# Hedging the Bitumen Price Index Component of Revised Reseal Contracts

11th August

Westpac
Institutional Bank

# Background – What is hedging ?

- Creation of price certainty, when the price of a good or service would otherwise be uncertain

- Why create price certainty?

  1) to maximise/minimise revenues/expenses

  2) financial rigour around the planning and budgeting process

- Who hedges?

  1) Households with fixed rate mortgages

  2) Local Authorities

  3) Numerous others

# Budgeting Difficulties ?

- *"Contracts awarded under Land Transport NZ's "Competitive Pricing Procedures" may specify that amounts payable under the contract will be adjusted in line with a Transfund formula"*

- That is: the total price paid for a Road Resealing contract is not known until completion (after cost adjustment), making budgeting very difficult !

- Upon receiving a set amount of $NZ funding for the purpose, a Road Owner budgets to Reseal a certain number of kilometres of road.

- However, when these "Cost Adjustment Factors" are applied to the original tender amount, the cost per KM is potentially higher, meaning the planned resealing is only partially completed or over budget.

- So, what are these "Cost Adjustment Factors"?

# Revised Reseal

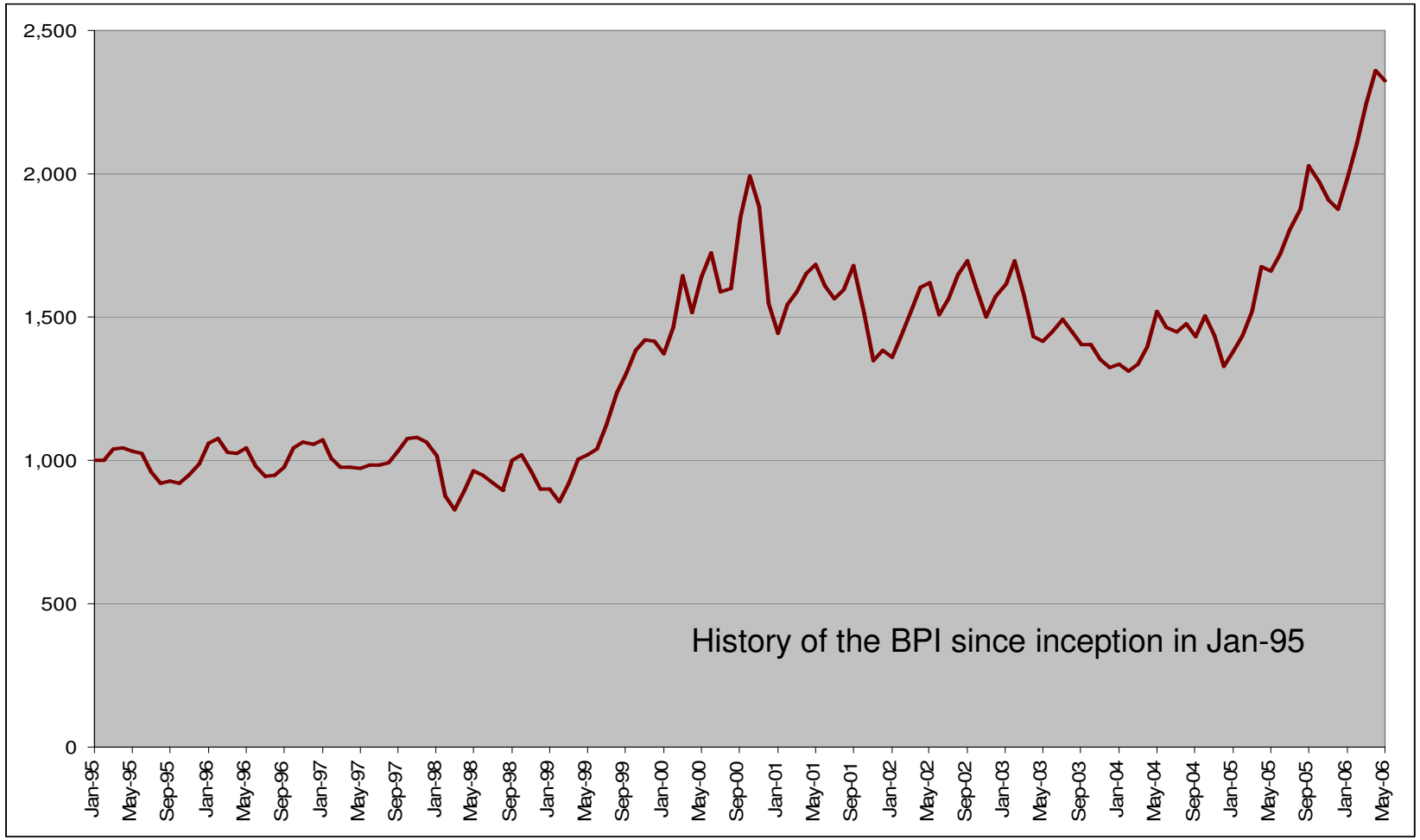
- The “Revised Reseal” Cost Adjustment Factor is the aggregate of the following factors and weights:

