Insuring the uninsurable

Tackling the link between climate change and financial instability in the insurance sector

A Finance Watch report

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“The thinking goes that because we know so little about climate risk, let’s be tentative in our actions — or even do nothing at all. This is completely wrong, in my view. This is a major problem and it needs to be tackled now.”

Janet Yellen,
United States Secretary of the Treasury
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Urgent action is needed to address one of the biggest challenges of our time, which, if left unaddressed, will lead to a financial crisis. This challenge is described in this report as the “climate-finance doom loop”, a vicious cycle where the financial industry, including the insurance sector, enables climate change by financing fossil fuel companies and thereby puts its own existence in jeopardy since climate change threatens financial stability.

This report builds on a previous report on the topic which Finance Watch published in June 2020. Focusing on the insurance-specific dimension of the climate-finance doom loop, this new publication explores how insurance companies enable climate change, how this creates risks to financial stability, and how to avoid this phenomenon from resulting in a financial crisis.

Insurance companies finance fossil fuels in two ways. First, in their role as one of the largest institutional investors globally and, second, in their role as insurance providers. U.S. and European insurance companies currently have around US$600 billion invested in fossil fuels assets, and insurers worldwide provide the industry with insurance coverage with estimated premia of US$17.3 billion.

During recent years, policymakers at both EU and international level have increasingly come to acknowledge a link between climate change and financial stability and the pressing need to address it. Regulatory and supervisory bodies, including the European Central Bank (ECB), Bank for International Settlements (BIS), the European Insurance and Occupational Pensions Authority (EIOPA) and the European Commission, have started to explore ways to address this problem. The measures and recommendations that would be applied to the insurance sector range from stress tests, scenario analyses to better ESG disclosures. The measures proposed so far, however, will not be able to address the situation in a decisive way on their own, partly because of the difficulty of modelling the risks that climate change poses to financial stability. For example, in order for climate stress tests to be able to derive any meaningful conclusions regarding the solvency of institutions, climate risks must be modelled. Quantifying these risks, however, proves extremely difficult, if not impossible, as they are forward-looking and subject to radical uncertainty by nature.

Despite the difficulties of this exercise, policymakers are currently directing most of their time and focus on trying to find a way to model climate change risks rather than looking at how they could supplement their current measures with alternative action that could be easily implemented now. This report argues that no time remains to wait to quantify something nearly impossible to model before taking meaningful action. Beyond the data, better and more robust ESG disclosure, while welcomed, will also be unable to achieve the kind of decisive change needed. This is in part because insurance companies, as any private commercial entity, pursue their private interest and will allocate capital to assets they think will make them the most profit in the short-term – regardless of whether or not the assets are sustainable.

This report argues that some simple tweaks to the prudential rulebook for the insurance sector, Solvency II, would allow policymakers to take the immediate and meaningful action needed. The aim of Solvency II, as any prudential regulation, is to ensure policyholder protection and financial stability. The current capital requirements rules of Solvency II, however, fail to take account of

2 Insure Our Future website
the financial stability risks of fossil fuel exposures, which effectively equates to subsidising fossil fuel finance and undermining the intention and aim of the rulebook.

To ensure policyholder protection and financial stability, insurance companies are obliged by the so-called “Prudent Person Principle” under Article 132 of Solvency II to “only invest in assets and instruments whose risks the undertaking concerned can properly identify, measure, monitor, manage, control and report, and appropriately take into account in the assessment of its overall solvency needs…” In addition, the “Prudent Person Principle” requires insurance companies to invest in a manner that ensures the profitability of portfolios as a whole. Given the high risk of existing fossil fuel assets becoming at least partially stranded due to the transition to a carbon-neutral economy, the Solvency II capital requirements rules should treat any equity and corporate bond investments in existing fossil fuel assets the same way as assets deemed highly risky. This would mean applying the highest capital charge for equity investments under the rules, i.e. 49%, to equity investments insurance undertakings made in existing fossil fuel assets. With regards to corporate bonds, it would mean aligning the capital charges for existing fossil fuel bonds with the capital charges applied to bond investments that have a credit quality step of 5/6 as they are deemed highly risky. It would also mean making fossil fuel investments ineligible for the Matching Adjustment (MA).

Investments in new fossil fuel exposures – both equities and bonds – are even riskier than existing fossil fuel exposures. This should also be reflected in Solvency II. New fossil fuel assets display an extremely high risk of becoming fully stranded and thus losing 100% of their value due to the planet’s limited carbon budget. Moreover, financing new fossil fuel assets accelerates physical and disruption risks which will result in a flood of insurance claims for insurers, which in turn will likely result in large unexpected losses for insurers putting at risk their solvency positions and with it financial stability. Taking account of these risks, these assets should be given a capital charge of 100%.

Given the high risk new fossil fuel assets pose to financial stability as well as the high likelihood that new fossil fuel companies will go out of business and thus lapse on their premiums, it is also necessary for insurers to assume a 100% loss when calculating the technical provisions required to settle the insurance and reinsurance obligations arising from insurance policies covering policyholders engaged in new fossil fuel exploration and production. In addition, the expected present value of future cash-flows, or the time value of money, used in the calculation should equal 0.0%.

Given the global nature of the climate-finance doom loop problem, the policy proposals in this report should also be adopted by other jurisdictions around the world. Therefore, they should also be put into law by national public authorities outside of the European Union.

The Treaty on the Functioning of the European Union and the United Nations Convention on Climate Change both enshrine the precautionary principle as one of their governing principles. Empowered with this mandate, both the European Union and the international community should take preventative action now.

The recommendations in this report equate to an evolution of the Solvency II framework and not an overhaul of the framework. They target a threat, however, which – if not tackled – will lead to a financial crisis of potentially huge proportions that we cannot afford.

