How sustainable cost accounting works[1]

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1. Sustainable cost accounting – the background

Sustainable cost accounting (SCA) is an idea that has been promoted by the Corporate Accountability Network (CAN) since 2019, when it was created by its director, Professor Richard Murphy FCA. SCA is explained at some length in CAN publications[4].

2. SCA – in summary

In summary, sustainable cost accounting is quite simple. SCA would require that every large business[5] prepare a plan to show how it will manage the consequences of climate change. That plan would have to state how it might become net carbon-neutral by a specified date as a consequence of eliminating carbon from its production processes, both within its own business and within its supply and customer chains.

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[1] http://www.corporateaccountabilitynet.work/projects/sustainable-cost-accounting-the-essential-guides/

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[4] http://www.corporateaccountabilitynet.work/wp-content/uploads/2019/12/SCANov2019.pdf

[5] What a large business is varies over time. In the UK at the time of writing of this report a large company was one that matched two out of these three criteria: annual turnover greater than £25.9 million; balance sheet total of more than £12.9 million; average number of employees of more 250.

It is important to note that this process does not require that the reporting entity account for the cost of carbon. In other words, SCA does not require an entity to account for the cost of the externalities[6] that its business activities create. Instead, the requirement is that the entity accounts for the cost of eliminating the causes of that externality from its business systems, and those of its supply and customer chains. The costs to be accounted for by SCA are in that case always those that are wholly under the management and control of the entity itself. There is no accounting required for the externality that is to be eliminated.

The plan would have to be specific as to what the business must do to achieve this goal, or alternatively state quite specifically what is not yet known.

A precautionary principle would apply. In other words, the plan could only rely upon those technologies known to exist and that had been proven to work at the time of its preparation. The company can suggest that it may seek to use other technologies and may budget for their development, but it cannot assume that they will work when preparing its plan unless that has actually been demonstrated to be the case. This approach is necessary to ensure that the risks within the processes that the company intends to rely upon are made apparent to its stakeholders.

It is suggested that, as an extension of the precautionary principle, an SCA business plan should not assume that carbon offsetting is possible unless the company can prove that it already owns the means to undertake that offset e.g. it has the land in its own possession on which trees to be used for carbon offset purposes might be planted. This assumption is required to prevent all businesses claiming that they can become carbon net neutral on the basis of offset when the resources to achieve that goal are not available.

The required plan would have to show where the impact of the changes would arise geographically: it would be unacceptable to solve the problem in some countries and not others, or to export carbon risk to developing countries.

That plan would then have to be costed, using best current estimates at current prices. Discounting for costs to be incurred in the future would not be permitted since this might encourage delay in expenditure and the costs of tackling climate change rise as delay is incurred. Discounting is in that case inappropriate.

[6] Investopedia suggests that 'an externality is a cost or benefit caused by a producer that is not financially incurred or received by that producer. An externality can be both positive or negative and can stem from either the production or consumption of a good or service. The costs and benefits can be both private—to an individual or an organization—or social, meaning it can affect society as a whole.'

3. SCA – the accounting mechanics

The requirement of sustainable cost accounting would then be that the full estimated cost to be incurred to become a net-zero carbon emitter should be provided[7] for in the accounts of a company to which SCA applied at the time that the standard was adopted.

Annual reappraisal of the provision[8] made would then be required thereafter to show progress against the goal of becoming a net zero carbon company. In addition, the way in which the provision had been expended during a period would have to be explained. The movement on the sustainable cost accounting reserve would become an additional note within the financial statements of a reporting entity[9] to which the SCA standard applied.

4. Carbon insolvency

If the inclusion of this cost in the accounts of a company resulted in it being shown to be insolvent then the company would have to address that issue so that their solvency might be restored. For example, it could plan the suspension of dividend payments to shareholders and retain profits over time to fund the change to being net carbon neutral.

Alternatively, solvency could be restored by raising additional capital.

If a company could not show how it could fund the cost of the transition to becoming net zero carbon, or it could not estimate the cost of completing that process, or it concluded that it simply could not make the transition, then it is suggested that the company in question would have to be declared 'carbon insolvent'.

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[7] The term 'provided' also relates to the term 'provision' include in this note. A provision is made in a set of accounts when it is known that a cost will be incurred in the future for which liability is already due, but the precise amount to be paid, and when cannot be estimated with absolute certainty. Accounting is very used to making such provisions. For example, a mine operator usually has to make provision for restoring the landscape that their mine has spoilt when the mining operation has ceased, and a nuclear power operator has to make a provision for the cost of decommissioning their power stations. More commonly, provisions are often made for the cost of closure of a business activity when it has come to the end of its natural life but the precise sum to be expended is not yet known.