| | |
|---|---|
| 20% | Construction |
| 5% | Storage |
| 15% | Labour index |
| 20% | Non-metallic mineral production |
| 40% | Bitumen price index |

# Revised Reseal and Bitumen

- Bitumen, at 40%, is the largest single component of the "Revised Reseal" Cost Adjustment Factor
- Recent Bitumen price increases, together with its large weighting, have been responsible for a large percentage of the cost appreciation of resealing contracts.
- As a product of oil, Bitumen prices are likely to continue to be very volatile as a result of the current geopolitical (Middle East) and economic (China) influences.
- So, how volatile is the Bitumen Price Index?

# The Bitumen Price Index

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# Bitumen Hedging Solution

- So, how can we eliminate the effects of Bitumen Price Index changes on the cost of Road Resealing?
- Like “fixing” the rate on a home loan, Westpac can offer a Fixed Bitumen Price Index.
- This would remove the effect of Bitumen price fluctuations from the Revised Reseal Cost Adjustment Factor !!!
- It would therefore be easier to predict the cost of (and budget for) a Road Resealing Project.

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# Westpac BPI Swaps

- This is done through a

  "Westpac Bitumen Price Index Swap"

- How does it work ?

  - In transacting the swap, a Fixed Bitumen Price Index (Fixed BPI) is agreed with Westpac.

  - Westpac then guarantees to cover the difference between this Fixed BPI and the BPI published at completion of the Road Resealing.

