

Hedge Accounting

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AGENDA

- **Recap on basics**
- **Hedge accounting**
- **Hedge documentation**
- **Hedge effectiveness**
- **AASB 7 disclosures**
- **IAS 39 Replacement Project**

Initial Measurement

Financial assets	
Financial assets at fair value through profit or loss or designated as such	Fair value (transaction costs expensed immediately)
Held-to-maturity investments	Fair value + transaction costs
Loans and receivables	Fair value + transaction costs
Available-for-sale	Fair value + transaction costs
Financial liabilities	
Financial liabilities at fair value through profit or loss or designated as such	Fair value (transaction costs expensed immediately)
Other liabilities	Fair value – transaction costs

Subsequent Measurement

Financial assets	Financial assets at fair value through profit or loss or designated as such	Fair value	P&L
	Held-to-maturity investments	Amortised cost (effective interest rate)	Not relevant (unless impaired)
	Loans and receivables	Amortised cost	Not relevant (unless impaired)
	Available-for-sale	Fair value	Equity (unless impaired)
Financial liabilities	Financial liabilities at fair value through profit or loss or designated as such	Fair value	P&L
	Other liabilities	Amortised cost	Not relevant

Hedge accounting - Overview

- Under AASB 139, there are three separate types of hedges, these being:
 - cash flow hedges;
 - fair value hedges; and
 - hedges of a net investment in a foreign operation
- The accounting for each type of hedge is different.
- Focus on cash flow and fair value hedges – commonly used

Hedge accounting - Cash flow hedge

- A cash flow hedge occurs where the hedge effectively fixes an otherwise variable cash flow that will *impact* the profit and loss account.
- For example:
 - A company borrows for two years at a variable rate of BBSW plus 50 basis points (bp).
 - The company hedges via a swap to:
 - receive floating BBSW; and
 - pay fixed interest rate swap.
- The company has *eliminated* the cash flow variability to the interest expense.

Hedge accounting - Cash flow hedge (2)

- Under cash flow hedge accounting, the derivative gain or loss is *deferred to equity* provided:
 - that the hedge is highly effective;
 - that the hedge satisfies the documentation requirements.
- Any *ineffective* component will be taken to the profit and loss account immediately.

Hedge accounting - Cash flow hedge (2)

- Hedged *items* in a cash flow hedge relationship:
 - a recognised asset;
 - a recognised liability;
 - a firm commitment.
 - A highly probable forecast transaction

Hedge accounting - Fair value hedge

- A fair value hedge seeks to offset the exposure to fair value changes that will affect the profit and loss.
- For example:
 - A fixed-rate loan - each time interest rates move the value of the loan goes up and down.
 - To hedge the loan execute a swap that converts it from a fixed-rate loan to a variable-rate loan.
 - Hence, changes in the fair value of the fixed loan will offset the opposite change in the fair value of the swap.

Hedge accounting - Fair value hedge (2)

- Hedged *items* in a fair value hedge relationship:
 - a recognised asset;
 - a recognised liability;
 - a firm commitment.
- To account for fair value hedge:
 - the hedge relationship needs to be defined, i.e. the *risk and cash flow being hedged needs to be defined*;
 - the *fair value changes* of both the hedging instrument and the hedge item need to be determined.

Hedge accounting — Fair value hedge (3)

- At every period end:
 - derivative fair value changes are recorded in the profit and loss;
 - the hedge item is fair valued for the attributable risk and the value changes are also recorded in the profit and loss.
- It should be noted that the hedge item is *fair valued for the attributable risk* - different from normal fair value calculation.