[8] See the previous footnote for explanation.

[9] A reporting entity can be a company, NGO, charity, trust, government department or other organisation if of the right sized for the SCA rules to apply to it. It is suggested that SCA accounting be required of that relatively small minority of companies that are defined in UK law as being 'large'.

Caron insolvency would not mean that an immediate winding up of a company's affairs would be required. Instead, it would make clear that the company was either not sure whether it might survive, or that it was acknowledging that it would not do so into the era that we are going to have to live in. As a result an orderly winding up of its affairs would be required, and carbon insolvency administrators would have to be appointed to oversee that goal. It is stressed that this process is not about an immediate winding up of the reporting entity's affairs; it is instead about managing an orderly transition for all involved including, most especially, its employees.

5. Audit

In either case the plan would have to be deemed credible by the company's auditors. This last point is important: all SCA data would require financial audit since the intention is to include it in the audited financial statements of the reporting entity. This would also require that auditors consider this in formation when undertaking going concern reviews.

6. An example

a. Timescale

Assume that a company has decided to become net zero carbon in five years. This makes the numbers easier, even if it is unlikely. It is assumed that the company only trades in one jurisdiction.

b. Costs

Also assume that on the basis of careful estimation it is believed that it will cost the company £60 million to eliminate carbon from its business processes, customer chain and supply chain. Of this sum £10 million will be spent over the first two years to invest in new technology to attach to equipment that it is believed will significantly reduce its carbon output if it is proved to work. The remaining £50 million will be spent in equal instalments to manage the process of carbon elimination. The estimate is prepared in accordance with the precautionary principle, in other words it is assumed for the purposes of estimation that the new technology will not work as yet. No offsetting is presumed to take place outside the business.

c. Initial accounting

The accounting for this situation in the first year in which SCA is adopted is straightforward. A provision for the entire estimated cost of £60 million is made.

This provision is not created by a charge in the income statement. It is instead a charge to the sustainability reserve. Movements on the sustainability reserve will feed into the balance sheet through the statement of comprehensive income and then though the statement of changes in equity. A separate note to the accounts would be required to explain movements arising during a period.

Such is the significance of the likely sustainability reserve that it will be required to be shown separately on the face of the balance sheet as a separate reserve within shareholder's equity.

The sustainability provision would be disclosed as a liability on the balance sheet. £15 million will, in this case, be due in less than one year, with £45 million being due after more than one year.

Ignoring all other transactions, those noted with regard to the sustainability provision would be reflected as follows in the first year:

Sustainable cost accounting

Sustainability provision reporting

Year 1

Sustainability reserve		**Year 1**
		£'million
Opening balance brought forward		0
Additions in the year:	Provision created	(60)
Balance carried forward		(60)
Split:		
Due in under one year		(15)
Due in more than one year		(45)

Statement of comprehensive income / (loss)	
	£'million
Change in the value of sustainability provision	(60)
Total comprehensive income / (loss) arising attributable to the owners	(60)

Statement of changes in equity	Sustainability reserve
	£'million
Change in the value of sustainability reserve	(60)
Total comprehensive income / (loss) arising attributable to the owners	(60)

Balance sheet	
Current liabilities	£'million
Sustainability provision	(15)
Non-current liabilities	
Sustainability provision	(45)
Net liabilities	(60)
Equity	£'million
Sustainability reserve	(60)

Narrative support for the entries would, of course, be required.

d. Second year accounting

The year two accounting might look like this, based on the assumptions made:

Sustainable cost accounting

Sustainability provision reporting

Year 1

Sustainability reserve		**Year 2**	**Year 1**
		£'million	£'million
Opening balance brought forward		(60)	0
Additions in the year:	Provision created	0	(60)
Spend in the year:		15	0
Balance carried forward		(45)	(60)
Split:			
Due in under one year		(15)	(15)
Due in more than one year		(30)	(45)

Statement of comprehensive income / (loss)		
	£'million	£'million
Change in the value of sustainability provision	0	(60)
Total comprehensive income / (loss) arising attributable to the owners	0	(60)

Statement of changes in equity	Sustainability reserve £'million	Sustainability reserve £'million
Change in the value of sustainability reserve	0	(60)
Total comprehensive income / (loss) arising attributable to the owners	0	(60)

Balance sheet		
Current liabilities	£'million	£'million
Sustainability provision	(15)	(15)
Non-current liabilities		
Sustainability provision	(30)	(45)
Net liabilities	(45)	(60)
Equity	£'million	£'million
Sustainability reserve	(45)	(60)

There is no movement in the statement of comprehensive income or loss in the year as the provision made has simply been expended. This would, of course, require explanation in a note with narrative support.