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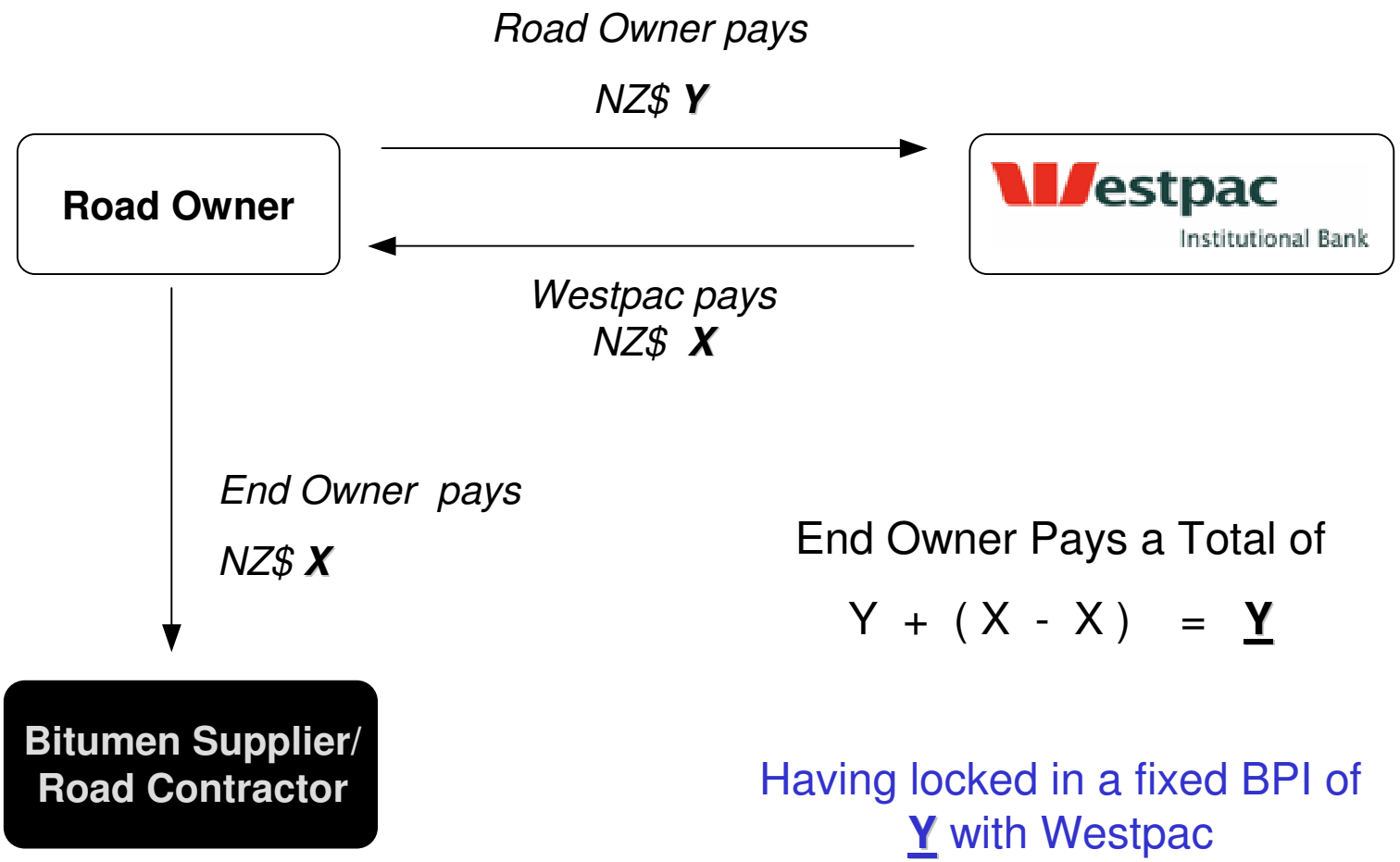
# Bitumen Price Index Swap




End Owner Pays a Total of

$$Y + (X - X) = \underline{Y}$$

Having locked in a fixed BPI of **Y** with Westpac

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# Westpac BPI Swaps

| | Fixed BPI from Westpac | Actual BPI used in paying contractor | Westpac pays | BPI actually achieved |
|---|---|---|---|---|
| Jan-05 | 1,525 | 1,528 | 3 | 1,525 |
| Feb-05 | 1,525 | 1,579 | 54 | 1,525 |
| Mar-05 | 1,525 | 1,535 | 10 | 1,525 |
| Apr-05 | 1,525 | 1,620 | 95 | 1,525 |
| May-05 | 1,525 | 1,675 | 150 | 1,525 |
| Jun-05 | 1,525 | 1,659 | 134 | 1,525 |
| Jul-05 | 1,525 | 1,722 | 197 | 1,525 |
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| Oct-05 | 1,525 | 2,028 | 503 | 1,525 |
| Nov-05 | 1,525 | 1,972 | 447 | 1,525 |
| Dec-05 | 1,525 | 1,910 | 385 | 1,525 |
| Jan-06 | 1,525 | 1,877 | 352 | 1,525 |

Difference between these
= the BPI Achieved

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# Benefits of the Westpac BPI Swap

- Knowing for certain the Bitumen Price Index that will effectively be used in the “Revised Reseal” Cost Adjustment,
- Provides more certainty over the actual Final Cost of the Road Resealing project,
- Helps to more accurately predict works to be completed with the funds received,
- Road Works budgeted will be more likely to be completed in full.
- ie: Budgeted Targets Met !!