Hedge documentation



Microsoft Office
Word Document

Hedge effectiveness

- Hedge effectiveness is a measure of how *changes* in the fair value or cash flows of the **hedged item** that are attributable to the hedged risk are *offset* by the changes in the fair value or cash flows of the **hedging instrument**.
- It is a requirement of AASB 139 that:
 - the hedge is expected to be *highly effective* in achieving offsetting changes in fair value or cash flows;
 - the effectiveness of the hedge can be *reliably measured*;

Hedge effectiveness (2)

- hedge effectiveness has to be **assessed** both *prospectively* and *retrospectively* at each reporting period;
- The effectiveness measure must be within an 80% – 125% range for the hedge to be considered highly effective (AASB 139, AG105).
- Result is either a pass or fail

Hedge effectiveness - effectiveness



- Hedge effectiveness can be assessed using a number of methods.
- All methods demonstrate the effectiveness of the hedge in achieving offsetting cash flows or fair values.
- Common methods:
 - dollar offset;
 - regression;
 - match terms.
- If pass, still have to measure hedge effectiveness using dollar offset method

Hedge effectiveness - Dollar offset



- Simple form of measuring hedge effectiveness.
- The dollar offset effectiveness test may be done on a:
 - period-to-period basis—fair value change during *the period*, for both the hedged item and hedging instrument is used;
 - cumulative basis—*total* fair value change during *all the periods*, for both the hedged item and hedging instrument is used.

Hedge effectiveness - Dollar offset (2)

- **Example—Not always effective on a period basis.**

Period	Derivative Fair value change A	Hedged item Fair value change B	Period Offset A/B	Cumulative Offset Sum A/Sum B
1	100	-95	105%	105%
2	30	-25	120%	108%
3	-10	10	100%	109%
4	-7	10	70%	113%
5	20	-10	200%	121%

Hedge effectiveness - Regression



- Statistical measure of determination.
- Measures the degree of correlation between the fair values of the hedging instrument and the hedging item.
- Must be statistically valid sample size
 - At *inception*, there will not be actual observations; accordingly, use prior market data.
- A common tool used to do this is Microsoft Excel.

Hedge effectiveness – Regression (2)

- Using the data as that used in the first dollar offset example, the following results were produced (in Excel):

SUMMARY OUTPUT	
<i>Regression Statistics</i>	
Multiple R	0.996523296
R Square	0.99305868
Adjusted R Square	0.991670416
Standard Error	6.012486847
Observations	7
<i>Coefficients</i>	
Intercept	0.040119325
X Variable 1	-1.074157647

Should be between 0.8 and 1.0

Should be between 0.8 and 1.25

Hedge effectiveness – Regression (3)




- Key measures to watch are the R Square function and the Coefficient of the X variable.
- R Square function should be within a range of 0.80 to 1.00.
- Coefficient of the X variable should be between -0.8 and -1.25 .

Hedge effectiveness - Matched terms

- Matched terms approach is applied via an *analysis of the critical terms* of the hedge and the hedged item.
- AASB 139 states that:
 - ‘*If the principal terms of the hedging instrument and of the hedged asset, liability, firm commitment or highly probable forecast transaction are the same, the changes in fair value and cash flows attributable to the risk being hedged may be likely to offset each other fully, both when the hedge is entered into and afterwards.*’
(Emphasis added)
- Used only as a prospective test