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3 Directive 2009/138/EC on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II), November 2009, Article 132
Recommendations

Insurance undertakings finance fossil fuel activities and thereby heighten climate change-related risks which threaten financial stability. Current Pillar 1 Solvency II (SII) rules do not take account of the micro- and macroprudential risks associated with investments in fossil fuel assets and underwriting insurance to entities engaged in new fossil fuel exploration and production.

To address this, changes are needed to the Pillar 1 SII rules in the Delegated Regulation of SII (Commission Delegated Regulation (EU) 2015/35). The proposals below differentiate between the production and exploitation of existing fossil fuel resources on the one hand, and the exploration, production and exploitation of new resources on the other hand:

1. **The capital charge of 49% currently applied to equities deemed particularly risky should also be applied to equity investments in existing fossil fuel exposures**

   **How to achieve this:** Amend Articles 164a, 164b, 168, 168a, 169, 170, 171, and 171a to ensure that all fossil fuel equity investments are given a capital charge of 49%.

2. **The capital requirements for corporate bonds issued by existing fossil fuel exposures should be equal to the capital requirements for bonds deemed particularly risky**

   **How to achieve this:** Amend Article 176 to stipulate that corporate bonds issued by entities engaged in the exploitation of existing fossil fuel reserves should be given the same credit quality step as corporate bonds deemed highly risky (credit quality step 5/6).

3. **A 100% capital charge should be applied to investments (equities and bonds) in new fossil fuel exploration and production**

   **How to achieve this:** This amendment would simply require adding a paragraph 1 (d) to Article 169 for equity investments and a new paragraph 3b to Article 176 (3) for bonds.

4. **Investments in fossil fuel assets should be ineligible for the Matching Adjustment (MA)**

   **How to achieve this:** Make a minor amendment to article 53 to clarify that fossil fuel assets are ineligible for MA benefits.
5 A 100% loss should be assumed when calculating the technical provisions required to settle the insurance and reinsurance obligations arising from insurance policies covering policyholders engaged in new fossil fuel exploration and production. In addition, the time value of money (expected present value of future cash-flows) used in the calculation should equal 0.0%.

How to achieve this: Amend Article 30 to stipulate that an estimation of a 100% loss should be used for the cash-flow projection for insurance obligations arising from insurance policies covering policyholders engaged in new fossil fuel exploration and production and that the time value of money used for these insurance obligations should equal 0.0%.
Introduction

There is broad recognition that finance has an impact on climate change and climate change poses a significant risk to financial stability to the extent that it could threaten the entire financial system. While the financial system does not create climate change, it is an enabler of it by providing finance to fossil fuel exploration, production and exploitation. By doing so, the financial system accelerates a risk to its own existence and that of the wider economic and financial system.

What can be done to break this cycle and avoid a massive financial crisis?

In June 2020, Finance Watch published a report on this phenomenon, coining it “the climate-finance doom loop”. That paper explained the concept of the climate-finance doom loop with a focus on banks and provided policy solutions to address this challenge on the banking side. This paper will explore insurance-specific aspects of the climate-finance doom loop phenomenon and explore regulatory changes needed in the insurance sector to tackle it.

While banking gets plenty of headlines on climate, insurance and reinsurance companies also play an important role in the doom loop dynamic. More specifically, insurance undertakings enable and promote climate change by providing capital to fossil fuel companies via corporate bond and equity investments. They also provide insurance coverage to the fossil fuel industry and their activities. Reports commissioned by Ceres, a nonprofit organisation, and the Unfriend Coal campaign, a global coalition of NGO’s and social movements, have found that the largest U.S. and European insurers currently have invested close to US$600 billion in fossil fuels. Moreover, according to the 2020 scorecard on Insurance, Fossil Fuels and Climate Change of the Insure Our Future campaign, the international insurance market for oil and gas totalled estimated premia of US$17.3 billion in 2018. These sums show that the insurance industry plays a large role in enabling climate change which in turn threatens financial stability.

The EU regulatory system has tools to deal with financial stability risks. In the case of insurance this regulatory tool is Solvency II which sets out the prudential rules for insurers. Its aim is to ensure that insurance companies are stable and solvent to protect financial stability in the European Union. Since climate risks pose financial stability risks, it is only logical that the climate-finance doom loop should be addressed in the risk-based framework of the prudential rules for insurers.

Most policymakers have already acknowledged that the prudential policy framework is the right place to deal with climate-related risks. For example, in 2019, the European Commission asked EIOPA to provide advice on how to integrate climate risks in Solvency II. However, as is the case on the banking side, policymakers face the pressing need to find a solution to a problem whose exact impact and timeframe proves impossible to measure.

Climate risks fall subject to radical uncertainty, which makes them unsuited to financial risk analysis. We cannot precisely quantify the impacts of climate change. At the same time, we know

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4 See for example: VILLEROY DE GALHAIU, F., “The green swan”, January 2020, Foreword; LAGARDE, C., “It is difficult to disagree that climate change is a threat to financial stability”, January 2020; and CARNEY, M., “Breaking the tragedy of the horizon – climate change and financial stability”, September 2015.
6 Insure Our Future website
8 EUROPEAN COMMISSION, “Request to EIOPA for an opinion on sustainability within Solvency II”, August 2018, 6p.
with certainty that climate change will impact the financial and economic system in a devastating way if it is not immediately and decisively abated.

Therefore, policymakers face a situation where they will never be able to measure the impact of climate change on the wider economic and financial system with the level of confidence that decision-makers like to have to take action. Most regulatory efforts at the moment focus on looking for ways to measure and monitor climate change risks on the financial system with a view to identify and take more decisive action once we have more data on the situation. We cannot afford to wait to take action, however, as these risks could materialise suddenly and with devastating impacts.

