Tenor matters too

IN THE FORMULATION OF AN OPTIMAL RISK MANAGEMENT STRATEGY, HEDGING DURATION IS AN OFTEN NEGLECTED QUESTION. **JWAN MELLA** EXPLAINS.

Hedging duration is typically taken into account as an afterthought – after the optimal fixed/floating debt mix has been converged on, the best debt/cash currency distribution calculated, and the FX risk mitigated. It is often left to insufficient or arbitrary measures such as the tenor of outstanding debt, horizon of cashflows or even the cheapest choice out of a selection of strategies. It is, of course, not incorrect to explore debt duration, certainty of cashflows or even tactical advantage in the market but it is better to combine them and add to the mix some more components for analysis, as follows:

- **Debt maturity**. This is primarily what a treasurer would look at when deciding on the hedging duration of debt. This is because hedging is tightly associated with the debt maturity or accounting concerns around extending the hedging beyond the debt maturity. But what if the assets the debt is funding are very long term? If, for example, it was a 30-year asset funded with five-year debt to be refinanced in five years' time, we might conclude that the duration of the asset is what should be targeted.
- **Asset duration**. In some cases – utility and property companies are an obvious example – assets' duration can span decades. Very long-term funding is extremely hard to achieve, leaving the option of drawing short to medium-term debt and refinancing at maturity. This raises the question of how much of the hedging tenor should be aligned to the asset duration.
- **Refixing risk**. A distinction should be made between different fixed rate tenors. If the optimal hedging strategy says you should adopt a 80% fixed rate debt profile, then there is a meaningful difference between having 80% of the debt fixed for three years and refixed at maturity and having 80% of the debt fixed for 10 years.
- **Certainty of revenue**. An asset may be returning a stable income for the next two years, say, but there may be unknowns around if or how much the asset will return subsequently. Clearly a highly fixed profile is applicable to the debt funding the asset but the duration of the risk management should be around two years (when volatility is reintroduced into the earning profile).

Choosing a strategic risk management tenor depends on the specific set-up of a company. It is typically quantifiable on a case-by-case basis and there are no across-the-board clear-cut answers. Nonetheless, a number of techniques can be employed that go a long way towards helping answer the question of how long to hedge.

ASSET PROFILE Analysing the asset profile helps form an idea of the asset duration to target. There are many ways of arriving at the hedging tenor and asset duration is an important contributor to determining it. Figure 1 highlights that having assets returning income over a 20-year horizon does not necessarily mean that the asset duration is 20 years. If the assets' expected hold tenor is weighted by the annual return of each asset, then low-return long-term assets do not lengthen the asset tenor, and low-return short-term assets do not shorten it. This approach lays out a scientific foundation for other subjective business strategy discussions around asset hold tenors and the optimal hedging around their funding.

DEBT PROFILE: BUSINESS STRATEGY The debt profile should be looked at in terms of the business strategy requirements, not just the existing debt levels. Figure 2 illustrates that with a hedging policy that states debt should be 80% fixed, the fixed/floating mix may stray away from policy as current debt levels and the hedges roll off.