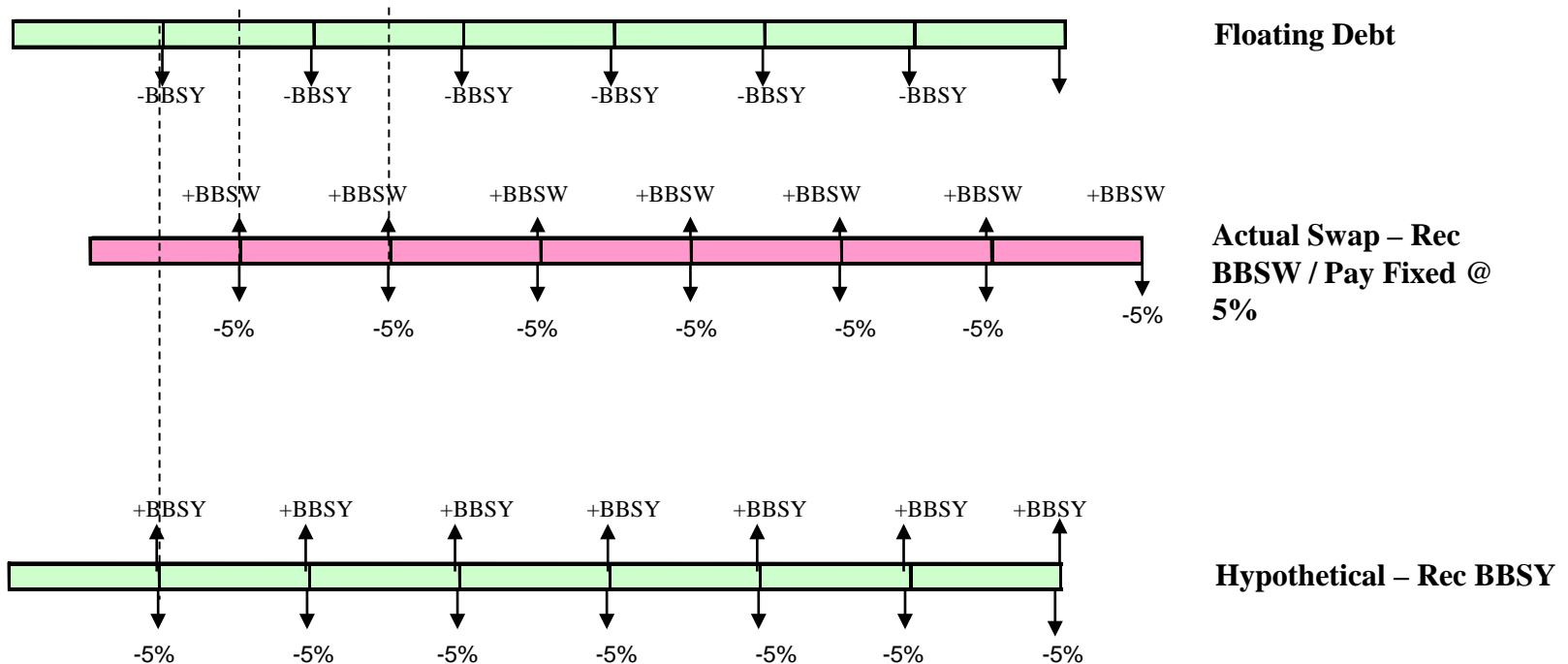
Hedge effectiveness – Hypothetical Derivative

- Used as a substitute for the hedged item when measuring hedge effectiveness for cash flow hedges.
- Is a derivative that exactly mirrors the hedged item
- A hypothetical derivative must:
 - Have a fair value of zero at inception – struck at market
 - Have critical terms that exactly match those of the hedged item for the hedged risk e.g. dates, notional
 - Be based on the same index as the hedged item



