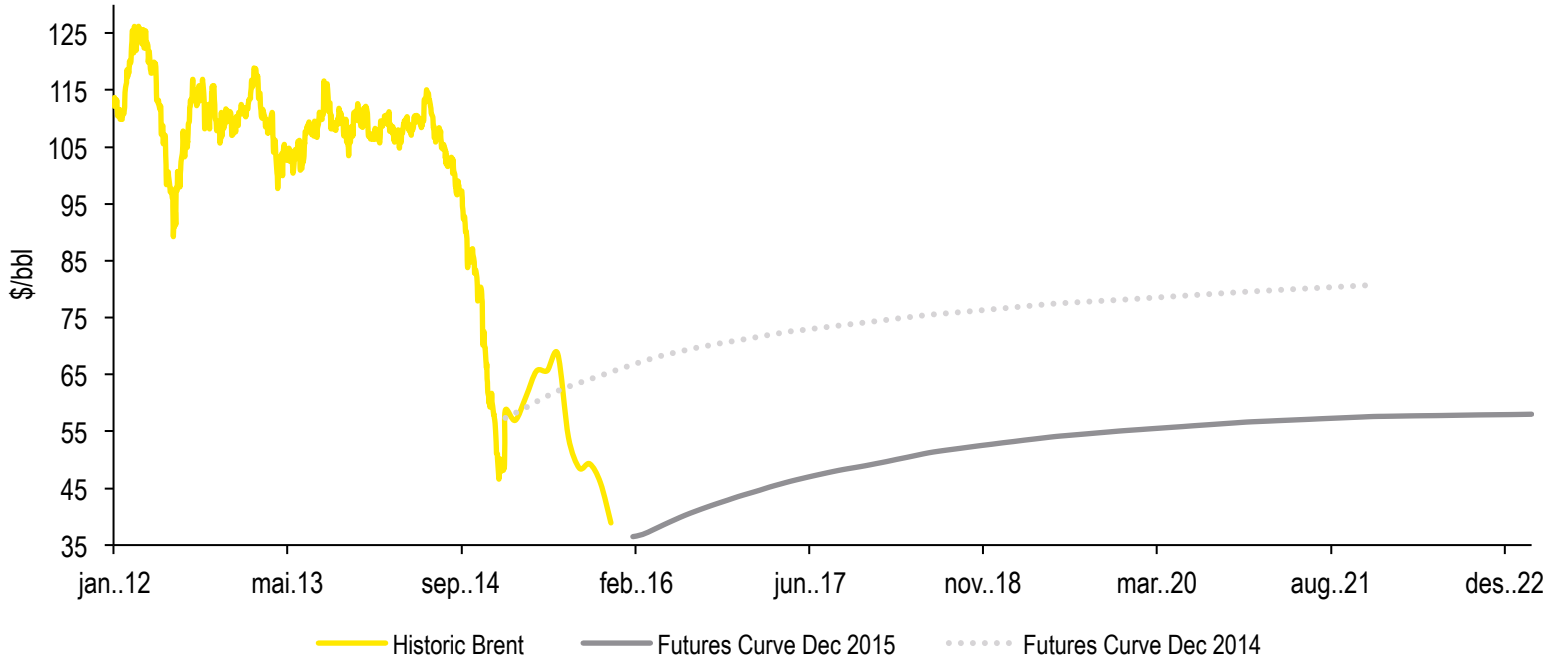

Impairment
Tor Inge Skjellevik
14 June 2016
EY
Building a better working world
Presentation title

Lower prices for longer?

The better the question. The better the answer.
The better the world works.

Building a better working world

Brent Crude: Futures price December 2015 (LT futures)



Monthly Averages	2016	2017	2018	2019	2020	2021	2022	2023
Futures Price ($/bb)	40.1	46.8	51.2	54.1	55.9	57.2	57.8	58.0

