MCAP

Three of the Scariest Words in the World of Mortgages – "Interest Rate Differential"

"My mortgage company told me that my penalty was more than $19,000. I just can't understand how they come up with these numbers." As fixed mortgage rates move ever lower, we hear more stories like this – and since we've been in a low rate environment for several years, the stories aren't really new.

Large penalties are the result of the application of the Interest Rate Differential (IRD) – a much mis-understood term within the mortgage industry. The lack of understanding is based on the references to IRD within mortgage documents – usually the Standard Charge Terms – which are generally vague at best. What is made clear is that an IRD might apply. What is not clear is how it is calculated.

Before we look at some examples to help us better understand the arithmetic behind the IRD, let's back up and look at what the term means and why it's used to calculate penalties. First the concept of the IRD exists only in the world of fixed rate mortgages. As we all know, if a borrower chooses a 5 year fixed rate closed mortgage, for example, certainty is created for both borrower and lender: if market rates rise during the term, the borrower is protected and if rates fall during the term, the lender is protected. If a borrower wants to re-pay a closed mortgage prior to maturity (under circumstances permitted by the lender), a pre-payment interest penalty must be paid by the borrower before the mortgage is discharged. Most fixed rate mortgages make reference to interest penalties being "3 months interest or the IRD – whichever is greater". To determine which is greater in an individual situation, we must look at the difference, if any, between the borrower's existing rate and current market rates *for the term remaining*.

Let's consider an example and look at it from the lender's perspective. Our borrower, Barry, is 3 years into a 5 year fixed rate term at 6% with a balance of $200,000. He follows the 5 year mortgage rate in the media and he knows that it currently stands at 4% - a full 2% less than he is currently paying. Not surprisingly, he is interested in taking advantage of this lower rate. What Barry may not know is that the current rate for 2 year fixed rate mortgages has moved even lower and currently stands at 2%. Barry isn't much interested in the 2 year rate but his lender certainly is. Why?

Barry's lender may have matched his 5 year loan at 6% with 5 year GIC deposits. Both the GICs and Barry's mortgage were scheduled to mature at the same time but since Barry now wants to re-pay his mortgage in full, his lender would be faced with having to reinvest the proceeds from his mortgage while maintaining the same maturity date as the GICs. The lender must then invest (or lend) in a new 2 year mortgage at 2% - a full 4% lower than what they had counted on earning with Barry's original mortgage. The compensation which Barry's lender is entitled to, if it greater than 3 months interest, is the Interest Rate Differential or IRD.

In this case, the difference between Barry's original rate (6%) and the new 2 year rate (2%) that his lender will earn on their reinvestment is 4%. The balance is $200,000 and the remaining term on Barry's mortgage is two years. Leaving aside compounding for purposes of this example, Barry's IRD penalty will be $200,000 at 4% for 2 years, or $16,000.

Remember that Barry is responsible for either 3 months interest or the IRD, whichever is greater. On his $200,000 balance at 6%, 3 months interest on Barry's mortgage is about $3,000 so it's clear that the IRD is the "greater" amount and that would be the penalty which Barry would be required to pay to discharge his mortgage. When interest rates move significantly lower, IRD penalty amounts can be eye-popping indeed. Imagine if Barry's mortgage balance was $400,000. Imagine if the 4% difference between Barry's rate and the lender's reinvestment rate was calculated over a remaining term of 4 years. If we apply these "worst case scenario" factors – a $400,000 mortgage, a 4% interest rate difference and 4 years remaining on Barry's term, then his IRD becomes $64,000!

This extreme example is shown only to demonstrate how IRD amounts can sometimes be very large – far too large to realistically pay. Let's say that Barry was actually interested in a 2 year mortgage at 2%. The amount that he would save in interest on a new 2 year mortgage, compared to staying with his 6% mortgage over the next 2 years is about $16,000. Wait, wasn't that the IRD penalty amount we calculated for him to get out of his original mortgage? Is this really a zero sum game?

Next week, we will look at IRDs from a practical perspective. We will look at what lenders actually do in various circumstances and we will see that the "reinvestment rate" which the lender chooses to use to calculate the IRD – in other words, the rate that lenders use to represent what they would earn in re-lending the money for the remaining term – makes all the difference in the world.

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