Easier to
value a
derivative

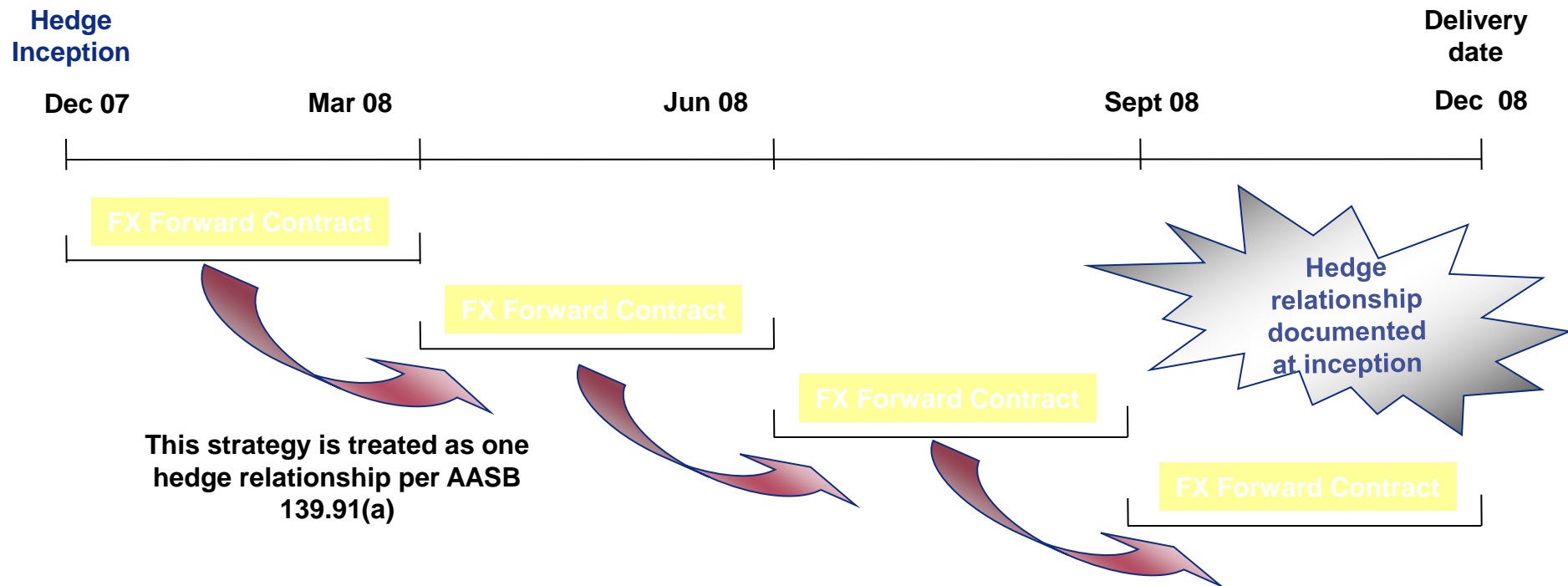
Hedge effectiveness – Hypothetical Derivative (2)



The hypothetical derivative is the “perfect” derivative that eliminates the designated risk

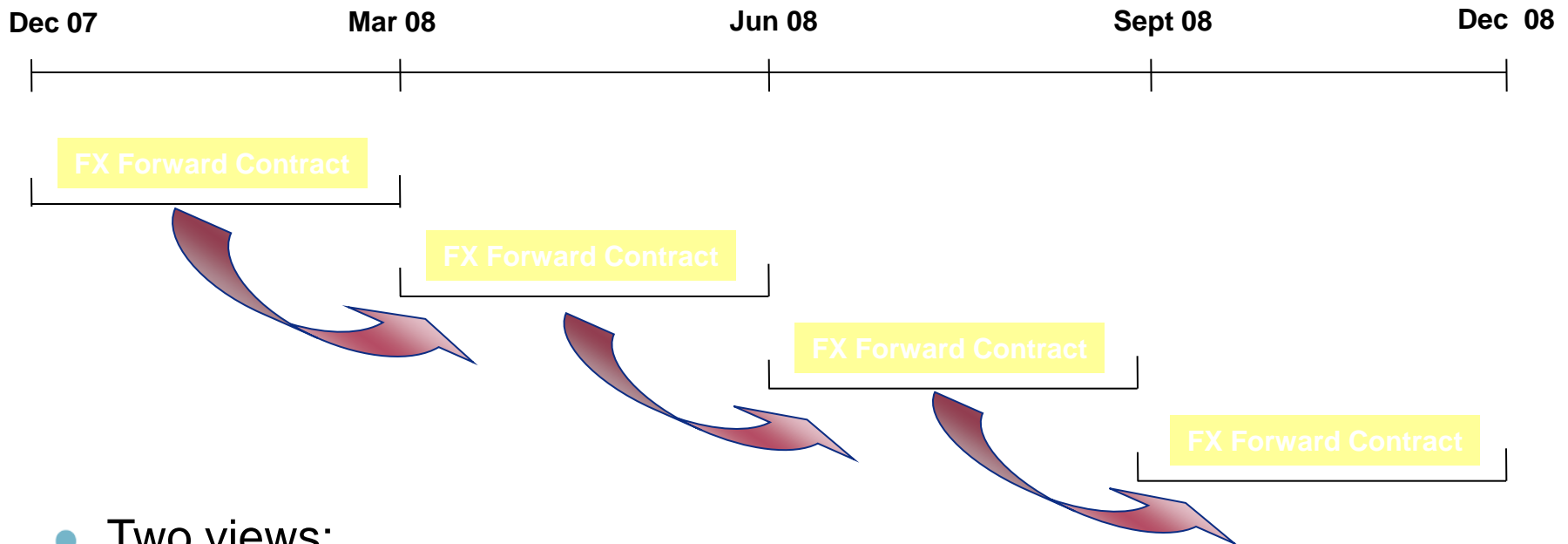
Hedge accounting – Rollover strategy

- In Dec 07, AUD company expects to purchase machinery worth US\$1m from overseas with payment due in Dec 08
- USD exposure hedged using 3 mth FECs in a rollover strategy



