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Negative interest rates — paying for the privilege

Over the last ten years, financial markets have gone from believing that zero was the lower bound for interest rates, to accepting, recording and accounting for negative interest rates as a living reality. Negative interest rates are certainly an unconventional monetary policy tool, used by central banks to stimulate an economy and provide a strong incentive to borrow. First deployed by Sweden's central bank in 2009, the global stock of debt around the globe with negative interest rates recently hit USD17 trillion — roughly 20% of world GDP.

Whilst the initial concerns around falling interest rates were with investors, and of course the current environment requires realistic and practical focus by those expecting and/or relying on interest income, it is now apparent that there are risks and costs to borrowers.

In New Zealand and Australia, it was widely believed that negative interest rates 'would never happen here!' But the heady pre-GFC days of 8% interest rates are long gone, with the last decade showing an almost unrelenting descent in key interest rate benchmarks across the globe. The question now commonly being asked is whether zero (or thereabouts) is the eventual destination for local interest rates, or if that is just a stop as global finance transitions to a new paradigm. Both the Reserve Bank of New Zealand ("RBNZ") and Reserve Bank of Australia, having recently dropped their cash rates to 1.00% and 0.75% respectively and signalled a willingness to ease further if needed, are openly assessing the implications of and preparing for the possibility of negative domestic interest rates. RBNZ Governor, Adrian Orr recently opined that negative cash rates are now "*not outside the realms of possibility.*"

Faced with the potential for negative interest rates, local banks have made, or are making, changes to their internal systems and loan documentation to deal with the ramifications. In terms of funding documentation, an almost universal solution adopted by local banks is to copy the European convention by limiting the fall of a loan's base lending rate to zero — known as the Zero Interest Rate Method.

Key points

- **Negative interest rates could be closer than you think**
- **Negative interest rates present many challenges, hurdles and complexities**
- **Negative interest rates could cost you money — both investors and borrowers**
- **Prepare now!**

That suits the lender (bank) but not the borrower because, at worst, the lender will still receive the credit margin and not fall into the unfortunate situation in which many Swiss and Danish banks have found themselves — paying borrowers when the aggregate of the (negative) base rate and the bank's margin becomes a negative number.

To complicate matters, the International Swaps and Derivatives Association's ("ISDA") market standard derivatives master agreement already incorporates provisions for negative base interest rates for derivatives settlements. According to ISDA default documentation, the underlying rate is what it is — known as the Negative Interest Rate Method.

In an environment of negative base lending interest rates, the mismatch between the Zero Interest Rate Method within loan agreements and the Negative Interest Rate Method in ISDA agreements could lead to higher funding costs for borrowers and a breakdown in the usual risk management attributes of interest rate hedging products such as swaps. And for those that hedge account to remove mark-to-market volatility from the P+L, the mismatch can have serious implications for the accounting treatment and lead to ineffectiveness between the hedge and the hedged item, thus reintroducing the prospect of P+L volatility. All because, when the underlying market reference rate falls below zero, the base rate on a loan would

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stop at zero but the interest rate on the compensating derivative would keep falling.

A number of institutional and local government borrowers have issued Floating Rate Notes ("FRN") against which they have transacted interest rate swaps and/or options (caps and collars) to fix the interest rate component of the FRNs. Recently issued corporate FRNs have incorporated a base rate that will not fall below zero, which is considered a favourable feature because it insulates the investor from negative interest rates. The imbedding of similar provisions should be considered in any documentation referencing a benchmark interest rate.

A loan agreement with a zero floor for the base lending rate is effectively an 'embedded derivative' in favour of the lender, this benefit having implications on pricing. The value of that embedded derivative will rise as the base rate approaches zero — further increasing the borrower's assessed and reported funding costs, with implications for bottom line profitability and adding a layer of complexity (and risk) to the borrower's hedge accounting valuations and reporting. At zero or negative interest rates, an embedded derivative would have a value that needs to be calculated and reported by the unfortunate borrower, or investor, in the case of the holder of an FRN with an embedded zero base interest rate.

Some banks are already suggesting that borrowers purchase an option to offset the mismatch between the base rate on the loan and their interest rate hedges when the base interest rate falls below zero. This involves buying a floor (option), which seems counter-intuitive because the borrower would normally buy a cap outright to protect against rising interest rates (or buy a cap and sell a floor as part of collar option strategy). However, buying a floor is costly and adds another layer of complication to the funding and hedging dynamic.

Understandably, there is also some reluctance to pay further premiums to banks in order to fix a problem with existing hedging positions.

A further complication to valuing the embedded derivative (option) in a loan agreement is that the calculation method for options (based on the Black-Scholes option pricing model) does not work because a key calculation within the model requires the interest rate to be a positive number (when a negative interest rate is used, the calculation gives an undefined or meaningless number). Many IT systems underpinning the banking infrastructure are also unable to reflect a negative number, the scenario never envisaged when they were developed.

A negative interest rate environment could therefore be financiers' equivalent of the millennium computer threat, then known as Y2K. The Y2K threat was neutralised by considerable preparation and effort. Our central bank and local banks are already well advanced in preparing for and understanding the implications of negative interest rates. Treasury managers should be too. That means a strong treasury framework, up to date risk management policies, fit for purpose treasury systems, healthy relationships with external lenders and proactive communications with the organisation's key stakeholders (Board, Council, Chief Executive, Shareholders).

The first steps of a prudent treasury manager in addressing the risks posed by inconsistencies between the Zero Interest Rate Method and the Negative Interest Rate Method should be to check all lending documents and derivative agreements and to evaluate if and how all internal policies, systems, practices, valuing and reporting would handle negative interest rates. If you do not have the time, knowledge or resources to undertake these necessary evaluations, seek independent, expert help. Now!

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