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DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS
STATISTICS DIVISION

Seminar

Addressing Information Gaps in Business and Macro-Economic Accounts to Better Explain Economic Performance

New York, 23 – 24 June 2008
United Nations, Conference room C

Accounting for environmental management and environmental costs

John McCormack

Accounting for environmental management and environmental costs

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Second Session
Addressing Information Gaps in Business and Macro-Economic Accounts to Better Explain Economic Performance
United Nations

Tuesday, 24 June 2008
9:30

JM1

Accounting for environmental liabilities of US companies during most of the 20th century

- Late in the 20th century, shareholder-owned companies were often aware they faced significant financial liabilities for cleaning up industrial and mining sites
- Estimates by the EPA and National Brownfield Association of future costs of polluted sites have ranged over several hundred billion dollars
- Nevertheless, liabilities for future clean-up costs were generally not recognized on balance sheets
  - FAS 5 (1975) and FIN 39 (1993) were tentative steps
- Environment related costs were generally expensed as they occurred
  - Including Superfund taxes under CERCLA

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Slide 2

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Relatively new financial accounting information (last decade)

- An estimate of the costs of future environmental liabilities must now be on the balance sheet
  - Sarbanes-Oxley, SEC's Regulation S-K, FAS 143 (2002) and FIN 47 (2005) impose strict requirements and *personal* liabilities for mis-statements
  - "Fair value" (DCF) of clean-up costs is the standard
- The first US accounting rules for such liabilities were designed with nuclear power plant decommissioning costs in mind but have been adapted to cover other situations
- Changes in estimates of future costs and "accretion" impact profit and loss
- These liabilities are generally known as "Asset Retirement Obligations" (AROs) in the US
- Treatment under IFRS (IASB) is converging with US

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How the accounting works

- A firm records the fair value of a liability for an ARO in the period when it is incurred (typically when the asset is installed at the production location).
- The firm capitalizes the ARO cost by increasing the carrying amount of the related properties, plants and equipment (PP&E).
- Over time, the liability is increased for the change in its present value each period, and the initial capitalized cost is depreciated over the useful life of the related asset.
- Public companies must also describe AROs and related assets and explain how the fair value was determined (assumptions used).

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Determining whether a liability exists under FAS 143

- FAS 143 applies to "legally enforceable obligations" which could refer to:
  - Federal law
  - Local statutes
  - Regulation
  - Contractual obligations
  - ***Promissory estoppel*** may impose obligations even if a firm has not contracted explicitly with other parties or if no law or ordinance exists
- FAS 143/FIN 47 now require an estimate of conditional AROs ("CAROs") even if a firm expects to operate a facility indefinitely and has no plans to shut down, abandon, or decommission.

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Changes in what is being reported

- Higher standards imposed by recent rulings –particularly the more specific rules of FIN 47—have resulted in much more extensive figures being reported
- Size of balance sheets have increased (both assets and liabilities) but reported profits have not been as heavily impacted
- Typical disclosure (from ConocoPhillips 2007 10-K)

	Millions of Dollars	
	2007	2006
Asset retirement obligations	**$ 6,613**	5,402
Accrued environmental costs	**1,089**	1,062
Total asset retirement obligations and accrued environmental costs	**7,702**	6,464
Asset retirement obligations and accrued environmental costs due	**(441)**	(845)
Long-term asset retirement obligations and accrued environmental	**$ 7,261**	5,619

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What sort of AROs are most commonly reported?

1. Nuclear power plant decommissioning
2. Oil and gas wells (especially offshore platforms)
3. Oil refineries and chemical plants
4. Non-nuclear electric power plants
5. Manufacturing facilities, smelters, some warehouses
6. Strip mines
7. Sites of industrial accidents (spills etc.)

These are traditional industrial situations where the both the nature of the environmental degradation and the sources of the problems are relatively clear. Liabilities incurred are generally for "remediation" of the local environment.

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Usefulness of financial accounting to "ecosystem accounting"

- The costs of remediating land and water to something resembling its prior natural state will now become available
  - Revisions to figures will be inevitable
- These contributions to statistics are "bottom-up" and offer much greater opportunities for analysis

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How the accounting relates to economics

- The accounting rules are conceptually sound, on the whole
  - "credit adjusted risk free rate" used in discounting an unfortunate technical defect
- The challenge is in applying the concept to matters where property rights, law, regulation, court decisions on legal liabilities, technical capabilities, responsibility for outcomes is unclear or changing swiftly

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Major challenges

- Determining responsibility and liability for those parts of the environment that are not private property nor even part of national territories
  - Oceans
  - Atmosphere
- Making financial estimates while the rules of the game are subject to radical change
  - The US EPA had long concluded that CO_2 was not a "pollutant" but the SCOTUS determined (5 to 4 vote) otherwise in 2007
  - Several "Cap and Trade" proposals floating about Congress currently
  - Who gets to claim reductions and who must assume liabilities?
    - Example: UTC's EcoPower jet engine cleaner (GE, Hawaiian Airlines)

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