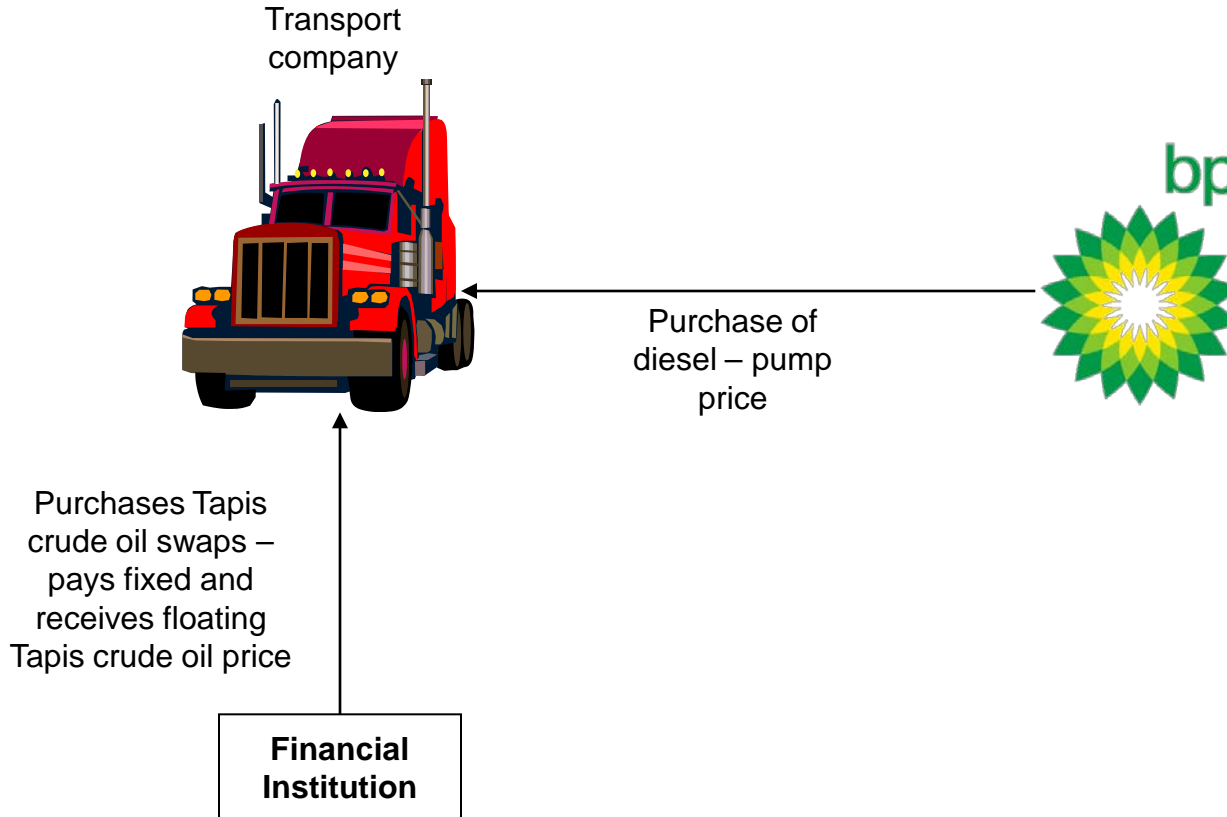
Hedge accounting - Rollover strategy (2)

- Issue: What is the perfect hypothetical derivative?
 - per AASB 139.IG F5.5 – hypothetical perfect derivative is based on the hedged item and hedged risk



