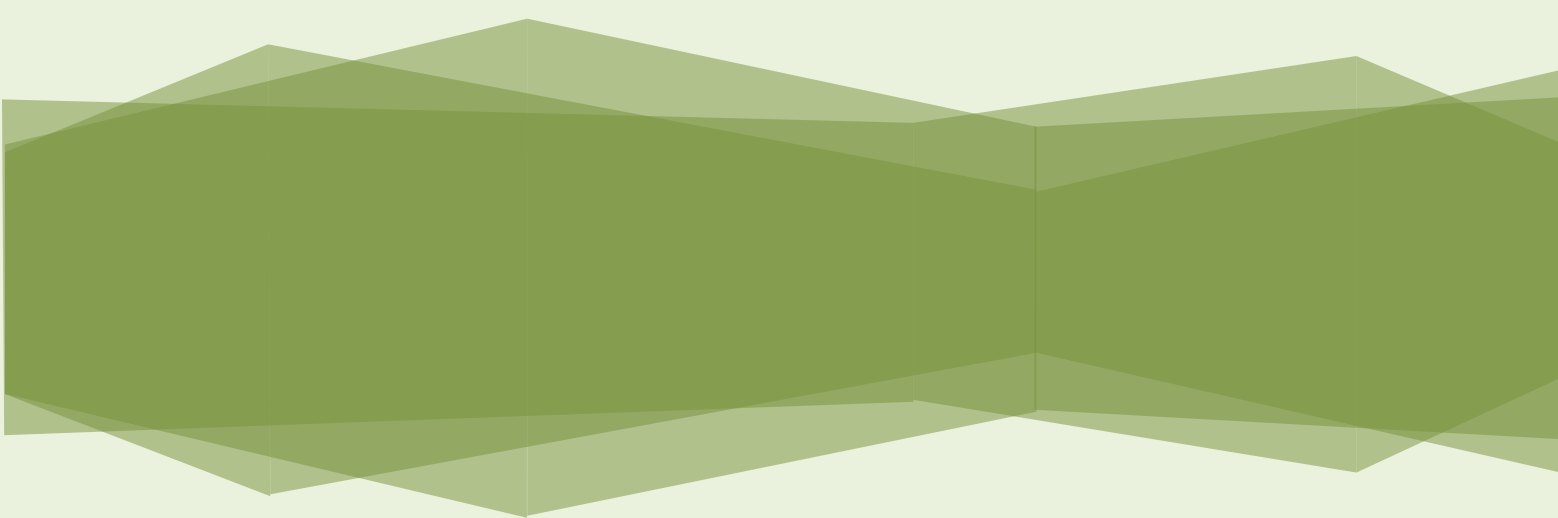


# Sustainable cost accounting

The case for building climate reporting into  
financial accounting

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## Sustainable cost accounting

### The case for building climate reporting into financial accounting

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#### 1. Summary

This paper recognises that there is a crisis created by global warming<sup>1</sup>. It recognises that this has been created by human activity. And it necessarily recognises as a consequence that this is primarily the result of the burning of fossil fuels, much of which will have been undertaken in the course of commercial economic activities.

As a result it is argued that it is now apparent that the integration of climate change reporting into the financial statements of major commercial organisations is an imperative if the consequences for those corporations, their suppliers of capital and all their other stakeholders is to be properly understood.

At present almost no commercial organisations recognise the cost of global heating in their financial statements. In addition, almost all the reporting that does take place on this issue is voluntary, unregulated, and lacks comparability. The latest and now most widespread form of reporting on climate issues has been promoted by the Task Force on Climate-related Financial Disclosures (TCFD)<sup>i</sup>. Launched as an initiative promoted by the Financial Stability Board of

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<sup>1</sup> The terms climate change, global warming and global heating are used interchangeably in this paper, recognising that there is as yet no consistency in their use.

the Bank for International Settlements in 2017, around 80% of world's largest corporations have now signed up to its standards, although less than 25% of these provide any meaningful range of reporting, as yet<sup>ii</sup>. This standard is used as the basis for appraisal of existing disclosure requirements in this commentary because of the scope of its use and the powerful and widespread nature of its backing.

It is stressed that in this paper we are not seeking to discuss the measurement of climate change, carbon emissions, changes in biodiversity or other related issues. Others tackle those issues. What we are seeking to address is the impact that these issues have upon commercial organisations and how that impact might be reflected in their financial reporting. To the best of our knowledge there is no other civil society organisation (CSO) addressing that issue.