This policy paper proposes a realistic action plan for policymakers to act now to address the climate-finance doom loop, using a qualitative risk-based approach. It explains in more detail the climate-finance doom loop and its insurance-specific aspects in Chapter 1 and summarises what supervisors are doing and not doing today to tackle the issue within the insurance sector in Chapter 2. Chapter 3 explains the need and grounds for using Pillar 1 capital requirements rules as a financial stability tool to address the problem.
Chapter I

Introducing the climate-finance doom loop for insurers
I. Climate change and its impacts on the financial system

Global consensus exists today around human-activity based greenhouse gas (GHG) emissions being the main cause of climate change. Climate change in turn brings with it considerable risks to mankind which, if left unaddressed, will have devastating consequences, including for financial stability.

Climate change will have profound negative impacts on society, the economy and financial stability. The three climate-related risks relevant for financial stability comprise physical, transition, and disruption risks.

Physical risk refers to the damage caused by the impacts of changes in climate conditions such as the destruction (through fires, floods, etc.) of buildings, farmland, and infrastructure by natural catastrophes such as heatwaves, droughts, and sea level rises. Transition risk arises from the necessary move towards a carbon-neutral economy to mitigate climate change.

Disruption risk is the climate change-related risk with the biggest impact. Finance Watch’s previous report on the climate-finance doom loop defined this risk as follows: “… in the light of the environmental and geostrategic upheavals that climate change will bring, there is no plausible scenario where the world economy as we know it will continue to function. In all likelihood, the economy will endure, at best, a considerable slowdown and, most probably, a prolonged depression because of climate change, its structures will be redesigned, and the financial system will be shaken to its roots, if not destroyed. In a nutshell, disruption risk is the fact that climate change will disrupt human societies, which will disrupt the world economy, which will disrupt the financial system.”

The United Nations (UN) has pointed out that disasters from floods, storms, droughts, wildfires and heatwaves have already nearly doubled in the last two decades. The Intergovernmental Panel on Climate Change (IPCC) has confirmed that the greater global warming gets beyond the level of 1.5°C or 2°C, the more severe the negative impacts caused by climate change will be in the years to come. This has also been acknowledged by the insurance industry itself. Thomas Buberl, Chief Executive Officer of AXA, a global insurance company, has stated, for example, that a “4°C” world is not insurable. The broad recognition of this is why the vast majority of countries in the world agreed on 12 December 2015 at the Paris Cop 21 summit to limit global warming to well below 2°C, preferably 1.5°C, compared to pre-industrial levels.

In light of the devastating impacts described above, it is now undisputed that there is an urgent need to mitigate the risks posed by climate change. As pointed out in the fifth assessment report of the Intergovernmental Panel on Climate Change (IPCC), the only tool available to mankind to mitigate global warming is to reduce GHG emissions. As confirmed by the Intergovernmental Panel on Climate Change (IPCC), emissions from fossil fuels are the dominant cause of global warming. In 2018, 89% of global CO2 emissions came from the fossil fuel industry.

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9 See for example: The Intergovernmental Panel on Climate Change (IPCC) website
12 The Intergovernmental Panel on Climate Change (IPCC) website
14 ClientEarth website
transition on capital markets and financial assets, has calculated how much GHG emissions we can afford to be able to meet our global goal of limiting global warming to the Paris climate goals. It has coined this as the “carbon budget”, defined as follows: “To stabilise global temperatures, there is a finite amount of emissions that can be released before net emissions need to reach zero – this can be referred to as a carbon budget.” That carbon budget totals merely 495 gigatonnes. Based on 2019 emissions of 43.1 gigatonnes, the current rate of GHG emissions leaves us only between 10 and 15 years until our net emissions need to reach zero. This means that there is not much time left for us to transition away from fossil fuel activities.

II. The role played by the insurance sector in promoting climate change and the climate-finance doom loop dynamic

The financial sector, including the insurance industry, plays a key role in enabling and accelerating climate change by providing finance and insurance coverage to the fossil fuel industry and its activities. By doing so, it is exacerbating the macro- and microprudential risks outlined earlier that will lead to its demise.

The insurance industry enables the fossil fuel industry by providing capital via equity and corporate bond investments, as well as by providing insurance coverage. Compounding this, by providing insurance cover to fossil fuel companies, insurers and reinsurers also indirectly unlock further financing opportunities for fossil fuel companies. This occurs since a company needs insurance to be bankable and to access important means of finance such as loans. By investing in fossil fuels assets or insuring them, however, insurance companies expose themselves to risks on the assets- and liabilities-side of their balance sheets which can lead to solvency and financial stability risks.

By providing finance to fossil fuel assets, insurance and reinsurance companies expose themselves to transition risk linked to stranded assets on the assets-side of their balance sheets. As outlined previously in this report, the carbon budget of the planet sits at 495 gigatonnes. The already explored fossil fuel reserves amount, however, to 2910 gigatonnes of CO2. These numbers indicate that 84% of the explored reserves will have to be left unexploited – abandoned – in order to limit the global temperature rise to 1.5°C; or 59% to limit the temperature rise to 2°C correspondingly. This will lead to the market value of fossil fuel companies diminishing accordingly and to a loss of funds invested in such assets, exposing insurers invested in these assets to potentially huge losses on their balance sheets. The Financial Times Lex team conducted an analysis of the potential financial fallout from stranded assets. It shows that the financial fallout will be an estimated drop of US$360 billion in the value of the top 13 international oil companies if the warming target of 2°C is pursued. This represents well over a sixth of the total enterprise value of these companies. Meeting the warming target of 1.5°C would more than double the figures to nearly US$890 billion. Moreover, an analysis conducted by EIOPA in 2020 shows that insurers’ losses on equity investments in high carbon sectors due to transition risk could be around 25% and that these losses are in particular driven by investments in fossil fuel extraction, especially oil and gas. While the methodologies used to make this assessment are, by EIOPA’s own admission, imperfect it nevertheless does show that the transition risk insurers

15 Carbon Tracker Initiative website
16 Idem
face is potentially quite significant. Exposure to losses of these magnitudes has the potential to jeopardise insurers’ solvency positions and, with it, financial stability.