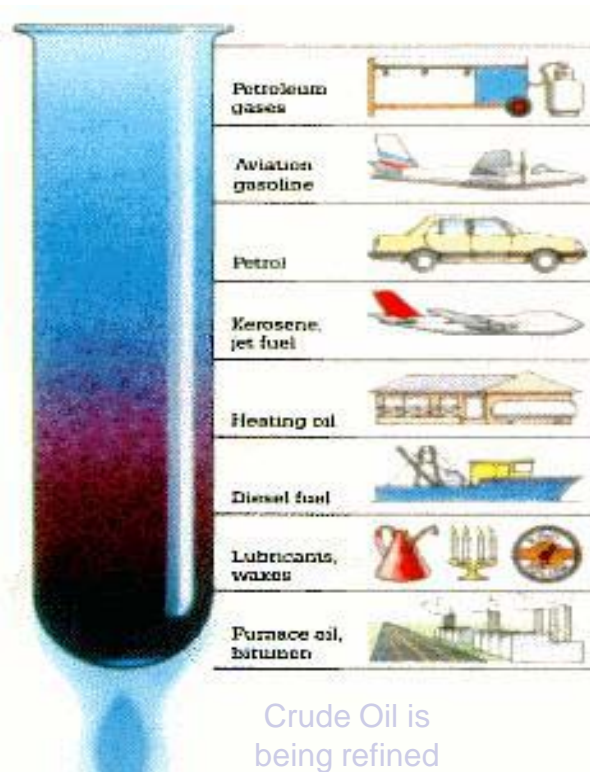
- Two views:
 - Actual derivative = perfect Hypothetical derivative
 - hypothetical derivative is a 12 month FEC contract taken out at the inception of the hedge

Hedge accounting – Fuel price risk component part hedging



Hedge accounting – Fuel price risk component part hedging (2)

- What is the hedged item
 - purchase of diesel fuel
- What is the hedging instrument
 - Tapis crude oil swaps



← Diesel for trucks

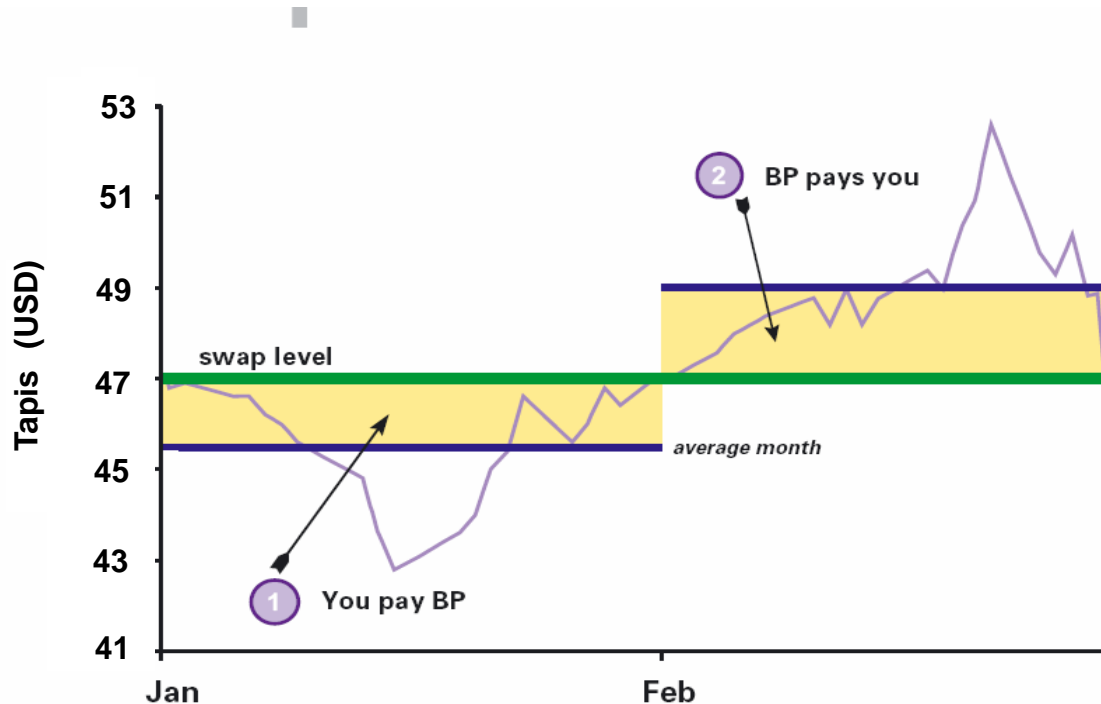
The refining process creates the refining margin - causes basis issue