In this paper the Corporate Accountability Network<sup>2</sup> (CAN) suggests that:

- That neither the current work programme of the Task Force on Climate-related Financial Disclosures (TCFD) or the proposed European Taxonomy (ET) are likely to result in climate disclosure that will meet the needs of the stakeholders of the world's major corporations, including their suppliers of capital;
- That it is the needs of all the stakeholders of those corporations, and not just the requirements of their suppliers of capital that must be met by climate related disclosures;
- That mandatory climate related disclosure is now required from those corporations;
- That mandatory disclosure must not be additional to the financial reporting of those companies but must instead be embedded in that reporting;
- That what the CAN describes as sustainable cost accounting (SCA) can meet the needs of stakeholders for climate reporting;
- That SCA has these advantages:
  - It does not require that carbon be priced;
  - The decision processes that are implicit within it are entirely within the reporting entity's control, and therefore are capable of being reported upon by it;
  - The information can be audited;

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<sup>2</sup> Corporate Accountability Network Limited  
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- It does indicate which companies will, and will not be, efficient users of capital in a period of global heating;
- It does provide other stakeholders of the reporting entity with the information that they require to appraise its impact on global warming and how it intends to address the issue;
- By requiring that disclosure be on a country-by-country reporting basis SCA ensures that multinational corporations cannot simply export their emissions to developing countries;
- It provides a pathway for managing the affairs of those companies that cannot become carbon net-neutral.

## 2. Introduction – the TCFD climate disclosure standard and its weaknesses

Mark Carney, Governor of the Bank of England, made a speech in Japan on 8 October on progress made to date with the 2017 launched Task Force on Climate-related Financial Disclosures (TCFD) entitled 'Strengthening the foundations of sustainable finance'<sup>iii</sup>. In this context it should be noted that Mark Carney is not only Governor of the Bank of England; he is also Chairman of the Financial Stability Board of the Bank for International Settlements, which is a principle sponsor of the TCFD.

The TCFD programme was established in 2017 with the aim of encouraging climate and environmental reporting by major corporations. A summary of the requirements is attached as an appendix.

As Mark Carney said in his speech:

*Over the past five years, global carbon emissions have risen by 20% and sea levels by over 3.3mm per year. Global temperatures are on course to increase by 3.4°C by 2100.*

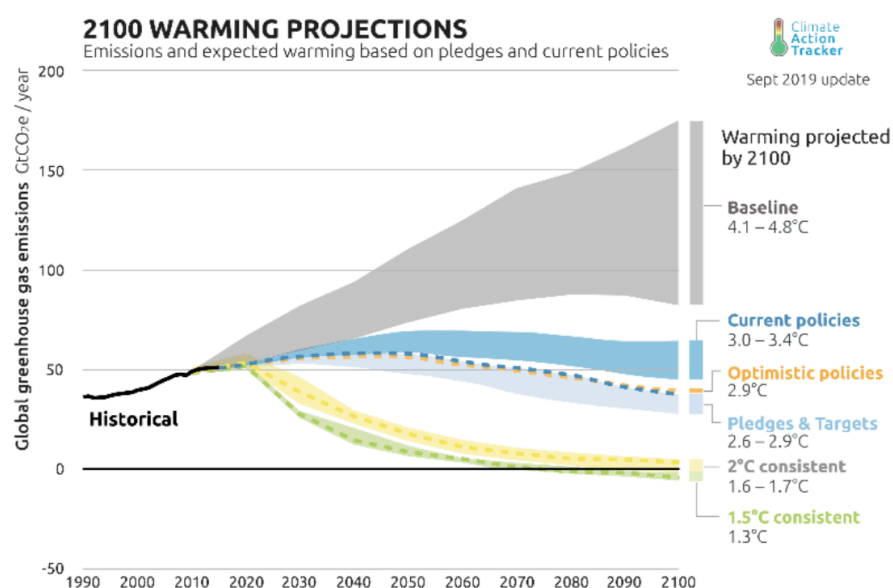
He acknowledged that this is unsustainable and that major action is required to deliver change. Much of that change required will have to take place in the business community. As Carney noted:

*GPIF, the world's largest pension fund, calculates that its portfolio is aligned to a 3.5 degree world. Allianz assesses that it is on 3.7 degree*

path and has committed to get to 1.5 degrees by 2050. AXA estimates that its assets are currently consistent with a 3.7 degree path.