Source: Bloomberg

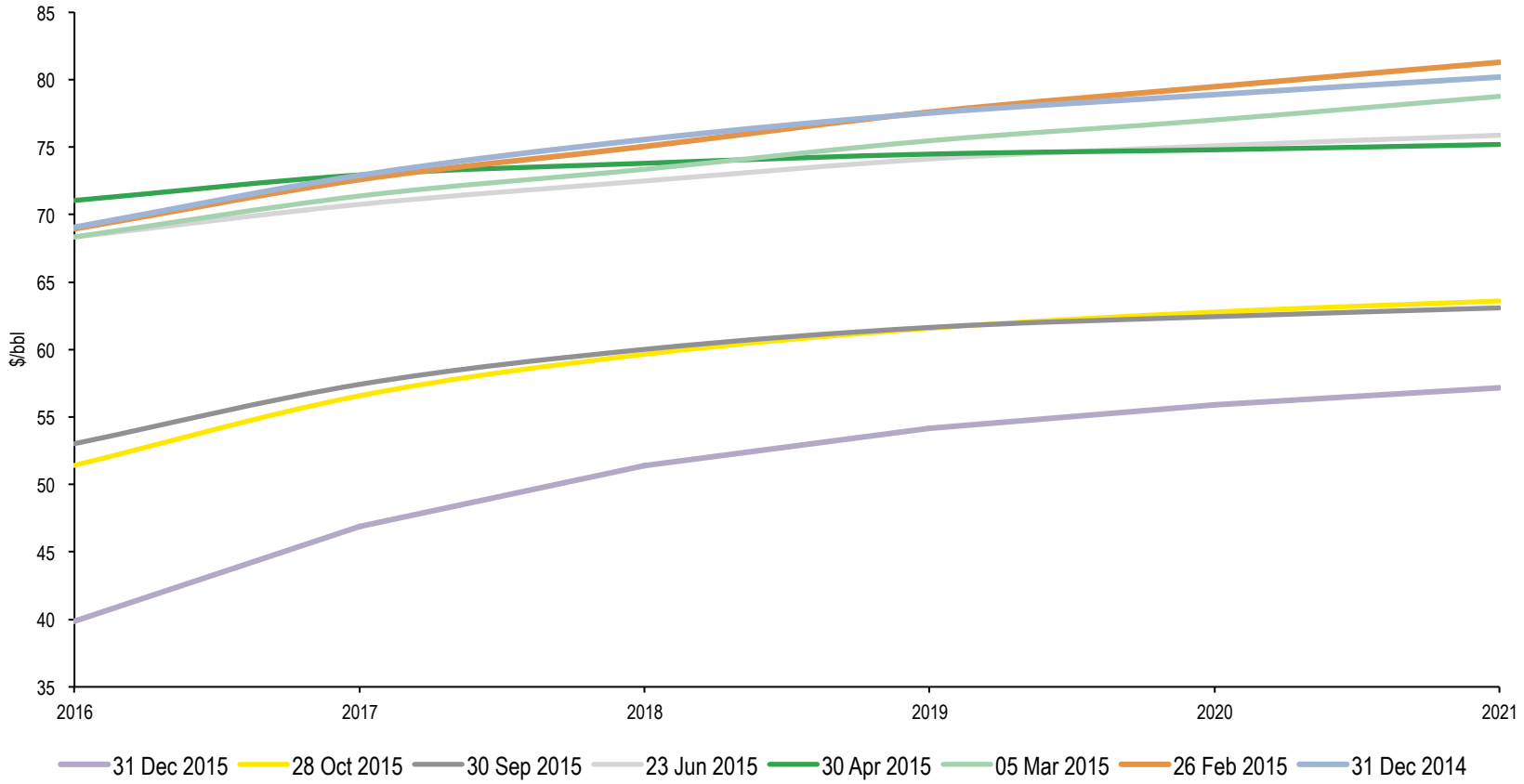
Brent Crude: Broker estimates

Broker	Date	2016 ($/bbl)	2017 ($/bbl)	2018 ($/bbl)	2019 ($/bbl)
Broker 1	12/31/15	44.9	48.0	n.a	n.a
Broker 2	12/23/15	45.0	n.a	n.a	n.a
Broker 3	12/22/15	56.0	66.0	n.a	n.a
Broker 4	12/21/15	42	n.a	n.a	n.a
Broker 5	12/21/15	60.0	74.0	n.a	n.a
Broker 6	12/18/15	45.0	66.0	n.a	n.a
Broker 7	12/16/15	49.3	57.0	64.0	67.0
Broker 8	12/15/15	56.0	70.0	80.0	n.a
Broker 9	12/14/15	53.8	62.5	67.5	70.0
Broker 10	12/11/15	51.0	53.0	n.a	n.a
Broker 11	12/10/15	52.5	54.0	n.a	n.a
Broker 12	12/8/15	41.0	47.0	55.0	52.0
Broker 13	12/7/15	60.0	n.a	n.a	n.a
Broker 14	12/3/15	47.7	55.0	55.0	55.0
Broker 15	11/30/15	47.0	45.2	50.4	53.8
Broker 16	11/24/15	58.0	60.0	70.0	70.0
Broker 17	11/24/15	54.0	65.0	n.a	n.a
Broker 18	11/19/15	50.0	55.0	60.0	65.0
Broker 19	11/17/15	55.0	n.a	n.a	n.a
Broker 20	11/5/15	67.3	n.a	n.a	n.a
Broker 21	11/5/15	62.0	n.a	n.a	n.a
Broker 22	10/29/15	56.0	n.a	n.a	n.a
Broker 23	4 Quarter 2015	55.0	60.0	70.0	86.6
High		**67.3**	**74.0**	**80.0**	**86.6**
Average		**52.5**	**58.6**	**63.5**	**64.9**
Median		**53.8**	**58.5**	**64.0**	**66.0**
Low		**41.0**	**45.2**	**50.4**	**52.0**

Source: Bloomberg.

