Current challenges in impairment testing

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Valuation & Business Modelling

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Headlines from recent press: oil and gas companies are in turbulent times

February 12, 2015
"… to **cut** UK **jobs** and **sell $5bn** of assets"

February 3, 2015
"… in **$8.9bn writedown** of assets after oil price fall"

January 26, 2015
"… halves profit forecast on **$1bn writedown**"

FT FINANCIAL TIMES

THE WALL STREET JOURNAL. WSJ

February 3, 2015
"… **slashes capital spending** by 20%"

January 16, 2015
"… to take **$2.7bn write-off** "

February 24, 2015
"Oil and gas industry in '**bleak**' **2014**, finds survey"

January 21, 2015
"… **cuts** US **shale operation** as oil price falls"

BBC NEWS

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What is an impairment?

Impairment defined

- International Financial Reporting Standards, IAS 36
- Impairments tested at "cash-generating unit" (CGU) level
  - *"The smallest group of assets that independently generates cash flows"*
- Write-down in the value of an asset on an entity's balance sheet to its recoverable amount, if headroom over the carrying amount is negative
  - Headroom: *"recoverable amount less carrying amount of the CGU"*
  - Carrying amount of the CGU: *"net operating assets"*
  - Consistency between carrying amount and recoverable amount
- Assets shouldn't be carried at more than their recoverable amount, i.e., the higher of:
  - Value-in-use: *"the present value of the future cash flows"*
  - Fair value less cost of disposal: *"price of an orderly transaction between market participants"*
- Impairments aimed at keeping the balance sheet honest

Understanding the starting point for a potential impairment

Scenario 1: Historical cost

- CGU is the company; internally developed reserves

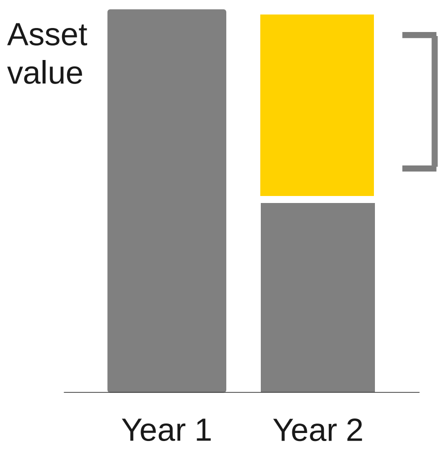
CGU assets	£	Basis
Oil and gas properties	100	Historical cost
Exploration intangibles	10	Historical cost
Total assets	**110**	Historical cost

Scenario 2: Fair value

- Same company as in scenario 1, **but:**
  - Acquired and consolidated on acquirer’s balance sheet

CGU assets	£	Basis
Oil and gas properties	150	Fair value
Exploration intangibles	15	Fair value
Goodwill	**10**	Purchase price less fair value of assets
Total assets	**175**	Purchase price

Example indicators that trigger potential impairment



Potential impairment

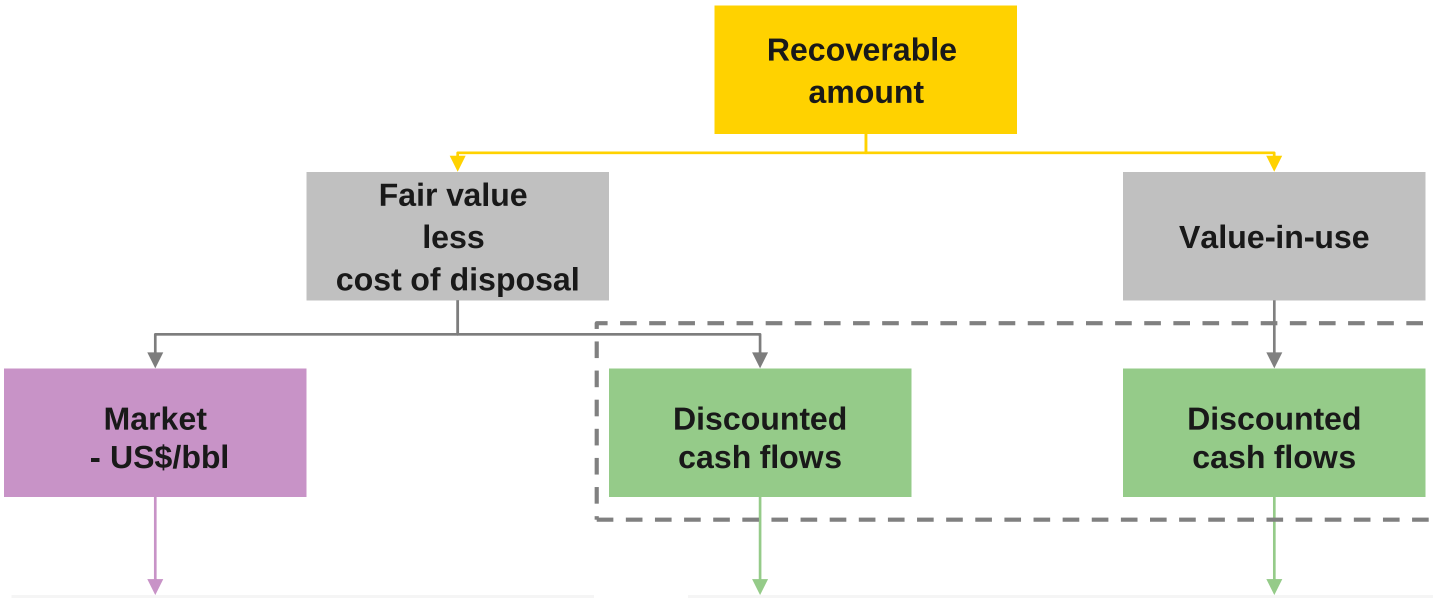
Internal impairment indicators

- Obsolescence
  - Physical damage
- Asset performance
  - Discontinuance, restructuring or disposal
- Deferral of capital investment