Carney published this chart to illustrate how far from desirable such portfolios are:

#### Global warming projections to 2100 under different policy pathways

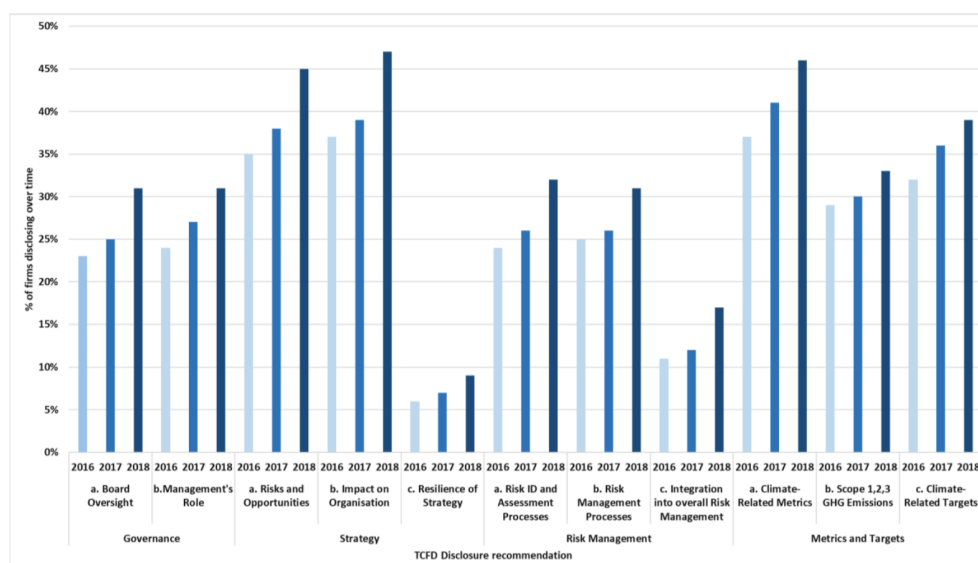


As is apparent, existing broadly based share portfolios suggest that business is a long way from preparedness for the actions required to deliver 1.5° temperature change, which is the maximum that it is believed can be tolerated if human life on earth is to be sustained. In that case it has to be asked whether the TCFD objective, which is as follows, remains appropriate <sup>iv</sup>:

*[To] develop voluntary, consistent climate-related financial disclosures that would be useful to investors, lenders, and insurance underwriters in understanding material risks*

This is most especially true when, as Mark Carney acknowledged, compliance with the TCFD's standards has been both variable and limited to date:

#### Changes in TCFD disclosures by recommendation 2016 – 2018



In no area has voluntary compliance reached 50% as yet. In some critical areas, such as resilience of the reporting entity's strategy, which disclosure would suggest whether or not the reporting entity remains a going concern in the face of the challenges it faces, the voluntary disclosure rate has yet to reach 10% and the rate of growth suggests it will take a considerable period of time before meaningful compliance is achieved, even amongst those who claim to be committed to these guidelines.

Concern on this issue is exacerbated when it is noted in which sectors non-disclosure on this issue of the resilience of the reporting entity's strategy for managing climate change is weakest:

#### Rates of disclosure against each of the TCFD recommendations by industry

Recommendation	Recommended disclosure	Banking	Insurance	Energy	Materials & Buildings	Transport	Agri, Food & Forest	Tech & Media	Consumer Goods
Governance	a. Board Oversight	48%	29%	38%	37%	25%	22%	19%	29%
	b. Management's Role	54%	35%	32%	35%	18%	26%	17%	40%
Strategy	a. Risks and Opportunities	51%	39%	57%	50%	39%	40%	38%	50%
	b. Impact on Organisation	55%	26%	64%	65%	34%	45%	25%	52%
	c. Resilience of Strategy	20%	12%	13%	12%	5%	4%	2%	6%
Risk Management	a. Risk ID and Assessment Processes	52%	30%	38%	41%	23%	24%	24%	22%
	b. Risk Management Processes	46%	33%	42%	39%	17%	26%	19%	23%
	c. Integration into overall Risk Management	32%	16%	21%	18%	11%	9%	17%	21%
Metrics and Targets	a. Climate-Related Metrics	51%	27%	49%	63%	36%	45%	37%	55%
	b. Scope 1,2,3 GHG Emissions	42%	22%	39%	41%	28%	26%	29%	38%
	c. Climate-Related Targets	50%	24%	45%	53%	32%	30%	24%	51%

The transport, agriculture and food sectors are amongst those where concern about emissions management is most acute: their non-compliance is unlikely to arise by chance and is evidence that a voluntary approach to disclosure on this issue is not appropriate.

For these reasons alone there is doubt as to whether the voluntary nature of the TCFD guidelines is adequate. Making them mandatory may not, however, address the concerns that we have.