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# Bitumen Price Index Swaps – an example

- Example :
  - In Dec-05 the end owner accepts a tender for $ 10mil for a project forecast to be completed in May-06. The end owner wishes to hedge it's $ 4mil exposure to the Bitumen price Index
    - $BPI_{Start}$ = 1,910 (BPI published for Dec-05)
    - Notional = $ 4,000,000 ( $ 10mil Contract amount * 40% )
    - Maturity = May-06 ( forecast completion date to hedge to )
    - $BPI_{Fixed}$ = 2,031 ( Westpac Fixed BPI quote accepted by end owner )
  - At maturity, when the BPI for May-06 is published, it is :
    - $BPI_{End}$ = 2,360
  - In early April-06 :
    - End owner Pays 4,000,000 * ( 2,031 / 1,910 ) = NZ$ 4,253,403
    - Westpac Pays 4,000,000 * ( 2,360 / 1,910 ) = NZ$ 4,942,408
      - End Owner Receives Net of NZ$ 689,005

Westpac Institutional Bank

# Bitumen Price Index Swaps - the syntax

- Settlement :
  - In the Project completion month (at Swap Maturity),
    - End Owner Pays Westpac :
      - Notional ($) * ( $BPI_{Fixed}$ / $BPI_{Start}$ )
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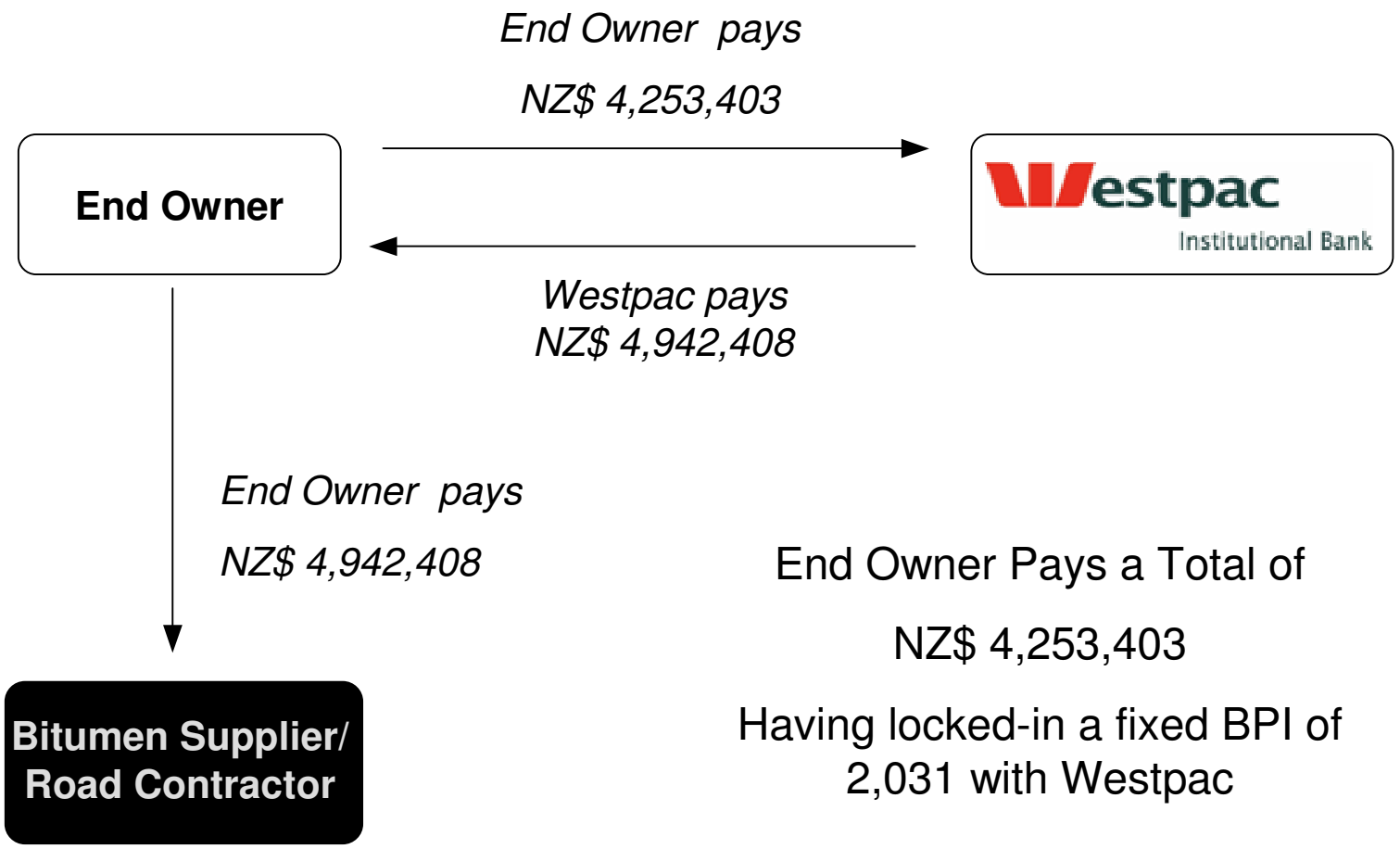