e. Third year accounting

Now suppose that in the third year of the project the spend on investment in new technology was shown to work. As previously planned, £15 million was spent in the year but as a consequence the success of the investment made the required spend in years 4, 5 and 6 is reduced from £30 million in total to £18 million in total. A saving of £12 million has arisen as a result of the successful investment programme. The accounting in year 3 would look like this:

Sustainable cost accounting

Sustainability provision reporting

Year 1

Sustainability reserve	**Year 3**	**Year 2**
	£'million	£'million
Opening balance brought forward	(45)	(60)
Reduction in the year due to successful innovation	12	0
Spend in the year:	15	15
Balance carried forward	(18)	(45)
Split:		
Due in under one year	(6)	(15)
Due in more than one year	(12)	(30)

Statement of comprehensive income / (loss)		
	£'million	£'million
Change in the value of sustainability provision	12	0
Total comprehensive income / (loss) arising attributab	12	0

Statement of changes in equity	Sustainabilit y reserve £'million	Sustainabilit y reserve £'million	S
Change in the value of sustainability reserve	12	0	
Total comprehensive income / (loss) arising attributab	12	0	

Balance sheet		
Current liabilities	£'million	£'million
Sustainability provision	(6)	(15)
Non-current liabilities		
Sustainability provision	(12)	(30)
Net liabilities	(18)	(45)
Equity	£'million	£'million
Sustainability reserve	(18)	(45)

If the restated plan now rolled out as planned the next three years would see reporting in the style of that of year 2. If variations were required the impact would be reported in the style of year three of this example.

f. Tax

It should be noted that whilst this spend does not pass through the income statement it would, almost certainly, create tax deductible expenditure. The value of that tax relief would in that case have to be noted as a reconciling item in the tax note to the accounts when explaining the effective rate of tax charge. Specific narrative disclosure with regard to this issue would be required in that note to the financial statements.

g. Distributable reserves

The sustainability reserve would form part of the distributable reserves of a company. It would as a result reduce the availability of reserves for dividend payment whilst it existed.

h. Narrative notes

In practice the sustainability reserve not to the accounts would require considerable narrative support to explain:

- The business plan to which the reserve related;
- The basis for making the provision;
- The planned timing of expenditure;
- The planned location of the expenditure if not all in one jurisdiction;
- The nature of expenditure actually incurred and the impact that it might be expected to have in achieving the goals of the entity;
- Revisions to plans;
- The nature and extent of uncertainties as to the estimation of the reserve and the likely success of plans, which issues might well be of considerable interest to auditors, and may well require highlighting in their reports;
- Any resulting changes to the appraisal of the carbon solvency of the reporting entity and how any resulting risk might be managed.

It is likely that it is the preparation of these narrative notes and the disclosures made to support them that will be of most interest within SCA reporting. The numerical accounting disclosures noted here are likely to be of less significance, whilst being fundamental since it is their inclusion in the financial statements that will require the supporting disclosures. They will also be the basis on which carbon insolvency will be determined.

i. Impact of SCA on other accounting issues

It is likely that FCA will have impact on a range of other accounting issues including:

- The anticipated lives of tangible fixed assets;
- The anticipated residual values of tangible assets;
- The valuation and amortisation of intangible assets;
- The estimated provisions required for decommissioning costs, and their timing;
- The valuation of investment in subsidiary companies;
- Estimated liabilities for costs arising in the event of carbon insolvency;
- Contingent liabilities arising from failing to address carbon use.

A reporting entity will need to consider all these issues as a consequence of the adoption of sustainable cost accounting but they are not a part of it.

7. Discussion points

Sustainable cost accounting, and the example provided, creates a number of discussion points. These might include the following issues:

a. Is it reasonable that a business be expected to become net zero carbon?
b. What does net zero carbon mean?
c. Is the inclusion of the supply chain in the appraisal appropriate?
d. Is the inclusion of the customer chain in the appraisal appropriate?
e. Is it appropriate to deny the use of offsetting when making such requirement?
f. Is a precautionary principle appropriate?
g. Is the requirement that provisions not be discounted appropriate?
h. Is accounting outside the income statement fair, or should this matter be included in the calculation of the income statement bottom line?
i. Is the treatment of the sustainability reserve as a part of distributable reserves fair?
j. Is the concept of carbon insolvency appropriate?
k. Is it appropriate to require extensive narrative reporting on this issue in the audited financial statements?
l. Is a country-by-country reporting approach a reasonable requirement?
m. Should auditors be required to consider this issue as part of their going concern reviews?
n. In the case of each question, if a contrary view is taken, why, and what alternative might be proposed?