately small plan, but really simplified by using our external service providers to help us out.

They do charge a fee for that, but the fees that they charge are very, very minimal. Some of your readers might be under a \$50-million dollar range, \$100-million dollar range, \$150-million dollar range, and there are several different service providers and investment managers out there that do offer a turnkey solution that offers many of the same elements that I described. You have to pay for it, but nonetheless, it is a way of implementation for the pension plans that do not even have the three part-timers that I described in our case.

Q: Are there any areas that a small plan should watch carefully?

I suspect that a small plan is going to end up with some limitations in terms of product availability. When I say that there are outsource solutions, that is true, but nonetheless, the outsourcers have limitations in terms of the product availability that they offer. A smaller plan may end up being able to implement much of what I described, but not all of what I described.

Aside from that, I think that there has always got to be an important educational component here in order to make sure that the key stakeholders – such as the trustees, such as staff – are not going to be surprised by the way that things happen. In particular, what I am describing as being a reduction of risk. Let me be very clear on this, it does not at all reduce the riskiness of the asset. In fact, it increases the variability if you consider variability of assets as being your definition of risk. This is a risk increaser. It increases risk.

It increases the volatility. It is expected. It is leveraged investments which does cause, all things being held equal, your standard deviation or your returns to be higher. What causes it to be lower is that increased variability of returns is nonetheless moving more in tandem with the variability of your liabilities. One does need to be invested enough in the education of their key stakeholder groups so that they do not end up being surprised. Lower risk means a lower risk from a funded position, but it certainly does not mean lower risk from the perspective of assets. Managing cash flows is something that there is more of an issue to deal with in that when you are dealing with unfunded exposure, there will be collateral calls and you need to deal with those. The return pattern you will end up with will be drastically different, potentially, than the return pattern that you will see in a more conventional 60/40 asset mix. It is good to recognize that and reinforce that to your stakeholders frequently so that when you end up with performance which is drastically greater than your pure plan's, you do not take it too seriously and when your performance is drastically worse, you do not get too unnerved by that either.

Q: How has your plan been able to avoid some of these drawbacks?

I think we have been fortunate, or call it dumb luck, as what has happened since we implemented in October 2008, interest rates have tended to go down. The issue with respect to being prepared to look different than other plans has been easy for us because our returns have been superior to other plans. That does not mean we have been better. It just means that the implementation timing was fortunate. It has not taken any great effort in order to encourage all of the stakeholders to stick to the plan when the performance has been really quite good.

That being said, we have paid a fair bit of attention to really encouraging our stakeholders to not take our favourable performance too seriously and for them to really look at that as being an example of the tracking error that we can expect in the future both in a positive and a negative way, so, we're really using this as a learning experience when it is easy to stick with the plan to, hopefully, encourage us to stick with the plan when we are in a rising interest rate environment and our relative performance is not so good.

It has been a learning experience for all of us, but I would say that the whole process has gone relatively easily. ■