End Owner Pays a Total of

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# Contacts :

- Craig Alexander :

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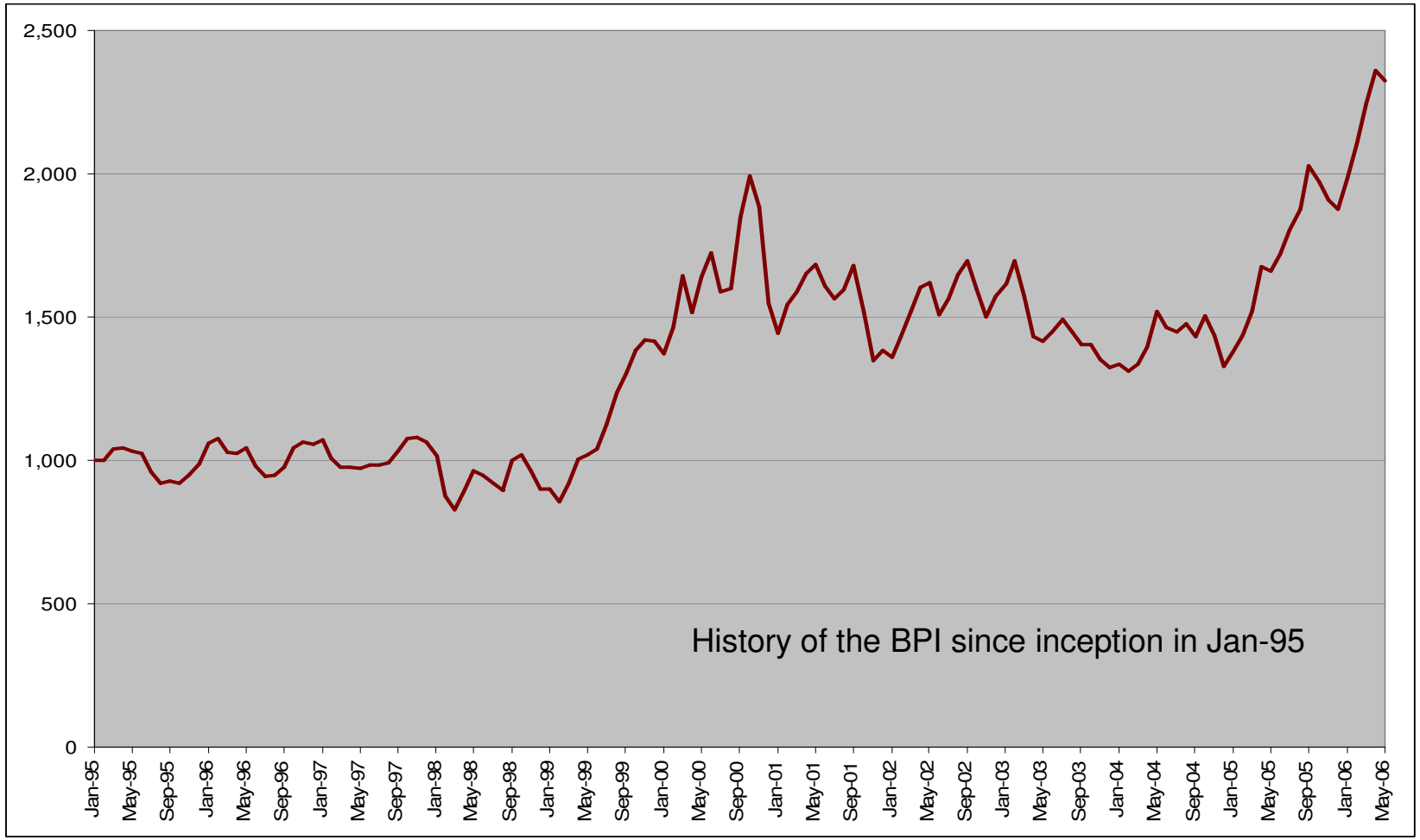