Source: Australian Institute of Petroleum

Hedge accounting – Fuel price risk component part hedging (3)

- Hedge strategy

- to fix the cost of a portion of the diesel fuel purchased by the transport company over a specific period of time.



Hedge accounting – Fuel price risk component part hedging (4)



- Issues:
 - basis issue – Tapis Oil vs Diesel Fuel
 - Diesel is just one component of tapis oil
 - AASB 139.82 – no component part hedging allowed for non financial items
 - non financial item must be hedged for FX or all of the market price risk
 - hedge ineffectiveness expected due to volatile basis
 - may undermine hedge accounting
- May be able to address by using regression analysis and optimising the hedge ratio

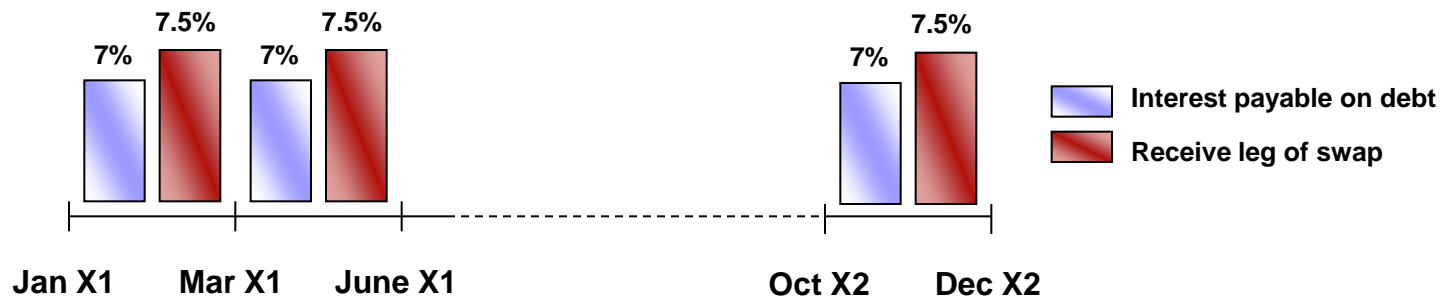
Hedge accounting – Hedging Portions

- Company X borrows \$1,000,000 at 7%, paid quarterly.
- Term is two years.
- To hedge the interest rate risk, the company enters into a swap with the following details:
 - notional principal is \$1,000,000;
 - receive 7.5% quarterly and pay fixed BBSW quarterly for a term of two years.
- The company wants to get hedge accounting



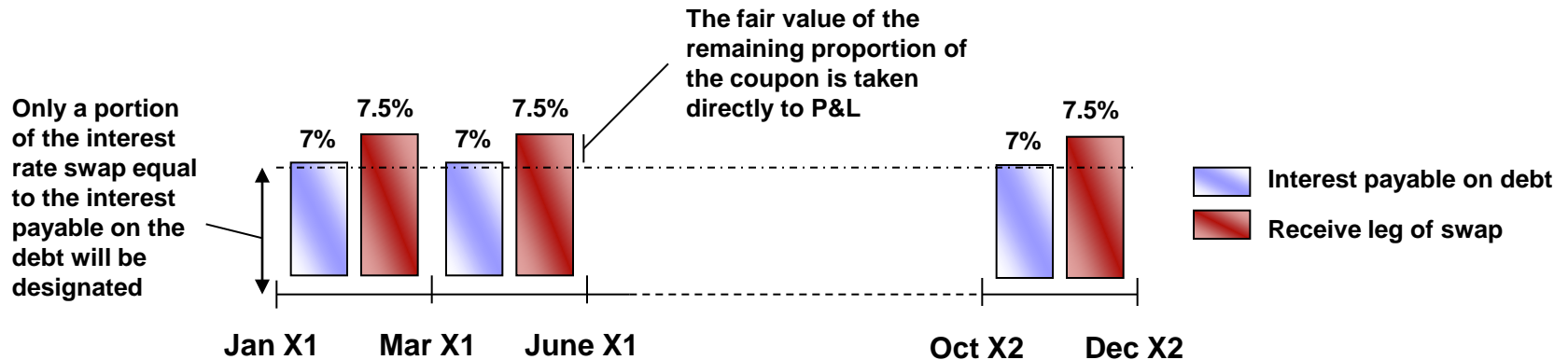
Hedge accounting – Portions (2)