- Per Consensus Economics Dec 2015, long term real estimates for Brent have a median of $75.15/bbl with a high and low of $86.48bbl and $59.00/bbl respectively.

Brent Crude: Future price (annual median) – nominal



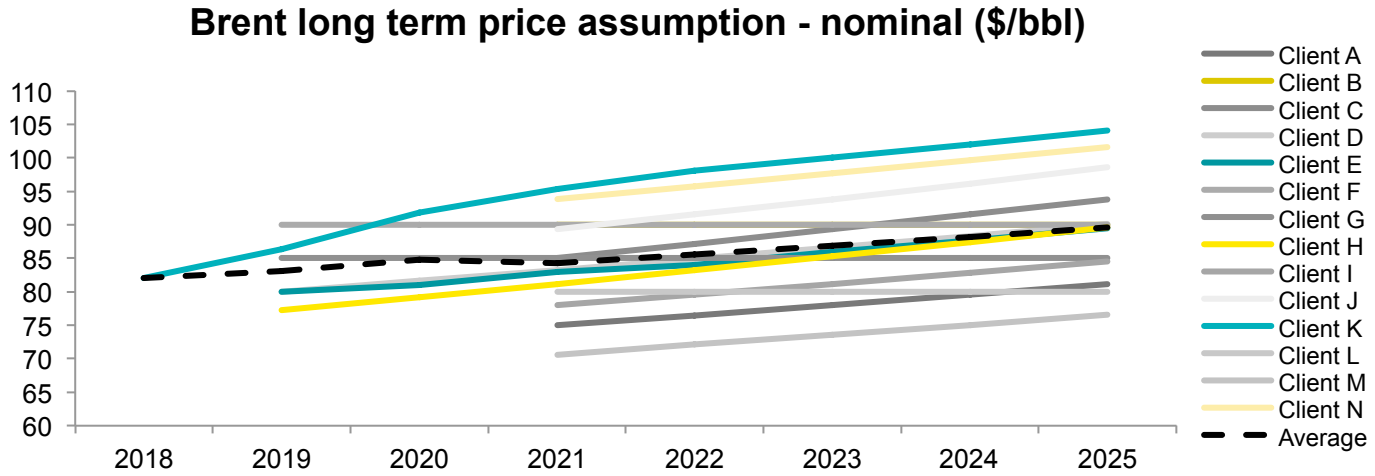
Source: Bloomberg

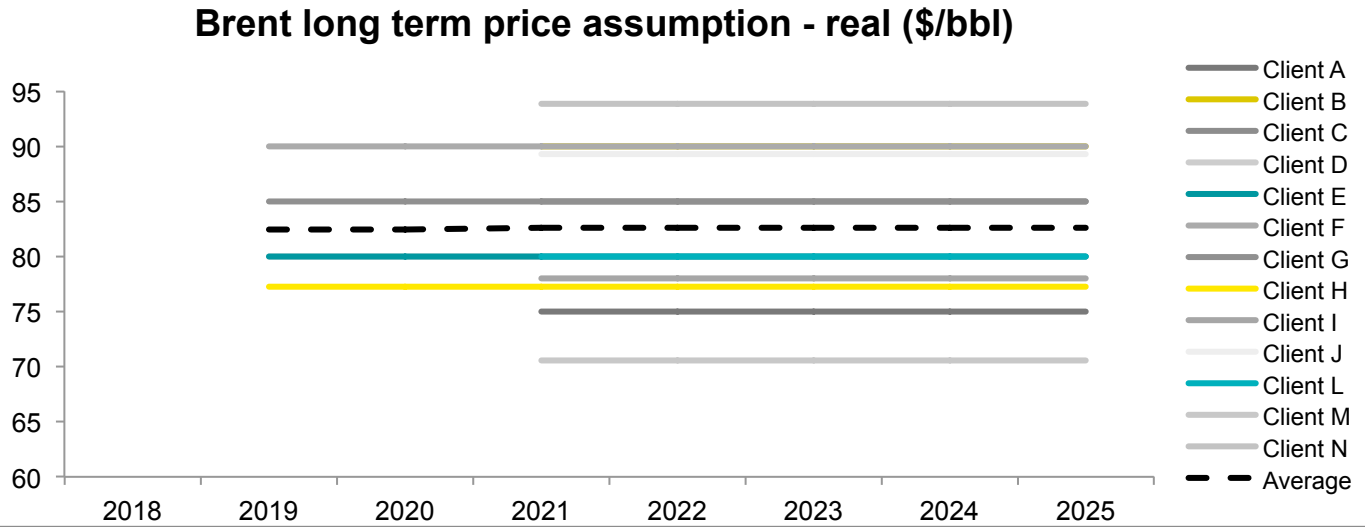
What were our clients' assumptions for 2015?