### 3. Why the TCFD disclosures are insufficient in scope

In our opinion the TCFD suggestion that its standards are designed to meet the needs of the suppliers of capital to a company, implicit throughout its initial report<sup>v</sup>, is inappropriate. Mark Carney noted in his speech on 8 October 2019 that:

*Although the private sector has made rapid progress on reporting and risk management, more is required. Over the next few years, companies, their banks, insurers and investors must:*

- 1. Increase the quantity and quality of disclosures;*
- 2. Refine disclosure metrics to determine which ones are most decision-useful;*
- 3. Spread knowledge on how to assess strategic resilience; and*
- 4. Consider how to disclose the extent to which portfolios are ready for the transition to net zero.*

The implication is clear from this comment and all commentary from the TCFD itself that the focus of the TCFD disclosure framework is on providing information to the managers of share, loan and bond portfolios. Carney made that clear in his closing comment in the speech already noted:

*With our citizens – led by the young – demanding climate action, it is becoming essential for asset owners to disclose the extent to which their clients' money is being invested in line with their values*

Following which he added:

*The TCFD provides the necessary foundation for the financial sector's role in the transition to net zero that our planet needs and our citizens (sic) demand.*

What Mark Carney failed to do was make the obvious leap, which was that if citizens, and most especially the young, are concerned about climate change they are not doing so just as asset owners, but much more generically. In other words, they have interest in this issue not just with regard to whether or not asset valuation is impacted but for its own sake because of the impact it has on their short and long-term well-being. Despite this at no point did Mark Carney, or the TCFD, think that this might require that the reporting that they propose, and which they are aware might become mandatory, be extended so that it meet the information needs of those other stakeholders that every reporting entity has. In this sense the TCFD approach fails to fulfill a public purpose mandate.

#### 4. Why the proposed European Taxonomy replicates the TCFD's failings

The European Union published an action plan on sustainable finance in March 2018<sup>vi</sup>. It had three stated objectives<sup>vii</sup>:

- a. To reorient capital flows towards sustainable investment;
- b. To assist management of financial risks stemming from climate change, environmental degradation and social issues;
- c. To foster transparency and long-termism in financial and economic activity.

To assist this process in June 2019 the European Union issued what is called a European Taxonomy for Sustainable Activities<sup>viii</sup> (ET). This extensive document has merits in suggesting sector bases for estimating carbon related impacts, and is welcome for that reason. However, all aspects of financial disclosure that it suggests are voluntary and outside the financial reporting framework. In addition, its target audience is solely the financial services sector, its primary purpose being to help those engaged in investment management differentiate the claims made as to whether any investment relates to sustainable activity, or not. Without requiring compulsory financial disclosure of the actual impact of the climate crisis on a company's activities we suggest that this taxonomy replicates the failures we have noted with regard to the TCFD. Without dismissing the initiative's useful features, it does not address the core requirement that a reporting entity address the impact of climate change for the benefit of all its stakeholders and that means that, as with the TCFD, it does not address the financial reporting requirement of this issue.



## 5. The stakeholders for climate change disclosure

The Corporate Accountability Network, building on the opinion of the UK based Accounting Standards Steering Committee published<sup>ix</sup> in 1975, suggests<sup>x</sup> that there are at least six clearly identifiable group of stakeholders with interest in the financial reporting of every reporting entity<sup>xi</sup>:

1. The suppliers of capital to a reporting entity;
2. The reporting entity's trading partners;
3. Its employees;
4. Its regulators;
5. Its tax authorities
6. All within civil society with whom it interacts.

We believe that the TCFD should embrace this idea. In other words, in our opinion the reporting that it proposes should not be intended to just supply the data needed for the sake of portfolio asset management, as Mark Carney and the TCFD suggest, but should instead be intended to meet the needs of all the stakeholders group noted. This would, in particular require additional reporting in the case of climate change related issues on:

- a. What the issues that the entity is facing are;
- b. Where, geographically, those issues arise;
- c. How they impact the communities that host the reporting entity's activities in the locations in question;
- d. How the reporting entity will respond to those issues, by location;
- e. How that response will impact those communities;
- f. When that impact might arise.

The entity wide approach that the TCFD proposes is inadequate for these purposes. Just as it has been appreciated, as a result of civil society pressure<sup>xii</sup> and <sup>xiii</sup>, that conventional consolidated financial statements produced using International Financial Reporting Standards do not provide sufficient information to meet stakeholders' needs on tax reporting, requiring various responses from the Organisation for Economic Cooperation and Development<sup>xiv</sup>, European Union<sup>xv</sup> and others<sup>xvi</sup>, so too is this now true for climate change reporting. The concern of many of the stakeholders previously noted is not with the overall impact of climate change on the entity that is reporting, but is instead with the impact that the emissions that the reporting entity is creating in the locality where they are based. The material issue for most stakeholders of most reporting

entities is, then, geographic and local. Mandatory financial reporting on climate change when undertaken in the public interest (as is necessarily the case for the published, audited financial statements of a corporation) must, then, in our opinion, take this fact into account.