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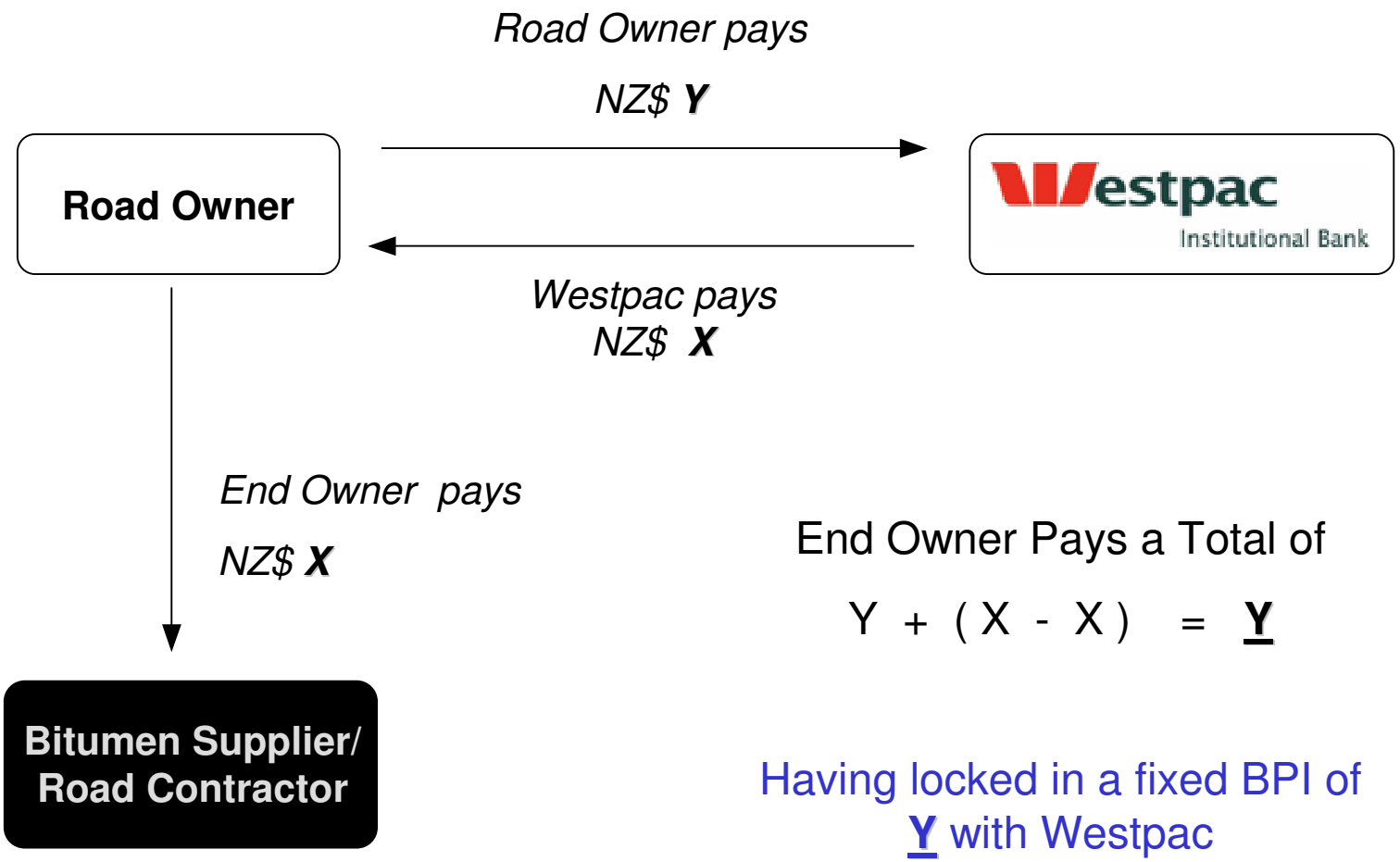