Secondly, by enabling climate change, the insurance industry is exacerbating physical and disruption risks, which will ultimately threaten the liabilities-side of insurers’ balance sheets. Severe weather-related events such as floods, storms and wildfires are increasing in intensity and frequency due to climate change. This will increase damages and losses to businesses, homes, infrastructure and other assets covered by property and casualty insurance, ultimately resulting in higher insurance claims. In addition, more extreme weather events, such as heatwaves, could lead to unexpected higher mortality rates and the spread of pandemic risk (e.g. malaria, dengue). Research shows that a chronic rise in temperatures and humidity are a breeding ground for vector-borne diseases, increasing the likelihood and severity of epidemics and pandemics, which can result in higher life and health insurance claims. If there is a sudden unexpected rise in insurance claims due to the reasons just highlighted, this can result in a risk to the solvency position of an insurance company if it does not have the reserves needed to meet sudden and unexpected liabilities on its balance sheet. If this affects several insurers, it can have systemic implications. As highlighted by the International Association of Insurance Supervisors (IAIS) and the Sustainable Insurance Forum (SIF), insurers may face difficulty in accurately pricing insurance contracts covering physical climate risks as the risks can change in non-linear ways.

We are already witnessing some of the physical risks outlined above having consequences for insurers’ balance sheets. Reports show that natural disasters already caused $3 trillion of losses over the last decade, which is $1.2 trillion higher than in 2000-2009, and cost insurers $845 billion in payouts. As a result, insurers are increasingly using reinsurance for natural catastrophe-related risks and they are starting to withdraw from providing insurance coverage for certain risks caused by natural catastrophes. This development, in turn, is creating micro- and macroprudential risks for the insurance sector. The wider use of reinsurance is already starting to cause a build-up of micro- and macroprudential risks for reinsurers. According to a stress test conducted by EIOPA in 2018, the biggest European insurance undertakings transferred 55% of the losses caused by natural catastrophe risks to reinsurers through current treaties in place. If these losses are big and sudden, they can create solvency risks for reinsurance undertakings. Moreover, as the losses are ceded to a limited number of counterparties, there is potential for concentration risk materialising which can have systemic implications.

As a result of the withdrawal of insurance coverage for natural catastrophe-related risks, on the other hand, only 35% on average of the climate-related economic losses caused by natural catastrophes are currently insured, and as little as 5% or less in some parts of Europe. If this trend, known as the protection gap, continues to accelerate, taxpayers and governments will soon have to foot the bill for these losses. In the medium to long-term, the world as we know it will become uninsurable, leading to insurance companies going out of business as well as the economy, and with it the financial system, collapsing.

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23 Ibid., p. 5.
24 EUROPEAN COMMISSION, “Forging a climate-resilient Europe - the new EU Strategy on Adaptation to Climate Change”, February 2021, p. 15.
Chapter II

What financial regulators and supervisors are doing and not doing
In recent years, policymakers have come to recognise the link between climate change and financial stability. In response, they have started to implement measures and policy recommendations to tackle the negative impacts of the financial system on the environment, on the one hand, and the negative micro- and macroprudential risks of climate change for financial institutions, on the other hand.

Finance Watch warmly welcomes this development. However, the measures taken so far only have limited effectiveness on their own and need to be complemented as soon as possible by measures that will make an immediate and decisive difference.

I. Stress tests, climate scenario analyses, and the integration of climate risks within risk management systems and natural catastrophe capital requirements

One of the main measures taken by policymakers and supervisors in the insurance sector so far has been to conduct exercises publicised as climate stress tests that are in reality scenario-based analyses. For example, EIOPA, the French supervisor Autorité de contrôle prudentiel et de résolution (ACPR), and the Bank of England have, at the time of the publication of this report, either already conducted or plan in the near future to conduct such exercises. For example, the Bank of England will work in its 2021 exercise on three different scenarios with a 30-year time-horizon, including scenarios that embody the risks of earlier and later policy action to reach the Paris Agreement target, and a “no additional policy action” scenario where the Paris Agreement target is not met. In its climate “pilot exercise” published in May 2021 (which, despite the communication made around it, was not a stress test), the ACPR also considered different scenarios and tried to understand essentially their impact on the transition risk incurred by financial institutions over the coming 30 years. While these exercises differ in their methodologies used, they all have in common not to be stress tests but mere scenario-based analyses looking at the impact of different transition scenarios on insurance companies. In order to be qualified as stress tests, these exercises would have to measure the impact of climate change on the financial institutions’ balance sheet and activity and consider all existing risks (i.e. transition risk, physical risk and disruption risk). These exercises, however, only look at transition risk, arguably the smaller of all three risks, and do not derive conclusions regarding the impact of climate change on the solvency of insurance companies, hence they cannot be qualified as stress tests.