## 6. The requirements of stakeholders from financial climate change disclosure

In this context we suggest that the four pillars for reporting that the TCFD proposes are too narrow. We do not deny the importance of reporting on governance, strategy, risk management and appropriate metrics and targets with regard to climate related issues, but what all the stakeholder groups that we note above do really need, we suggest, are these four things:

1. Hard evidence as to the cost the reporting entity will incur in becoming a net-zero carbon producer by an agreed date (we prefer 2030, but know that this is not universally agreed);
2. Audited confirmation that the entity will remain a going concern in the face of these costs;
3. Evidence that net zero carbon objectives in some locations will not be met by exporting emissions to other locations;
4. A mechanism for the orderly winding up of the affairs of those companies that are not going to survive into the new economy that we need.

## 7. The Sustainable Cost Accounting requirement for climate change disclosure

At the invitation of Prof Aled Jones of Anglia Ruskin University and Dr Rupert Read of University of East Anglia, who have been working with the Institute of Chartered Accountants in England and Wales on the ESRC funded Centre for the Understanding of Sustainable Prosperity (CUSP) project, CAN set itself the task of seeking to integrate climate change thinking into financial reporting itself. The result is the Corporate Accountability Network's suggested alternative approach, which we call sustainable cost accounting (SCA)<sup>xvii</sup>.

SCA would make accounting for the costs of climate change mandatory. To achieve this goal we are suggesting that SCA be an accounting standard akin to, or actually, an International Financial Reporting Standard.

The essence of sustainable cost accounting is simple. It would require that every large business prepare a plan to show how it would manage the consequences of climate change. That plan would have to state how it might become net carbon-neutral by a specified date, both within its own business and within its supply chain.

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

The plan must be in two parts. The first addresses the changes required within the reporting entity's own processes. The second part would appraise the change in its supply and customer chains to achieve the same goal. This second part will, inevitably, be the harder part of the process, first because information will be harder to collect and secondly because a company will, in particular, not always know what a customer might do with its products. However, it is exceptionally unlikely that reasonable estimation will not be possible given rapidly developing methodologies in this field.

The aim of the two part process is to both assist decision making and supply decision useful information to those engaging with reporting entities. Some issues must be directly addressed by the reporting entity itself. But it also has choice as to the products it supplies and how it sources them. It is very likely that many reporting entities will change their business models as a result of the climate crisis. This two part process lets the impact of decisions in this area be recorded and is also designed to bring commercial pressure to bear on those businesses associated with generating carbon emissions to change their behaviour to continue to secure markets.

A precautionary principle would apply to this planning process: in other words, the plan could only rely upon those technologies now known to exist and that have been proven to work. In addition, the 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. Full country-by-country reporting would be required.

That plan would then have to be costed. The requirement of sustainable cost accounting would then be that the full cost of the change to being a net-zero carbon emitter should be provided for in the accounts of the companies to which sustainable cost accounting would apply at the time that it was adopted, which could be by 2022 if sufficient urgency was applied to this task. Annual reappraisal

would then be required thereafter to show progress. The provision, and its reappraisal, will reflect the two part approach noted previously i.e. separate disclosure will be required for the cost of changing the reporting entity's own processes and to addressing the cost of managing the impact of climate change within its supply and customer chains.

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 end dividend payments to shareholders and retain profits over time to fund the change to being net carbon-neutral. Alternatively, solvency could be achieved by raising additional capital. In either case the plan would have to be deemed credible by the company's auditors. We stress: we think that all the sustainable cost accounting data would require financial audit since the intention is to include it in financial statements.

And, if a company could not show how it could fund the cost of the transition, 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 it would have to be declared 'carbon insolvent'. This would not mean that it was financially bankrupt. But it would make clear that the company was not going to survive 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 achieve that goal. But it is stressed: this 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.

## 8. Why Sustainable Cost Accounting is consistent with financial reporting

We stress that we think that the impact of climate change is entirely appropriately a financial accounting issue of concern. The return to financial capital is not now the issue that matters in this world, including that of business, as the recent decision of the US based Business Roundtable to redefine the purpose of the corporation indicated<sup>xviii</sup>. The ability to supply goods and services in a way consistent with sustaining life here on earth is what matters now. This is why sustainable cost accounting matters, and is why it should be mandatory and subject to audit. It shows which companies are likely to survive into this new business era, or not. The consequence is that it should result in the reallocation

of capital from those businesses that cannot survive to those that can. This is exactly what the purpose of accounting should be according to the International Financial Reporting Standards Foundation.

The accounting concepts within sustainable cost accounting are also not either radical or even unusual. Many are already inherent in what is called International Accounting Standard 36 (IAS 36), which concerns impairment of the value of assets. IAS 36 says that impairment of the value of an asset may be required when:

*significant changes with an adverse effect on the entity have taken place during the period, or will take place in the near future, in the technological, market, economic or legal environment in which the entity operates or in the market to which an asset is dedicated.*

It is our argument that the climate crisis creates this 'significant change' (to which we added the emphasis) for every company and requires all entities to consider this approach as a consequence.