The better the question. The better the answer.
The better the world works.

Building a better working world

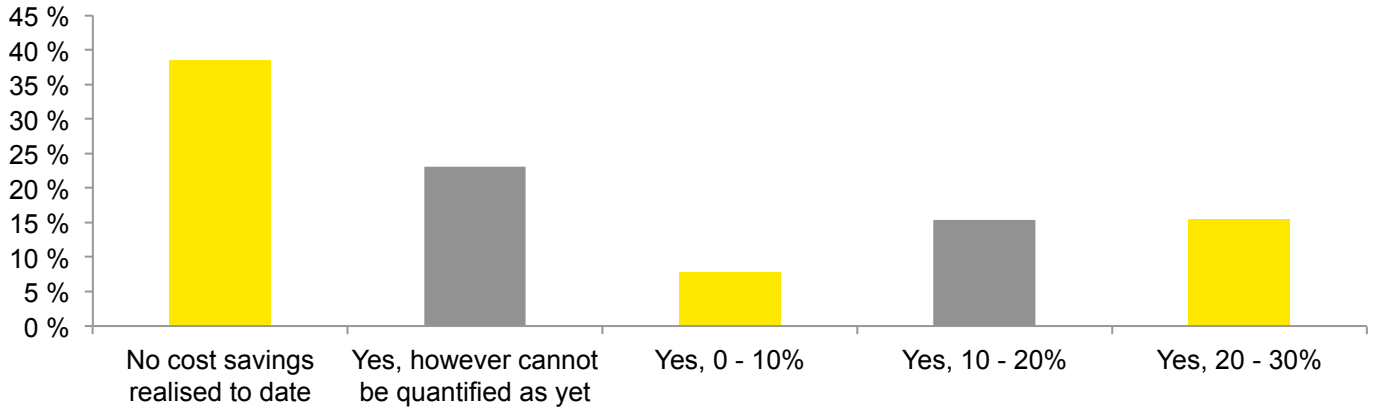
O&G Assumptions Benchmark - Brent



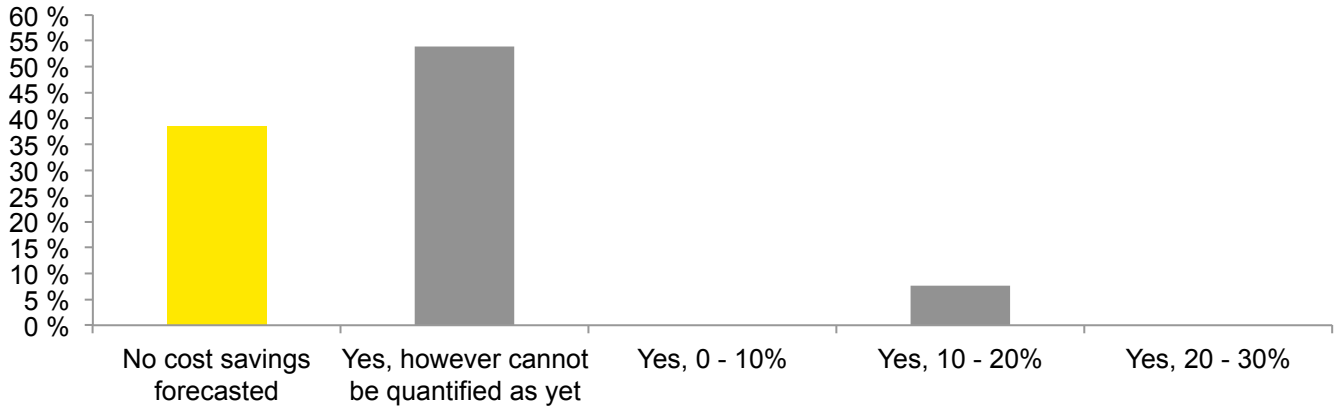


O&G Assumptions Benchmark – Cost reductions

- Cost reductions realized to date



- Forecasted cost reductions



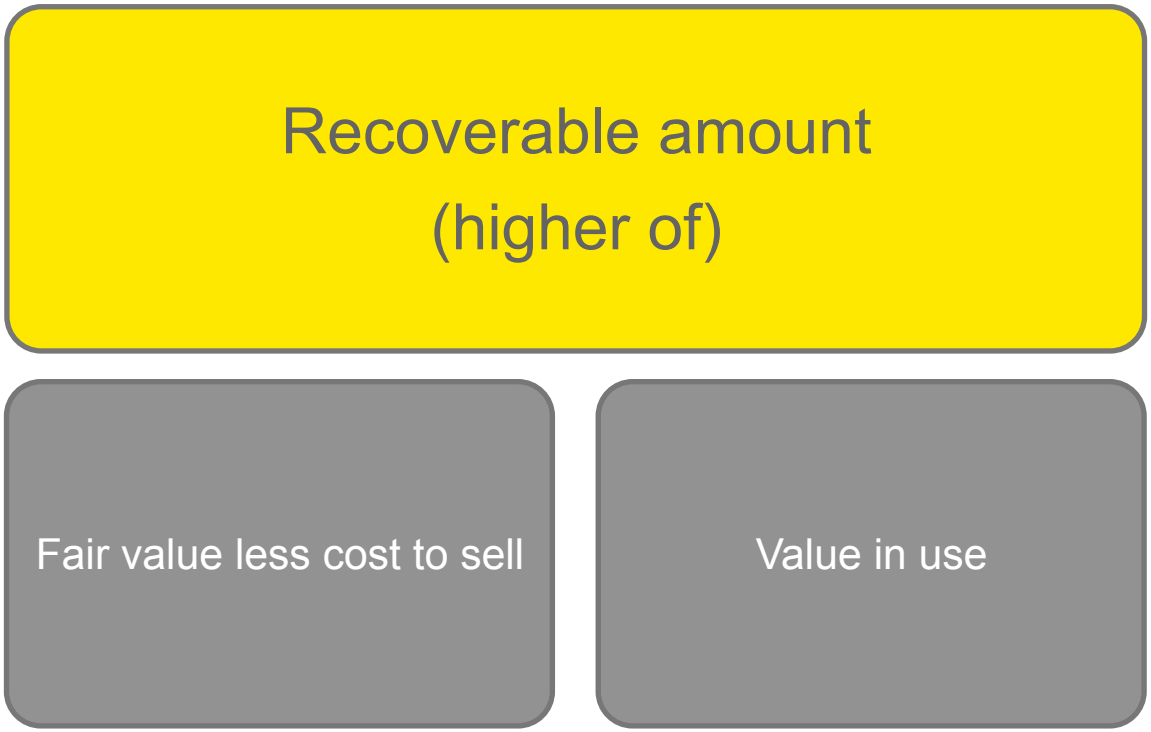
Impairment tests

Very challenging area

The better the question. The better the answer.
The better the world works.

Building a better working world

Recoverable amount
IAS 36.18



Basis for estimates of future cashflows Value in use - IAS 36.33a)

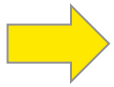
"Base cash flow projections [shall be based on] reasonable and supportable assumptions that represent management's best estimate of the range of economic conditions that will exist over the remaining useful life of the asset.

Greater weight shall be given to external evidence"

How to handle currency issues IAS 36.54

1. Test performed with cashflow in USD or EUR
   - Discount rate appropriate for the currency in which the cashflow will be generated
   - Net present value of the cashflow in USD or EUR should be translated to NOK using the spot exchange rate
   - Challenging…..

2. Use forward exchange rate to translate to one common currency, and then apply appropriate discount rate for the common currency