- Issue – receive leg of swap is greater than pay leg of debt



- If we designate the entire swap, the hedge relationship may not be effective
- AASB 139.75 allows a proportion of a hedging instrument to be designated into a hedge relationship
- Hence we designate only a proportion of the swap's interest coupon

Hedge accounting – Portions (3)



- The hedge relationship is now expected to be highly effective

interest rate swap with 7% coupon is hedging debt with 7% interest payment

- **ASIC has identified this as a key area of focus**
 - Insufficient disclosure
 - Failure to disclose sensitivity analysis to market risks
 - Lack of analysis of financial assets past due but not impaired and analysis of impaired financial assets
 - Failure to separately disclose material gains and losses arising from a group of similar transactions
 - Additional disclosures required due to AASB 7 changes effective 1 January 2009

AASB 7 Summary of requirements



Aim is to provide qualitative and quantitative disclosures of risks arising from financial instruments.

- Includes credit, liquidity and market risks

- **Qualitative disclosures**

- Exposure to risk and how it arises

- An entity's objectives, policies and processes for managing the risk

- Methods used to measure risk

AASB 7 Summary of requirements (2)



- **Quantitative disclosures**

- Concentrations of risk e.g. Due to geographical, currency, counterparty etc
- Credit risk
 - Maximum exposure
 - Maturity analysis of past due but not impaired
 - Analysis of impaired assets

- **Liquidity risk**

- Maturity analysis split between non-derivatives and derivatives (check consistency with current vs non-current classification)

AASB 7 Summary of requirements (3)



- **Market risk**

- Currency
- Interest rate
- Other e.g. Commodity prices
- Present sensitivity analysis for each type of risk
- Base on reasonably expected changes, not worst case scenarios

- **Other requirements**

- Details of hedge accounted relationships
- Comparison of carrying value vs fair value (disclose valuation method used)

AASB 7 changes effective 1 January 2009

- **For each type of financial instrument measured at fair value in balance sheet, disclose position in fair value hierarchy:**
 - Level 1: based on quoted prices in an active market
 - Level 2: based on observable inputs other than quoted prices e.g. Interest rates, currency rates
 - Level 3: fair values based on inputs not based on observable market data.
 - Additional disclosures required for Level 3 instruments and transfers between categories.

Replacement of IAS 39 Project

- **Aim is to “simplify” classification and measurement**
- **Comprises 3 main phases**
 - Phase 1: Classification and measurement
 - Phase 2: Impairment methodology
 - Phase 3: Hedge accounting
- Phase 1
 - AASB 9 issued – covers classification and measurement of financial assets (early adopt for AFS equity investments?)
 - ED on classification of financial liabilities to be issued in 1H 2010
- Phase 2
 - ED issued on measuring impairment – changes impairment measurement to expected cash flow method rather than incurred
- Phase 3
 - IASB discussing feedback from users of financial statements

Questions



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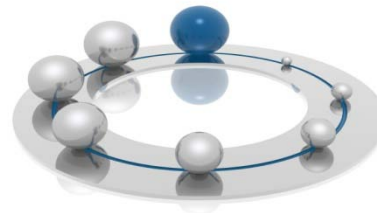
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