In addition to the above-mentioned so-called stress tests, policymakers are looking into ways to integrate climate change risks in the risk management functions of insurance undertakings. In its Opinion on Sustainability within Solvency II from September 2019 issued to the European Commission, EIOPA recommended that insurers should be obliged under SII to assess the impact of climate risks on their business as part of their internal own risk and solvency assessments (ORSA) using scenario-based analyses. Furthermore, EIOPA recommended that insurers should report on where and which sustainability considerations have been taken into account by their risk management function and to use data from scenario analyses, historical loss data and forward-looking catastrophe modelling to integrate climate risks in the valuation

of their assets and liabilities. In addition, the European Commission adopted a delegated act to Solvency II in April 2021 which requires insurance companies to integrate sustainability risks in their risk management systems. 28

In September 2019, EIOPA also recommended that climate change-related natural catastrophes should be better integrated in the natural catastrophe risk submodule of Solvency II. This module is used to calculate the solvency capital requirement (SCR) for natural catastrophe underwriting risk. EIOPA recommends that there should be a regular recalibration of the standard parameters for the natural catastrophe risk module. They also recommend that this exercise should take into account the potential effect of climate change using the latest data and science available. 29

Whilst all these measures and policy recommendations are to be supported, there are clear limitations to their effectiveness. For one, they fail to take account of disruption risk that, as highlighted earlier in this report, is the climate-related risk with the biggest impact. Its second-round effects will be large, unpredictable and non-linear, as the Covid-19 crisis has shown. However, in its “climate pilot exercise”, the ACPR, for example, considered as the worst-case economic scenario a slower, but still positive, economic growth. 30 Paradoxically, this is a much more optimistic scenario than the economic scenarios considered in usual non climate-related stress tests where the strength of financial institutions is also tested for an economic downturn. Disruption risk has also not been considered in an assessment conducted by EIOPA in 2020 which sought to measure the sensitivity of climate change risks in the investment portfolio of European insurers. 31

Secondly, most of the current measures centre around modelling, and the use of data that is not attainable given the forward-looking nature of the phenomenon to model. Climate change-related financial risks, in particular disruption risk, are impossible to quantify and measure. Climate change is a complex phenomenon subject to radical uncertainty. 32 As highlighted in “The green swan”, a publication under the auspices of the Bank of International Settlements (BIS) on financial stability and climate change, “Climate-related physical and transition risks involve interacting, nonlinear and fundamentally unpredictable environmental, social, economic and geopolitical dynamics that are irreversibly transformed by the growing concentration of greenhouse gases in the atmosphere.” 33 Given the profound uncertainties involved, no single model or scenario can provide a full picture of the potential macroeconomic, sectorial and firm-level impacts caused by climate change. For example, the IPCC considers a set of 222 scenarios compatible with the 1.5°C or 2°C global warming target, plus 189 scenarios representing a variety of non-desirable warmer futures. 34 Worse yet, these models “only represent global emission pathways, not the multiple variations at regional and national levels that interact with each other and are the responsibility of local and national governments, central banks and supervisors. These are simply the multiple scenarios of climate pathways, which have not even been mapped on to highly

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28 EUROPEAN COMMISSION, Commission Delegated Regulation amending Delegated Regulation (EU) 2015/35 as regards the integration of sustainability risks in the governance of insurance and reinsurance undertakings, April 2021.
29 Idem
complex interconnected modern financial systems — that would engender yet more potential scenarios..."35 The enormous difficulty to quantify climate change-related risks has even been acknowledged by policymakers and supervisors themselves. For example, EIOPA stated in its Paper on Methodological Principles of Insurance Stress Testing from 2019 that "...the impact of climate policies on climate changes and other macroeconomic variables can be very hard to model and are very assumption driven" and "...no commonly agreed scenarios or broadly accepted methodology are yet available."36

Given the difficulty of quantifying climate change-related financial risks, in particular disruption risk, measures or recommendations centred on or relying on the measurement of climate change-related financial risks are prone to have serious shortcomings. Therefore, results of exercises such as the results of what the ACPR calls “the first climate pilot exercise covering the banking and insurance sectors” are questionable with regards to their ability to give a complete view of the situation and foster meaningful action.37

For the above reasons, EIOPA has also acknowledged that there are considerable challenges in recalibrating the natural catastrophe risk module based on the latest data/modelling. As rightfully pointed out by EIOPA in a discussion paper on the topic, it would necessitate further work from the catastrophe risk modelling community to expand their analyses on the potential effect of climate change and, where material, reflect the results of those analyses into their natural catastrophe (Nat Cat) models.38 Moreover, as pointed out by EIOPA in that same discussion paper, Nat Cat models are not necessarily updated annually as updating a Nat Cat model requires a lot of effort and resources. The models used in any recalibration of the Nat CAT submodule would therefore be a couple of years’ old. This poses a problem since climate change-related risks are forward-looking and subject to evolve quickly over time. In addition, for the recalibration process, it can take more than two years between the parameters’ recalibration and when undertakings actually use these parameters.

II. Disclosures

Policymakers have also focused on widening the availability and boosting the quality of sustainability-related information from companies to, amongst other aims, address the financial stability risks stemming from climate change. The rationale of this approach is that if financial actors, including insurance companies, have more and better access to ESG data, they will be able to identify sustainable investments (investments that have a positive impact on people and the environment, including climate change) and take account of sustainability-related risks in their investment and other business decisions. This, amongst other aims, is supposed to lead to a reallocation of capital to a sustainable economy and reduce macroprudential risks that threaten financial stability.39

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At the global level, global regulators have introduced voluntary disclosure requirements to this effect via the Task Force on Climate-related Financial Disclosure (TCFD). The TCFD recommendations are addressed to listed companies, private non-financial companies as well as financial institutions such as banks and insurance companies. They recommend these companies to disclose the outside-in climate-related financial risks they are exposed to. The disclosure of this information is supposed to allow investors, lenders, and insurance underwriters to take account of climate change risks in their business and investment decisions.40