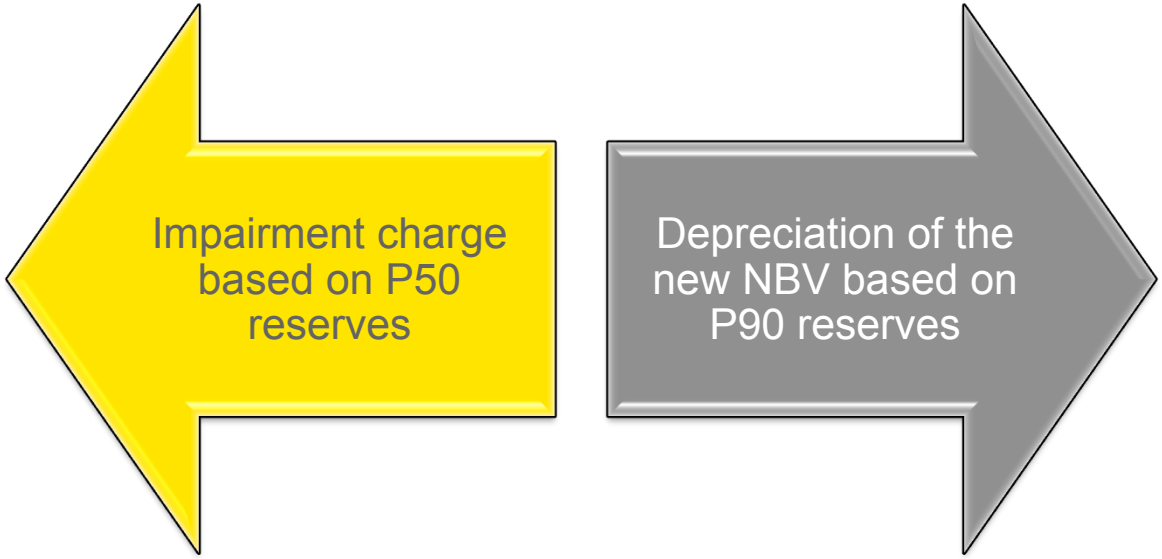


Financial theory: Alternative 1 and 2 should be equivalent methods (Interest Rate Parity)

- Net book value should not be revaluated

- Relationship between NOK/USD and oil price
  - (Historically high) spot exchange rate, and
  - High oil price expectations – realistic and equivalent?

Impact on depreciations
IAS 36.63



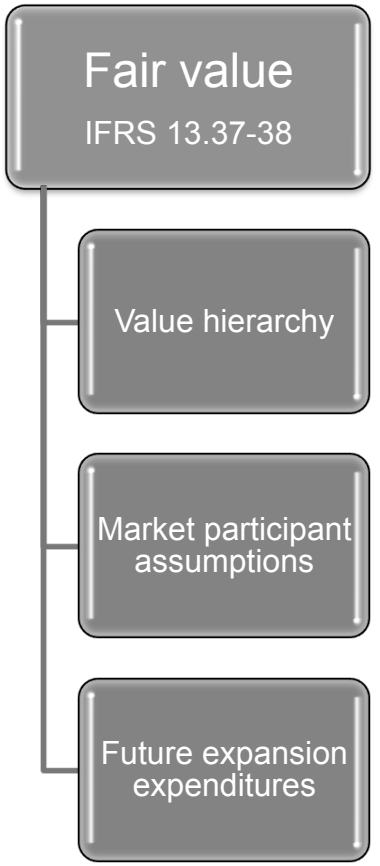
- Depreciation based on P90 reserves leads to lower NBV before impairment but effectively an “automatic” reversal after the impairment

Value in use
Current condition IAS 36.44

- Does not allow inclusion of cashflow relating to future enhancements of an assets performance or capacity to which an entity is not committed
- Maintenance and replacement capital expenditure necessary to maintain the function or current performance of the assets have to be included
- This distinction may not be easy to draw in practice
- What about cost reduction programs?

Fair value less cost to sell

Solution?



Shared infrastructure
IAS 36.66-73



- Not appropriate to treat the field and the infrastructure as one CGU if the field is capable of selling the petroleum without making use of the shared infrastructure
- Careful considerations are needed

Abandonment costs
IAS 36.43

- To avoid double-counting, estimates of future cash flows do not include
  a) cash inflows from assets that generate cash inflows that are largely independent of the cash inflows from the asset under review (for example, financial assets such as receivables); and
  b) Cash outflows that relate to obligations that have been recognised as liabilities (for example, payables, pensions, or provisions)
- The future abandonment costs are already recognised on the balance sheet as a liability
- The “removal asset” is always included in the asset’s acquisition cost, and hence its carrying value

Abandonment costs

- IAS 37 typically requires recognition of the abandonment obligation using a lower discount rate than the asset's pre-tax WACC
  - Day 1-impairment ???
- Example
  - An asset is created in year zero at an investment cost of $100
  - The asset generates expected revenues of $121 in year one, and is then removed at a cost of $11
  - The asset's discount rate is 10%, giving a net NPV of the asset equal to
    - ($121-$11)/1,10 = $100
  - However, the removal obligation should be recognised using a discount rate of 5%
  - The book value in year 0 is therefore $100 + $11/1,05 = $110.5
  - The NPV of the impairment test is $121/1,10 = $110
  - Impairment = $0.5 ?

