Prepayment Costs on Fixed Rate Loans

Why might Westpac charge you a prepayment cost?

When we agree to lend you money at a fixed interest rate we do so on the understanding that you will make certain contractual fixed-rate payments for the whole of the fixed rate period. We manage our fixed-rate portfolios on that assumption, so if you repay ahead of the due date (or switch to another interest rate) we may make a loss from re-arranging our funding positions.

It is the calculated amount of that loss that is passed on to you as a prepayment cost when you prepay a fixed rate loan.

How is the prepayment cost worked out?

To work out whether a prepayment cost applies, we use a formula to calculate whether we have incurred a loss as a result of the prepayment or switch. This formula is complex, but in general terms if our current hedge rate* for the remaining part of the fixed rate term is lower than the original hedge rate when the fixed rate period started, then a prepayment cost will result.

*Hedge Rate: the rate at which we determine we can get fixed rate funds from the wholesale money market on the relevant day.

This relationship can be approximately expressed as:

Prepayment Cost = Loan amount prepaid * (**Interest Rate Differential**) * Remaining Term

Where the Interest Rate Differential is the difference between the original hedge rate at start of fixed rate period and the hedge rate on the day of prepayment of the remaining fixed rate term.

An example:

You wish to prepay a fixed rate loan balance of $100,000 which has two years of its original fixed rate term left to run. The hedge rate at the start of the fixed rate period was 7.00% p.a., but wholesale rates have fallen since then and the current hedge rate for the remaining fixed rate term is now at 6.00% p.a.

The interest rate differential is 1.00% p.a. The approximate prepayment cost would therefore be:

Prepayment Cost = $100,000* 1.00%p.a. * 2 years = approx $2,000

This example is simplified. A customer loan represents a series of payments, each of which needs to be separately valued. Westpac uses the Present Value (PV) of Cash-flows formula to do this. It compares the value of the stream of foregone payments, at both the original and current hedge rates.

The difference between these two values is then adjusted to account for the time value of money, which recognises that a dollar received today is worth more than one received in the future.

The formula is complex:

Prepayment Cost =
= Value of loan after prepayment – Value of loan before prepayment
= PV (Interest flows with prepayment) – PV(Interest flows without prepayment)

$$= \left(\frac{B_1' * (R_d - R_c)}{(1 + R_1)} + \frac{B_2' * (R_d - R_c)}{(1 + R_2)^2} + \dots + \frac{B_t' * (R_d - R_c)}{(1 + R_i)^t} \right)$$

$$- \left(\frac{B_1 * (R_d - R_c)}{(1 + R_1)} + \frac{B_2 * (R_d - R_c)}{(1 + R_2)^2} + \dots + \frac{B_t * (R_d - R_c)}{(1 + R_i)^t} \right)$$

Where:

B_t' = Balance with prepayment at period 1, period 2 …. up to period t
B_t = Balance without prepayment at period 1, period 2….up to period t
R_d = wholesale interest rate for fixed term of loan at start of fixed period (using Zero coupon per period methodology)
R_c = current wholesale interest rate for remaining term of fixed rate period (using Zero coupon per period methodology)
R_t = Discount rate for period t

Taking our earlier simplified example, and assuming the loan was being repaid at $772 per month over a 25 year period, the resultant actual prepayment cost would be $1829.71.

The table below gives a guide to the possible prepayment cost outcomes (per $100,000 of principal repayment). Using a 25 year table loan – given varying interest differentials and remaining terms at the time of prepayment.

Original Hedge Rate	Current Hedge Rate	Estimated prepayment cost by remaining term (yrs)			
		4	3	2	1
7.00%	6.50%	$1,710	$1,333	$923	$479
7.00%	6.00%	$3,456	$2,688	$1,856	$962
7.00%	5.00%	$7,051	$5,459	$3,752	$1,935
7.00%	4.00%	$10,786	$8,312	$5,685	$2,919

Notes:
- The table provides an indicative guide only.
- Each prepayment is processed by Westpac on the date of prepayment.
- Westpac's standard fixed rate prepayment administration charge applies in addition to the calculated prepayment cost position.

Can I minimise prepayment costs?

Going into a fixed rate term contract implies you are seeking protection against rising rates. If you want flexible payment alternatives discuss your needs with us and we can probably tailor a combination of loans to meet your needs. Alternatively a capped rate loan provides protection against rising rates with the opportunity to benefit from a fall in rates. Your Westpac Relationship Manager or lending consultant can work through the options with you.

Should you require further explanation of the detailed mathematical formula you should seek suitably qualified independent advice.