In Europe, the European Union has introduced a number of disclosure initiatives under its sustainable finance agenda. One of the most important initiatives at EU level in this regard is the review of the Non-Financial Reporting Directive (NFRD). The NFRD became applicable in 2017 and requires Public Interest Companies (listed companies, insurance companies and banks) with more than 500 employees to disclose certain non-financial information. The availability of this information, amongst others, is supposed to allow investors and other financial actors to integrate sustainability considerations in their business decisions. In April 2021, the European Commission published a legislative proposal on revising the NFRD. Known under the new name “Corporate Sustainability Reporting Directive (CSRD)"41, the Commission proposal revises and strengthens the existing rules under the NFRD. It does this by 1) enlarging the scope of the Directive to all large companies42, including privately owned, and SMEs with securities listed on EU regulated markets, and 2) a requirement to report according to mandatory EU sustainability reporting standards. These new EU sustainability reporting standards are to be developed by the European Financial Reporting Advisory Group (EFRAG) which published a roadmap for the development of these standards in February 2021.43 The EFRAG report underlines the importance of introducing a double materiality approach, asking firms to disclose not only the outside-in financial impact of climate-related risks on their business but also the inside-out environmental impact of their business on its socio-environment, including climate change.44

In addition, the EU Taxonomy Regulation, which introduces an EU classification system according to which investors and businesses can assess whether certain economic activities are “sustainable”, will introduce disclosure requirements for companies falling within the scope of the NFRD and the future CSRD.45 By June 2021, the European Commission will adopt a delegated act specifying information that companies subject to the NFRD will have to disclose on how, and to what extent, their activities align with those deemed environmentally sustainable in the EU taxonomy regarding its climate goals.

Furthermore, the so-called Sustainable Finance Disclosures Regulation (SFDR) became applicable at the EU-level in March 2021. It introduces sustainability disclosure obligations for manufacturers of financial products and financial advisers towards end-investors. It requires financial market participants, including insurance firms, to disclose how they integrate sustainability risks in all investment processes and provides for specific transparency requirements for financial products

42 Aligning with the definition of large undertakings in the Accounting Directive: “large undertakings shall be undertakings which on their balance sheet dates exceed at least two of the following criteria: (a) balance sheet total: EUR 20 000 000; (b) net turnover: EUR 40 000 000; (c) average number of employees during the financial year: 250.”
43 EUROPEAN FINANCIAL REPORTING ADVISORY GROUP (EFRAG), “Proposals for a relevant and dynamic EU sustainability reporting standard-setting”, February 2021, 228p.
44 Idem
with Environmental, Social and Governance (ESG) characteristics or that pursue the objective of sustainable investment. In addition, it contains a disclosure obligation on whether financial market participants and financial advisers consider negative externalities on environment and society of their investment decisions/advice and, if so, how this is reflected at the product level.46

While Finance Watch supports all of the disclosure initiatives above as they take a step in the right direction, they are not sufficient on their own to mitigate the financial stability risks stemming from climate change which are the topic of discussion in this report. Transparency measures alone will be ineffective in ensuring that financial institutions, including insurers, take account of climate change considerations in their investment and underwriting activities. For one, the consideration of the impact of business decisions, including investment and underwriting decisions, on the environment and society is a question of public interest. However, it is not in the nature of market forces, including insurance companies, to take into account on a voluntary basis the public interest in their business decision-making. Insurers, like all financial market players, “finance the world as it is” and, confronted with two profitable projects, one sustainable and one non-sustainable, provide capital to both projects, regardless of their impacts on climate change. This issue was addressed by Adam Smith in the 18th century when he analysed that, whilst private interests are the engine driving the provision of economic goods to society (the invisible hand), it is not in the nature of private agents to consider public interest nor to self-regulate.47

In addition, as shown by numerous studies and data, financial actors are under the impression that the severest impacts of climate change will be in the long-term and are therefore not material to the shorter time horizons of financial actors. They believe that climate change-related risks do not need to be taken into consideration now but only sometime in the future and that there remains ample time for them to adapt. More and better availability of information about outside-in climate change-related risks associated with investee companies and potential insurance clients alone will not be sufficient to change this.48

A number of data and surveys support this viewpoint. A survey of 2000 investors conducted in 2020 by HSBC, for example, found that just 10% viewed the TCFD climate-related disclosures as a relevant source of information.49 Moreover, a review of equity markets by the International Monetary Fund (IMF) published in April 2020 concluded that aggregate equity valuations in 2019 did not “…reflect the predicted changes in physical risk under various climate change scenarios, which suggests that investors do not pay sufficient attention to climate change risks.”50

For all the benefits it brings, improving the quality and the quantity of ESG information provided to investors/underwriters will not, on its own, significantly change the behaviour of insurance undertakings and with it, reduce micro- and macroprudential risks for the financial system. Only a change in regulation can achieve this aim.

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III. The need to complement existing measures with preventive action that has an impact

The limited efficacy of the current measures and policy recommendations taken by policymakers so far does not imply that these measures should be abandoned. They should be pursued and amplified, as they contribute to an indispensable effort to address the threat to financial stability posed by climate change.

However, this effort falls short on its own. Policymakers and legislators must start taking preventive measures that will make a difference, without falling under the illusion that the situation is under control because they have started to act. We cannot afford to wait to take action, pending which we run a high risk of piling a financial crisis on top of a climate crisis.