What we go on to suggest is that impairing the cost of existing assets is not, however, enough to address the situation that has now arisen. Our additional thinking is based on the provisions of International Accounting Standard 1 (IAS 1). IAS 1 relates to the presentation of financial statements and says that:

*When preparing financial statements, management shall make an assessment of an entity's ability to continue as a going concern. An entity shall prepare financial statements on a going concern basis unless management either intends to liquidate the entity or to cease trading, or has no realistic alternative but to do so.*

We, again, added the emphasis. What we are suggesting is that unless an entity can suggest how it can meet the costs of becoming net carbon zero compliant then it follows that the current technological, market, economic and legal environment means that it has no realistic alternative but to cease to trade. Sustainable cost accounting requires that it test this hypothesis, and publish the results in an audited form. This, in essence, is all that Sustainable Cost Accounting is, with the added twist that:

1. The specific behaviour to which it applies is the ability of the reporting entity to limit its carbon emissions;

2. We suggest that a specific date for achieving net zero carbon emissions be imposed; our wish being that this be by 2030;
3. The concept of carbon insolvency is created for those companies that cannot meet this objective.

## 9. The consequences of Sustainable Cost Accounting

Accounting should be the lens through which we view the commercial world. It is, of course a company's right (within the limits of regulation) to project their own image of the contribution that they claim to make to the world that we live in. But the whole reason for requiring audited accounts from those entities is that it is known that companies might, if given a free hand, represent matters in a way that is not the whole truth. This is why one of the traditional underpinnings of accounting was what was called the stewardship concept<sup>xix</sup>: the directors of a company were required by accounting regulation to prepare a true and fair report of their management of the assets entrusted to their care, which had to be subject to audit to substantiate its veracity.

Once it was sufficient to think that this issue only related to the financial assets over which those directors might command control. Most companies were small. Their reach was limited. Their power to influence macroeconomic events was negligible. Their impact on the world beyond their own enterprise's (literal) gates appeared to be small. But that is no longer true. The number of large companies in the world has shrunk considerably in size<sup>xx</sup>, but each of them is very much larger than those they might be compared with in the past. Many of them trade, quite literally, around the globe. Their sales frequently dwarf the entire incomes of the countries in which they trade<sup>xxi</sup>. They do have significant macroeconomic power, not least to determine the income of governments through the taxes that they decide to pay, or not, by location<sup>xxii</sup>. And their command of resources stretches far beyond national boundaries.

In this situation a system of financial accounting first imagined in the late nineteen sixties<sup>xxiii</sup>, that has come to deliver a limited range of data for a very limited range of stakeholders<sup>xxiv</sup> has reached the end of its useful life. As already noted in this paper, the time has come for accounting to recognise all the stakeholders of the world's reporting entities. And those entities have to account for the stewardship they undertake over all the resources that they command in the course of their activities. This is why we have proposed sustainable cost accounting. It is now necessary that corporate accounting for the resources that

are used by a reporting entity and the consequences that flow from that use be brought within the mainstream of financial accounting and out of the ghetto of voluntary, unregulated, unaudited and peripheral reporting that seeks to emphasise that this issue is not one of primary concern to major reporting entities.

We are aware that simple as it appears to be sustainable cost accounting will have significant impact on the corporate world. That is its intention. It is well known that what we measure is what comes to matter to us<sup>xxv</sup>. The environment has to matter more to the corporate world than it does at present. But there is more to this desire than that: the fact is that at present the financial reporting of many of the world's major corporations is incomplete because they do not take their use of natural resources into account. The result is the considerable misallocation of resources within the world's economies. The Bank of England has estimated that up to US\$20 trillion might be at stake as a result<sup>xxvi</sup>.

So, whilst we know that the world cannot burn most of its known oil reserves it remains the case that its oil companies are amongst the largest corporations in the world<sup>xxvii</sup>. The manufacturing of cars remains a massively important activity, attracting enormous resources when it is now known that those same cars cannot be used if we are to meet the world's climate targets. And the same if even more true of aircraft manufacture, and of the airlines that use them. Less immediate obvious, but as important, is the transformation required in the world's agricultural systems and in all the support services that maintain them.

It is, of course, true that none of these changes need happen. But what we now know is that climate science is settled on the fact that if we do not change then there will be continued global heating<sup>xxviii</sup> with the resultant risk of a climate catastrophe. This is a risk that governments and many in civil society, in all its forms, think should not be taken. The result is that the time has come for business to recognise its responsibilities on this issue. This is why we propose the use of sustainable cost accounting and that it become an accounting standard.

We are aware of the consequences of what we are suggesting. For example, many companies will have considerable difficulty producing a plan to become net zero carbon emitters when legally required to do so, but if that is the case then that is something that their stakeholders need to know.