External impairment indicators

- Market value
  - Market capitalisation deficit (if listed)
  - Oil price decline
- Competitive landscape
  - New entrants
  - Technology shift
- Political/macroeconomic
  - Expropriation
  - Labour
  - Fiscal regime
- “Acts of God”
- Terrorism

IAS 36: Recoverable amount estimation



- US$/bbl ought to reconcile to discounted cash flows
- If not, must understand how discounted cash flows reconciles to a US$/bbl

- Approaches are materially the same
  - Price – market expectation of forecast prices
  - Volumes – at CGU level, recoverable reserves
  - Discount rate – consistent to match cash flow risks
- Cost may differ depending on geographic proximity and/or synergies

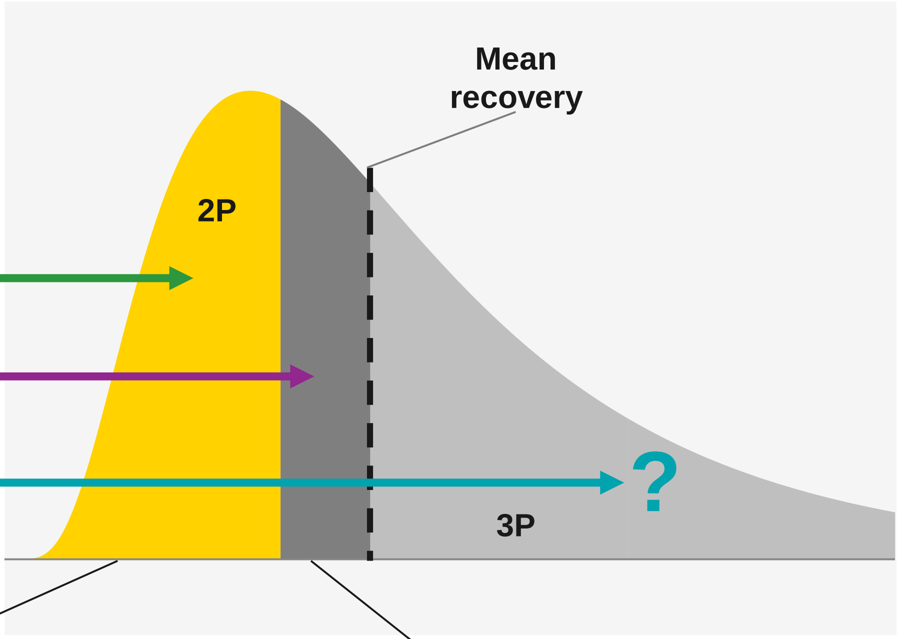
Please note that impairment testing materially differs under US GAAP

Reconciling the fair value balance sheet to the reserves distribution

Fair value balance sheet

CGU assets	£
Oil and gas properties	150
Exploration intangibles	15
Goodwill	10
Total assets	**175**

Reserves distribution



- Typical oil and gas fair value
- Supports exploration and evaluation

A fundamental look at valuation: income or market approach?

Income approach – discounted cash flows (DCF)

- Two components, each with potential pitfalls:

1. Cash flows
   - Real vs. nominal
   - Post-tax vs. pre-tax, tax to buyer or seller (market participant?)
   - Risk adjusted for project status
2. Discount rates
   - Real vs. nominal
   - Differences between fair value less cost of disposal and value-in-use?
   - Impact of yield compression
   - Economic factors such as country risk – not straightforward
   - Currency denomination
   - Comparison to client's investment appraisal framework and hurdle rates

- What about the decommissioning value?
  - Cat is still out of the bag

Market approach – where has the market gone?

- Liquidity in private transactions of assets
- US$/boe – be wary of those transaction data points!
  - Eg., oil price expectations at the transaction date and other synergy value priced in

Practical challenges

- Market approach
  - Less credible when transactions are few and far between for comparable assets
- Income approach
  - DCF most common approach at CGU level
  - DCF *(where possible)* at **post-tax leve**l; then "back solve" using pre-tax cash flows to determine **pre-tax discount rate** for disclosure purposes
  - For finite lived assets: possible **material differences** under different methods:
    - Grossing up post-tax discount rate
    - Using pre-tax cash flows and iterating to calculate the implied discount rate (IRR)

Impact of impairment on fair value and historical cost balance sheets

Balance sheet example: CGU assets recoverable amount valued at £90

CGU assets	Scenario 1: Historical cost Pre impairment	 Post impairment	 Headroom/ (impairment)	Scenario 2: Fair value Pre impairment	 Post impairment	 Headroom/ (impairment)
Oil and gas properties	100	90	(10)	150	90	(60)
Exploration intangibles	10	-	(10)	15	-	(15)
Goodwill				10	-	(10)
Total assets	**110**	**90**	**(20)**	**175**	**90**	**(85)**

Balance sheet example: CGU assets recoverable amount valued at £140

CGU assets	Scenario 1: Historical cost Pre impairment	 Post impairment	 Headroom	Scenario 2: Fair value Pre impairment	 Post impairment	 Headroom/ (impairment)
Oil and gas properties	100	100		150	140	(10)
Exploration intangibles	10	10		15	-	(15)
Goodwill				10	-	(10)
Total assets	**110**	**110**	**30**	**175**	**140**	**(35)**

- **Same assets to trigger different impairment magnitude – depends on "headroom"**
  - Can be materially different
  - Impact on company's share price (if listed)?! – active communication and stakeholder management is key

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