As the European Union holds an obligation to act in a precautionary way to tackle the link between climate change and financial instability, despite not having all of the climate-related risk data at hand, is provided by the precautionary principle detailed in Article 191 of the Treaty on the Functioning of the European Union (TFEU)\(^{51}\). This article states that “Union policy on the environment (…) shall be based on the precautionary principle and on the principles that preventive action should be taken…”

A similar commitment also exists at the international level. In June 1992, 153 countries committed to take preventive action to tackle the risks posed by climate change by adopting the United Nations Convention on Climate Change whose Article 3.3 states that: “The Parties should take precautionary measures to anticipate, prevent or minimise the causes of climate change and mitigate its adverse effects. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures…”\(^{52}\) This article seems to have been written for the kind of situation we currently find ourselves in with regards to the climate-finance doom loop. While we have a lack of data on exactly when and at which precise magnitude the climate risks we discuss in this report will strike, we do know that they will strike and with extremely severe effects if we do not act ambitiously and decisively now.

Therefore, an obligation exists to take precautionary measures now that effectively mitigate and prevent adverse effects of climate change on financial stability. As we established in this chapter and the preceding one, there are indeed threats of serious or irreversible damage posed by the transition, physical and disruption risks to the financial system. The UN Convention cited above gives countries a mandate to take precautionary measures now and not to use the lack of data available as an excuse to postpone such measures.

\(^{51}\) Article 191 of the Treaty on the Functioning of the European Union

Chapter III

How regulatory measures can address the link between climate change and financial stability in the insurance sector
We have established in the previous chapter that, on their own, the current initiatives and recommendations of policymakers will not be sufficient to tackle the link between climate change and financial instability. Thus, the question emerges which regulatory action should supplement those ongoing measures to prevent climate change-related risks from having a devastating impact on financial stability.

To answer this question, we must first establish which regulatory tool is most suitable and effective in tackling the financial stability challenges outlined in this report. The prudential regulation for insurance and reinsurance companies, Solvency II, aims to protect policyholders by ensuring solvent insurance undertakings and a stable financial system. Given that the climate-finance doom loop is prudentially relevant as it threatens the solvency of insurers and thereby policyholder protection at the microprudential level and poses risks to financial stability at the macroprudential level, it is only logical and suitable that it should be addressed in Solvency II.

I. Which insurance undertakings should be targeted by new prudential measures to tackle climate change-related financial risks?

Before looking at which precise amendments are necessary to Solvency II to ensure that it adequately takes into account the financial stability risks posed by the provision of finance to fossil fuel-related activities, we must first determine which insurance undertakings the new measures should target. We argue that they should target only those institutions which are enabling the acceleration of climate change, as opposed to imposing conditions or additional capital buffers on all institutions in an indiscriminate manner.

While the effects of climate risks on all insurance undertakings will be increasingly relevant, targeting all insurance undertakings at random would be counter-productive. Such an indiscriminate approach would neither address the question of the global warming-enabling function of the insurance companies financing fossil fuel exploitation, exploration and production, nor recognise the behaviour of those insurers that have decided not to finance fossil fuel assets. Moreover, it would neglect the fact that insurance companies which finance or provide insurance cover to fossil fuel activities or companies face higher immediate financial risks stemming from climate risks than insurance firms that do not have direct exposures to such activities or companies.

II. Distinguishing between new and existing fossil fuel reserves

Before determining which rules under Solvency II require tweaking, we also need to determine whether all types of fossil fuel exposures need to be treated in the same manner under insurance prudential rules or whether a distinction between the different types of fossil fuel assets needs to be made.

A need exists for a different treatment and therefore different prudential rules for exposures to new vs. existing fossil fuels. While both new and existing fossil fuel reserves are responsible for greenhouse gas emissions and promote the vicious circle between climate change and financial instability, the magnitude of risk they pose to individual insurance companies’ solvency positions and financial stability differs.
Whilst existing fossil fuel assets run a high risk of becoming at least partially stranded during their lifetime, new fossil fuel assets deriving from additional exploration and production face an even higher likelihood of becoming entirely stranded given that the proven fossil fuel reserves of the planet represent already six times its carbon budget. A report by the International Energy Agency (IEA) published in May 2021 confirms this point. It states that if we want to meet the 1.5 degree warming target, investments in new fossil fuels must stop immediately as the share of fossil fuels in energy supply has to fall drastically from almost four-fifths today to slightly over one-fifth.53

In addition, while both existing and new fossil fuel assets accelerate physical and disruption risks, new fossil fuel assets will have a bigger impact on worsening these risks. As pointed out in the IPCC 2014 report, the higher the planet’s temperature rise is above 2 degrees Celsius, the worse the consequences will be. 54 The exploitation of new fossil fuel assets will make the temperature rise worse than it would be if these assets are not exploited and therefore would result in the impact of climate change being higher, including for the financial sector.

Last but not least, a differential treatment of the two types of fossil fuel assets is needed and justified to accommodate for the economic reality that there is a need for a transition period for fossil fuel enterprises. The world still needs a transition period during which existing fossil fuel resources will be used, and our proposal to align capital charges for existing fossil fuel exposures on existing Solvency II rules makes the financing of existing fossil fuel assets by definition still possible.

III. Addressing climate change-related financial risks on the assets-side of insurance undertakings’ balance sheets

Insurance undertakings are the biggest institutional investors in Europe with investments totalling €10.4 trillion in 2019.55 Insurance companies invest their assets in the real economy and use the returns on these investments to meet their financial liabilities arising from claims on insurance products. Therefore, from a solvency, financial stability and policyholder protection point of view, it is crucial that the capital requirements rules for these investments adequately take into account the risk profile of each asset class an insurance company invests in.