Abandonment costs

- Three-step solution to estimate Value In Use
  1. Calculate NPV of cash flows including future abandonment costs using WACC
     - ($121-$11) / 1.10 = $100
  2. Calculate NPV of abandonment cost using the ARO discount rate
     - $11 / 1.05 = $10.5
  3. Add values from steps 1 and 2 to obtain total NPV of the impairment test:
     - NPV = $100 + $10.5 = $110.5
- NPV equals book value – no impairment is required
- This gives a discount rate for the fixed assets excl. abandonment of 9.5%
  - $121 / $110.5 – 1 = 9.5%
- This method is equivalent to deducting ARO from carrying value and including abandonment costs in cash flows and discounting by WACC


Taxes

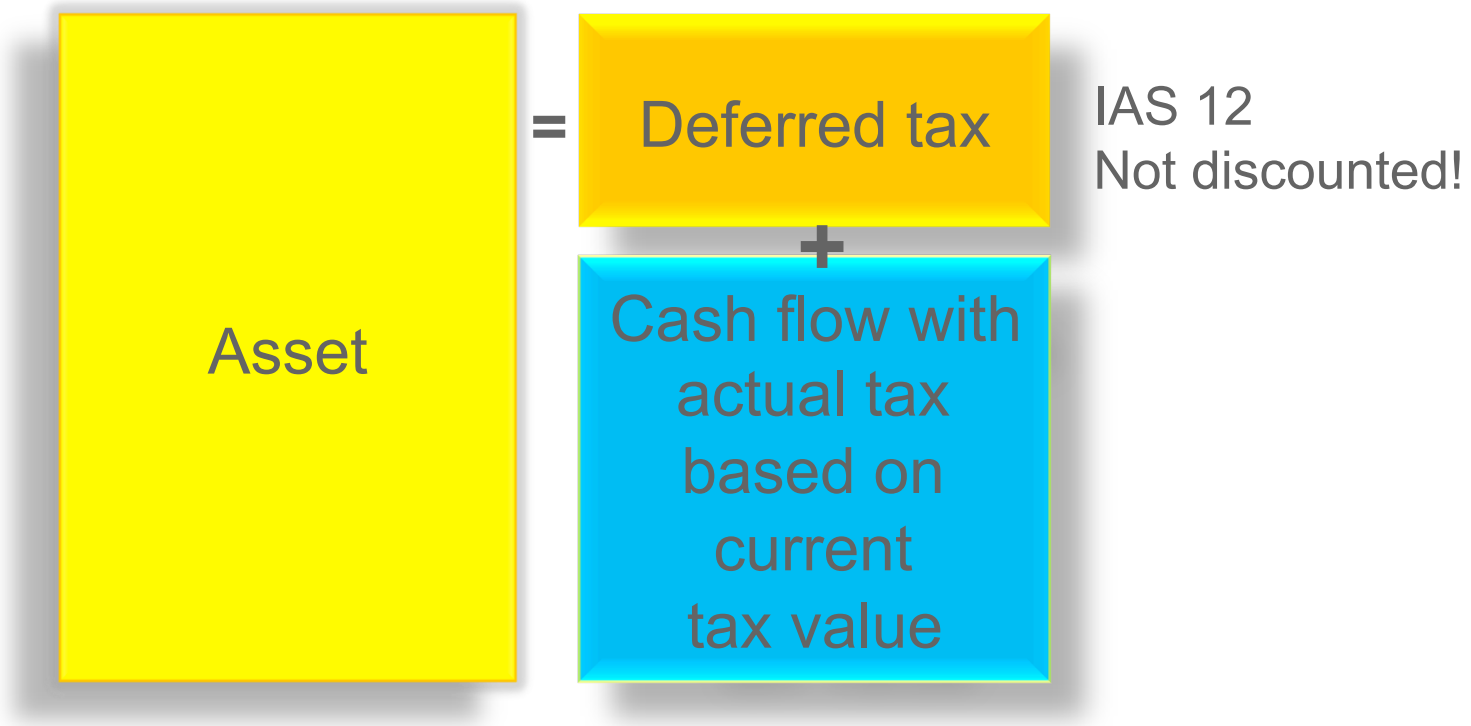
Impairment and deferred tax - Why is this important?

- Consider an asset where tax balance is depreciated faster than book value
  - Asset is acquired (i.e. built) in year 0 for $100, with tax value = acquisition cost
  - The asset generates profits for two years, with EBITDA of $110 and $121 in years 1 and 2, respectively
  - Depreciation for accounting purposes is $50 in each year («Unit-of-Production»)
  - Full depreciation in year 1 for tax purposes
  - Tax rate is 78%, no capital allowance (uplift), discount rate 10%
- After year 1, NPV is lower than book value – we need to make an adjustment for deferred tax in the NPV calculation for impairment test purposes