In addition, we are also aware that many corporations will have to cease paying dividends to fund their carbon transition. This will, in turn, have an impact on all

those who depend upon that dividend income including, for example, pension funds. This, however, is part of the crisis that global heating does, in any case, present: our management of long term obligations on existing bases is no longer possible and sustainable cost accounting both makes this clear and suggests how capital should be reallocated to meet needs.

In summary, it is our contention that hard as the consequences of sustainable cost accounting will be for some companies and sectors, and for those who have depended upon them what it does is draw attention to an issue that we all actually know to be true now, which is that the world's corporations are using the natural resources of our planet in ways that are unsustainable.

In that case accounting has to change because we need a clear, audited, enforced and unambiguous indicator of the process of change that business must go through to support continued human life on this planet. Sustainable cost accounting can do that by indicating who can, and cannot, use capital to best effect in this changed environment. That is precisely why it is needed, however uncomfortable the consequences might be.

## 10. Sustainable cost accounting – the issues to resolve

### *a. At what date is net zero-carbon required?*

2030 is desirable. There is then a chance that the net zero carbon target might be met.

### *b. How is net zero-carbon to be measured?*

Given the universal application of the standard it will not be possible to be prescriptive on this issue. How this goal will be achieved will vary between sectors.

### *c. Why is the supply chain considered when the reporting entities within it will themselves be required by the standard to be net zero-carbon emitters?*

There are three reasons for this:

- First, this emphasises that all reporting entities have supply chain choices;
- Second, this encourages reporting entities to re-engineer their processes;



- Third, the reporting entity may not agree with the confidence expressed by companies within their supply chains.

***d. Why is a precautionary principle prescribed?***

Precautionary principles are feature of some aspects of green thinking. They can be equated to the prudence concept that was at one time a prominent feature within accounting. The principle requires that a company undertake its appraisal of its prospect of becoming a net zero-carbon emitter within the framework of currently known and proven technologies. It may not then, for example, assume nuclear fusion will be available when it at present has not. There are good reasons for this within the framework:

- It provides an unambiguous base level for appraisal;
- It permits reappraisal if and when technology improves;
- The method will encourage investment in that improvement in technology.

***e. Will carbon insolvency require that companies cease trading immediately that it is declared?***

No, it will not. Carbon insolvency will imply that a reporting entity has not at present got a plan to how it will become a net zero-carbon emitter. This will either be because it has not at present got access to the capital to achieve this objective or they are not aware as to how to technically achieve this goal as yet, at least to the satisfaction of their auditors. This means that the whole focus of the reporting entity's attention has to be on this issue: if it cannot resolve it then it will have to cease to trade. The task of carbon insolvency administrators would be to supervise this process. And if, as deadlines for becoming net carbon neutral approached and no progress on this issue have been made then it would become apparent that the company would need to be wound up unless some alternative arrangements, to be put in place by government, was made to permit survival. Critically, the process is intended to make clear the importance of the issue. When the future of the planet is at stake a declaration of carbon insolvency for a reporting entity that cannot play its part in the change that we must all make is a necessary measure.

## Appendix 1

## The Task Force on Climate-related Financial Disclosures recommendations

The TCFD summarises its recommendations as follows<sup>xxix</sup>:

The Task Force aims to provide the solution:  
**a voluntary, consistent disclosure framework that improves  
the ease of both producing and using climate-related financial disclosures**

### DISCLOSURE RECOMMENDATIONS

The Task Force developed **four widely-adoptable recommendations** on climate-related financial disclosures that are applicable to organizations across sectors and jurisdictions.

The recommendations are structured around four thematic areas that represent core elements of how organizations operate:



#### **Governance**

The organization's governance around climate-related risks and opportunities

#### **Strategy**

The actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning

#### **Risk Management**

The processes used by the organization to identify, assess, and manage climate-related risks

#### **Metrics and Targets**

The metrics and targets used to assess and manage relevant climate-related risks and opportunities

## DISCLOSURE RECOMMENDATIONS (CONTINUED)

The four recommendations are supported by **specific disclosures** organizations should include in financial filings or other reports to provide decision-useful information to investors and others.

Governance	Strategy	Risk Management	Metrics and Targets
Disclose the organization's governance around climate-related risks and opportunities.	Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.	Disclose how the organization identifies, assesses, and manages climate-related risks.	Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.
Recommended Disclosures	Recommended Disclosures	Recommended Disclosures	Recommended Disclosures
a) Describe the board's oversight of climate-related risks and opportunities.	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	a) Describe the organization's processes for identifying and assessing climate-related risks.	a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.
b) Describe management's role in assessing and managing climate-related risks and opportunities.	b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	b) Describe the organization's processes for managing climate-related risks.	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.
	c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.