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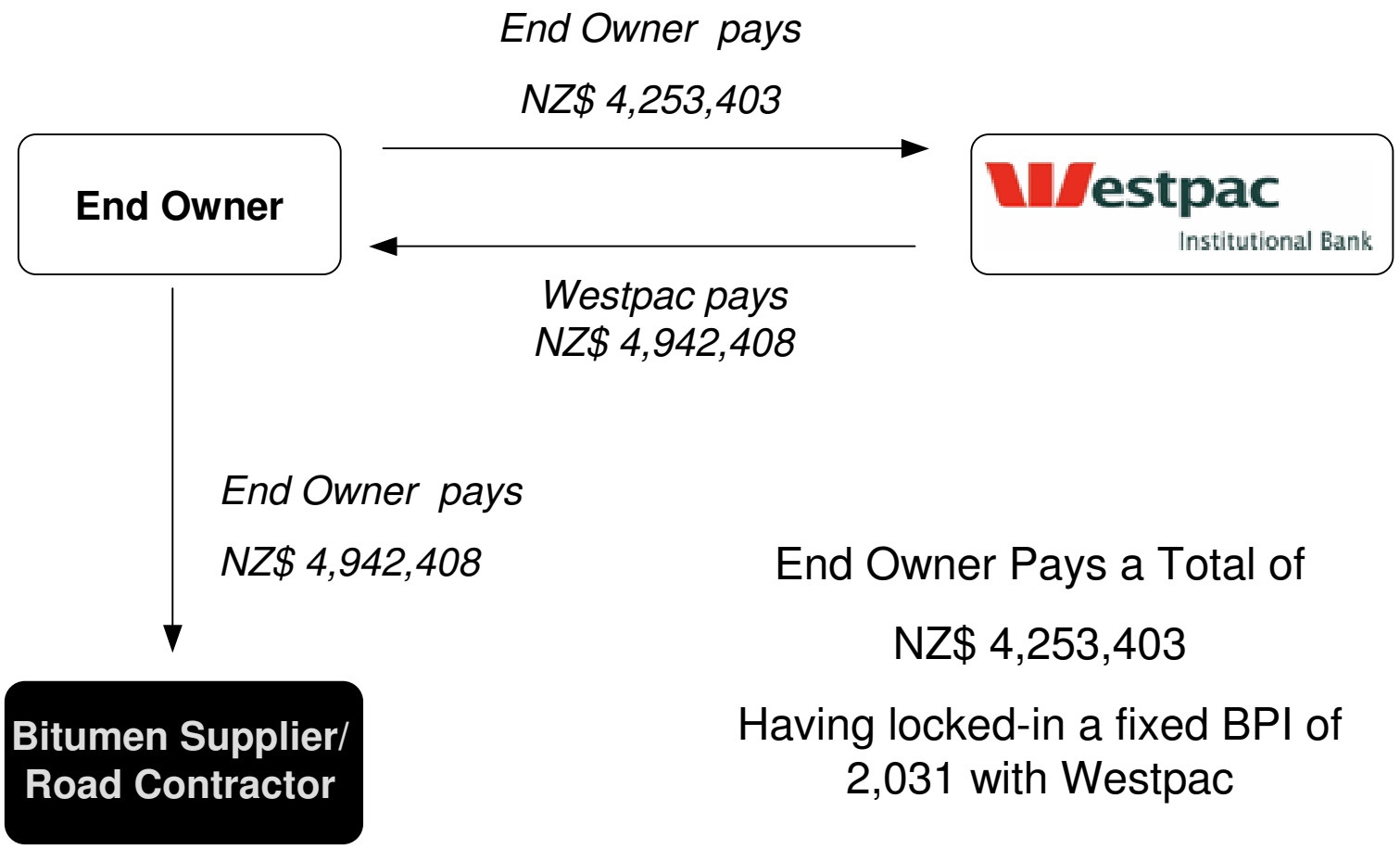


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