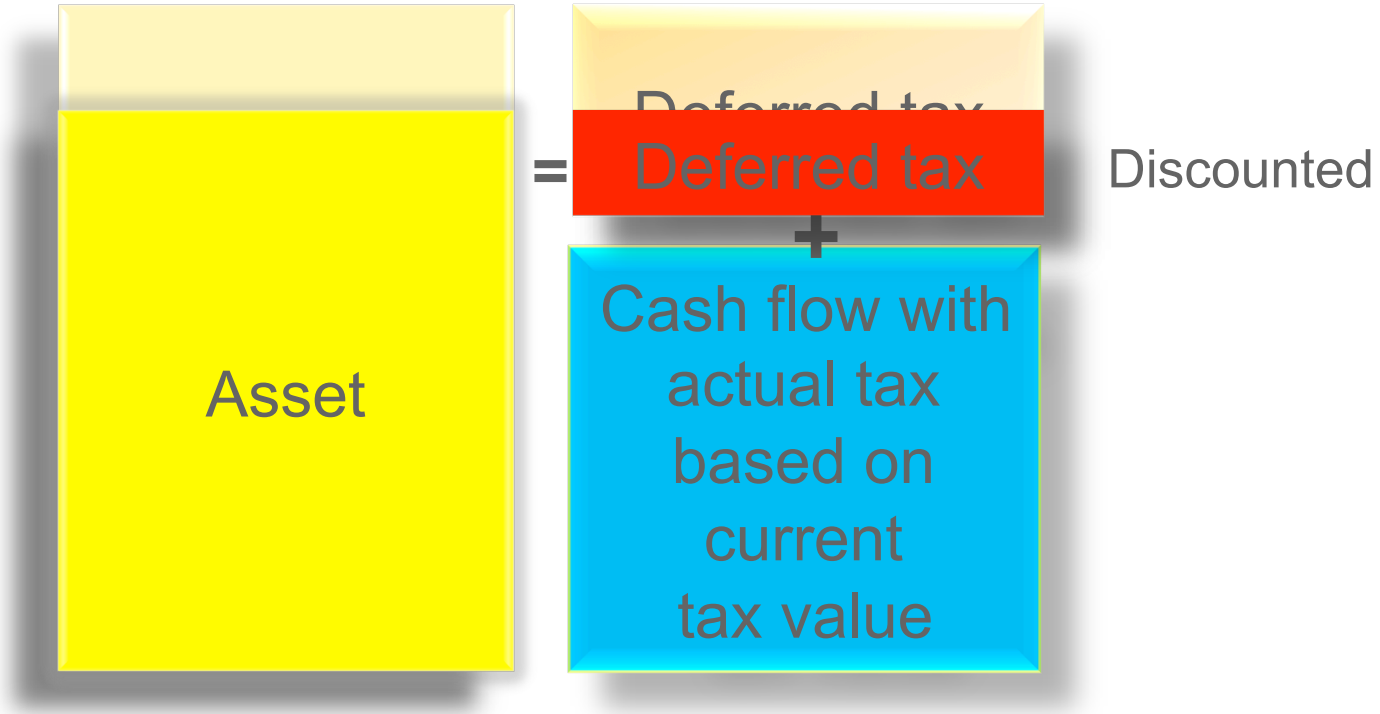
Cash flows	Year 0	Year 1	Year 2
EBITDA		$110.0	$121.0
- Tax		($7.8)	$94.4
= Net cash flow		$102.2	$26.6
Book value end-of-period	$100.0	$50.0	
NPV of future cash flows (end-of-period)	$114.9	$24.2	

NPV < BV !

Some simplifies; use actual tax and add the deferred tax in value in use calculations



Some simplifies; use actual tax and add the deferred tax in value in use calculations



- Adding deferred tax to the NPV using actual tax balances overvalues the asset, since the tax benefits of depreciation of temporary differences are to be discounted under the method recommended by IAS 36

How not to solve the tax issue….

Net book value (asset less deferred tax)	500
Value in use	400
Negative headroom	100
Cr asset	-100
Dr impairment P&L	100
Dr deferred tax	78
Cr tax items P&L	-78
Net book value before impairment	500
Net book value after impairment	478
Net impairment in P&L	22

Still negative headroom

Need to gross-up, or preferably use the iterative method as per IAS 36 (as the gross-up model gives correct net impairment, but too high gross figures)

Other issues

- Uplift is not recognised as deferred tax asset in the balance sheet
  - Double-counting argument in IAS 36.BCZ84 is not relevant
  - Can argue that uplift should be included in the cash flows to obtain the pre-tax discount rate
- Negative taxable income
  - Should future tax losses be carried forward or considered to give immediate cash flow?
  - The example given in IAS 36.BCZ85 assumes immediate cash inflow from negative tax
  - In practice, negative taxable income is often carried forward
  - Stand alone or company assessment?
- Permanent differences
  - Buyers keep seller's tax basis for asset transactions under the Petroleum Taxation Act §10
  - How should this permanent difference be treated in impairment calculations?
  - In general, permanent differences will affect the pre-tax discount rate

Thank you!

Any question?

The better the question. The better the answer.
The better the world works.

Building a better working world