## Endnotes

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- <sup>i</sup> <https://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-2017-TCFD-Report-11052018.pdf>
- <sup>ii</sup> <https://www.bankofengland.co.uk/-/media/boe/files/speech/2019/tcfd-strengthening-the-foundations-of-sustainable-finance-speech-by-mark-carney.pdf?la=en&hash=D28F6D67BC4B97DDCCDE91AF8111283A39950563>
- <sup>iii</sup> <https://bankofengland.us12.list-manage.com/track/click?u=f7bfb4e5984e7fb90467e6fba&id=6e4876404d&e=83911740c0>
- <sup>iv</sup> <https://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-2017-TCFD-Report-11052018.pdf> page iii
- <sup>v</sup> <https://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-2017-TCFD-Report-11052018.pdf>
- <sup>vi</sup> [https://ec.europa.eu/info/publications/sustainable-finance-teg-taxonomy\\_en](https://ec.europa.eu/info/publications/sustainable-finance-teg-taxonomy_en)
- <sup>vii</sup> [https://ec.europa.eu/info/publications/180308-action-plan-sustainable-growth\\_en](https://ec.europa.eu/info/publications/180308-action-plan-sustainable-growth_en)
- <sup>viii</sup> [https://ec.europa.eu/info/publications/sustainable-finance-teg-taxonomy\\_en](https://ec.europa.eu/info/publications/sustainable-finance-teg-taxonomy_en)
- <sup>ix</sup> <https://www.icaew.com/library/subject-gateways/corporate-reporting/the-corporate-report>
- <sup>x</sup> <http://www.corporateaccountabilitynet.work/what-we-are-about/stakeholders/>
- <sup>xi</sup> We use the term 'reporting entity' because not all the organisations to which accounting standards apply are corporations. They also do not need to be profit motivated. The term 'reporting entity' covers the broader scope of the demand for proper accounting to all stakeholders by organisations with major impact on their stakeholders' activities.
- <sup>xii</sup> <http://visar.csustan.edu/aaba/ProposedAccstd.pdf>
- <sup>xiii</sup> [https://unctad.org/en/PublicationChapters/diaeia2018d5a2\\_en.pdf](https://unctad.org/en/PublicationChapters/diaeia2018d5a2_en.pdf)
- <sup>xiv</sup> <https://www.oecd.org/tax/beps/beps-actions/action13/>
- <sup>xv</sup> [https://ec.europa.eu/taxation\\_customs/business/tax-cooperation-control/administrative-cooperation/enhanced-administrative-cooperation-field-direct-taxation/country-country-reporting\\_en](https://ec.europa.eu/taxation_customs/business/tax-cooperation-control/administrative-cooperation/enhanced-administrative-cooperation-field-direct-taxation/country-country-reporting_en)
- <sup>xvi</sup> <https://www.globalreporting.org/information/news-and-press-center/Pages/Draft-standard-tax-and-payments-to-government-public-comment-2018.aspx>
- <sup>xvii</sup> <http://www.taxresearch.org.uk/documents/scajune2019.pdf>
- <sup>xviii</sup> <https://www.businessroundtable.org/business-roundtable-redefines-the-purpose-of-a-corporation-to-promote-an-economy-that-serves-all-americans>
- <sup>xix</sup> The idea has moved on somewhat now, and is little emphasised, overall  
<https://www.icaew.com/technical/corporate-governance/codes-and-reports/uk-stewardship-code>
- <sup>xx</sup> <https://www.ft.com/content/0c9c0b64-9760-11e9-9573-ee5cbb98ed36>
- <sup>xxi</sup> <https://www.businessinsider.com/25-giant-companies-that-earn-more-than-entire-countries-2018-7?r=US&IR=T>
- <sup>xxii</sup> <https://www.oecd.org/tax/beps/>
- <sup>xxiii</sup> <https://www.icaew.com/library/subject-gateways/accounting-standards/knowledge-guide-to-uk-accounting-standards>
- <sup>xxiv</sup> <https://www.iasplus.com/en/standards/other/framework>
- <sup>xxv</sup> We accept that there are also issues arising from measurement – but that is not the case being addressed here at present <https://medium.com/coffee-and-junk/campbells-law-goodhart-s-law-when-you-are-measuring-to-fail-c6c64923ad7>
- <sup>xxvi</sup> <https://www.theguardian.com/environment/2019/apr/17/mark-carney-tells-global-banks-they-cannot-ignore-climate-change-dangers>
- <sup>xxvii</sup> <https://www.carbontracker.org/terms/stranded-assets/>
- <sup>xxviii</sup> [https://report.ipcc.ch/sr15/pdf/sr15\\_spm\\_final.pdf](https://report.ipcc.ch/sr15/pdf/sr15_spm_final.pdf)
- <sup>xxix</sup> <https://www.fsb-tcfd.org/wp-content/uploads/2017/06/TCFD-Recommendations-Overview-062717.pdf>