Figure 1: Hypothetical asset profile weighted by annual return

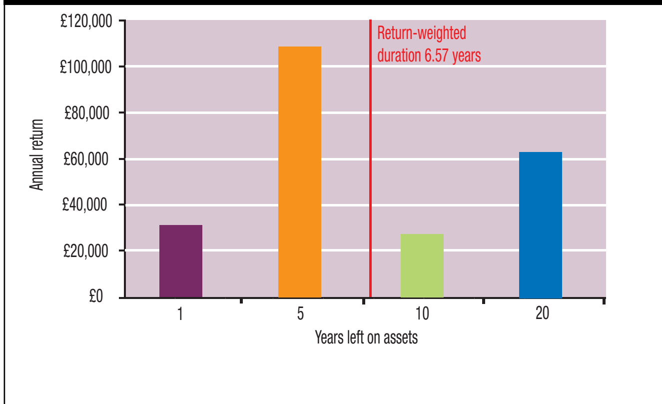


Figure 2: Hypothetical 10-year debt profile, current and projected

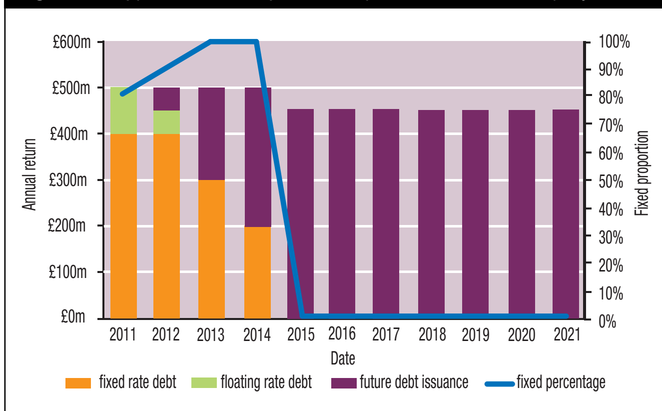
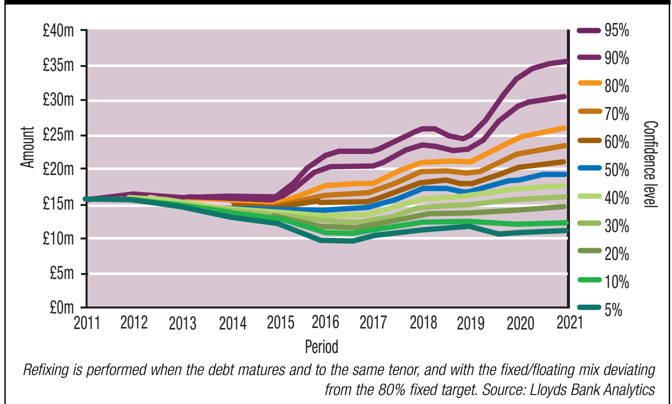
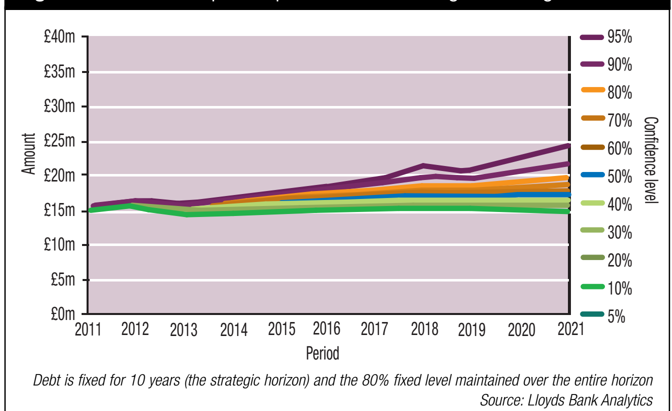


Figure 3: Interest expense profile



Refixing is performed when the debt matures and to the same tenor, and with the fixed/floating mix deviating from the 80% fixed target. Source: Lloyds Bank Analytics

Figure 4: Interest expense profile after refixing risk mitigation



Debt is fixed for 10 years (the strategic horizon) and the 80% fixed level maintained over the entire horizon Source: Lloyds Bank Analytics

The refinancing risk manifests itself in significant interest rate risk since effectively there is no funding rate certainty on the entire debt past 2015. Applying a risk management process across the entire business strategy horizon rather than the existing debt tenors provides funding rate certainty and smoothes refixing risk volatility.

The process involves quantifying financial market risks. Figure 3 shows the refixing risk on the debt profile. It assumes that the debt will be refinanced with a similar maturity and that none of the hedging is extended beyond the tenor of the debt.

The interest expense distribution in Figure 3 shows in a series of steps that the uncertainty around interest rates increases the risk profile. The analysis takes into account market conditions: the first refinancing pushes interest rates down as current rates are lower than historical rates, but the subsequent refinancing steps increase the risk profile due to the upwards skew in interest rates and the upwards sloping yield curve environment.

Risk management measures that ignore the strategic horizon or are implemented piecemeal are not effective at containing risks. Removing the refixing risk by hedging for the strategic horizon of 10 years rather than restricting the hedging tenor to the maturity of the debt greatly reduces the risk profile. Figure 4 shows what an 80% fixed interest expense profile looks like when the refixing risk is mitigated.

Analysis such as this allows a treasurer to evaluate the risks around a strategy while taking into account the current market environment. After all, there is typically a tactical corridor around the optimal hedging/policy benchmark. And that brings us to the tactical considerations around hedging tenors.

TACTICAL CONSIDERATIONS When the risk management horizon is decided there are tactical market implications. Assuming the target risk management tenor is seven years, the tactical corridor may be 5–10 years. A consistent methodology is needed to assess the market and decide which tenor offers best value. A portfolio of hedges can also be analysed to see how they align with the wider business strategy.

The bottom line is this: converging on a risk management tenor is a key component of an optimal risk management benchmark. The subjective elements can be combined with the objective/quantifiable elements, taking the analysis from asset profile to debt profile to revenue profile, adding the business strategy and incorporating the tactical opportunities to become a part of the risk management decision-making process.

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