This crucial aspect is reflected in the so-called “Prudent Person Principle”, which is laid out in Article 132 of Solvency II. This article obliges insurance undertakings to “only invest in assets and instruments whose risks the undertaking concerned can properly identify, measure, monitor, manage, control and report, and appropriately take into account in the assessment of its overall solvency needs...” The rule goes on to say that “All assets, in particular those covering the Minimum Capital Requirement and the Solvency Capital Requirement, shall be invested in such a manner as to ensure the security, quality, liquidity and profitability of the portfolio as a whole.”56

The capital requirements rules of Solvency II are supposed to ensure that insurance undertakings invest their assets in accordance with the prudent person principle by setting a capital charge consistent with the riskiness of the asset for every asset type an insurance undertaking invests in. The current capital requirements rules, however, do not adequately take into account the

55 Insurance Europe website
risks fossil fuel investments pose to the solvency of an insurance undertaking investing in those assets and to financial stability as a whole.

i. Applying appropriate capital requirements for investments in existing fossil fuel assets

Equity investments are one of the ways insurance undertakings provide capital to the fossil fuel industry and their activities. The equity capital charges under Solvency II are 22%, 30%, 39% or 49%, depending on the type of equity the insurance undertaking invests in. Equities deemed the riskiest have a capital charge of 49%. The type of equity investments considered the riskiest under SII are, for example, certain alternative investments and most unlisted equity. Equity investments deemed less risky such as certain long-term investments and infrastructure investments, on the other hand, are given a capital charge of 22% and 30% respectively.

Under the current SII rules, the vast majority of equity investments in fossil fuel assets are unlikely to be given a 49% risk charge. If an asset is listed on a regulated market in countries which are members of the European Economic Area (EEA) or the Organization for Economic Cooperation and Development (OECD), or traded on multilateral trading facilities, the highest capital charge applied is 39%. Some fossil fuel equities are even likely to be eligible for the low capital charges applied to “qualifying infrastructure investments” or “long-term equities”, as the question of involvement in fossil fuel activity is currently not a factor considered when determining whether an equity investment is eligible for the lower capital charges applied to certain infrastructure investments or long-term equities.

From a financial stability standpoint, however, it would be difficult to argue, given the high risk of existing fossil fuel assets becoming at least partially stranded, that investments in the fossil fuel industry are less risky than investments to which a capital charge of 49% is applied. That these assets will become at least partially stranded is illustrated, for example, by the level of asset depreciation in the fossil fuel industry which amounted to US$145 billion in 2020. Not applying the heightened capital requirement to such exposures effectively means leaving part of these risks not accounted for and putting insurance undertakings that invest in these assets at risk of being undercapitalised and thereby at risk of becoming insolvent.

The capital charges for fossil fuel bond investments under Solvency II are currently also inconsistent with the riskiness of those assets. Corporate bonds issued by entities engaged in the exploitation of existing fossil fuel reserves are currently not treated the same way as corporate bonds deemed highly risky under Solvency II. Under Article 176 of the Delegated Regulation of Solvency II, capital requirements for corporate bonds are determined by the duration of the bond and the credit quality of the issuer (credit quality step)\(^57\). Credit quality is determined by the companies’ external ratings. The majority of the world’s biggest oil and gas companies, which are the main source of CO₂ emissions,\(^58\) currently tend to have high ratings with credit rating agencies putting them at A to AA\(^59\). This rating is not consistent with the risk profile of these bonds as they are, as highlighted earlier, at a high risk of becoming at least partially stranded. For highly rated companies (AA) the capital charge for a 5-year maturity bond under SII rules, for example, is only 5.5%. If the credit quality step applied to particularly high risk bonds were used to calculate the capital charge, however, it would amount to a capital charge of 37.5% for a 5-year bond. Thus, the risk of fossil fuel

\(^{57}\) The capital requirement is determined by mapping the ratings assigned to the companies by external rating agencies to the credit quality steps as per Article 176 SII. The mapping tables are included in the Commission Implementing Regulation (EU) 2016/1800.


bonds is currently underestimated under SII, resulting in these assets being an artificially attractive investment for insurance undertakings given the lack of adequate capital buffers in place to account for the real risks posed by these investments to insurers’ balance sheets and to financial stability.

To ensure that insurance companies investing in corporate bonds issued by existing fossil fuel companies are not undercapitalised, there is need for an amendment to the Delegated Regulation of SII which stipulates that such bonds should be given the same credit quality step as corporate bonds deemed highly risky. This means applying a credit quality step of 5/6 (equating to a credit rating of B or lower) to these bonds.

The increase in capital requirements for existing fossil fuel assets as proposed above would not lead to a brutal interruption of financing of these assets and would therefore not hamper the important gradual transition from fossil fuels as an energy source towards more sustainable energy sources. Evidence for this is the fact that other equity and corporate bond investments that are deemed highly risky and are therefore given the relevant capital charges under Solvency II still receive routinely large amounts of investments by insurance companies at market prices.60

ii. Applying appropriate capital charges to investments in new fossil fuel assets

As explained earlier in this chapter, the financing of new fossil fuel exposures bears higher risks at both the macro- and microprudential levels than the financing of existing fossil fuel reserves. Therefore, higher capital charges than the ones we propose for investments in existing fossil fuel reserves is warranted for these investments.

At the microprudential level, new fossil fuel assets are riskier as they are nearly certain of becoming fully stranded and thus losing 100% of their value. From a macroprudential standpoint, the financing of new fossil fuel assets accelerates physical and disruption risks, which will result in increasing insurance claims for insurers, which will likely result in large unexpected losses. If this impacts a number of insurers, the impact can quickly become systemic.

In light of the above, equity and corporate bond investments in new fossil fuel assets should be given a capital charge of 100%. This would be consistent with the risk profile of such assets as explained above and with the basic risk-management principle stating that very risky operations should be entirely equity-funded.

iii. Making fossil fuel investments ineligible for the Matching Adjustment (MA)

In addition to making sure that the capital charges under Solvency II are consistent with the risk profile of fossil fuel assets, there is also a need to ensure that these assets are treated appropriately by the Matching Adjustment (MA).

The Matching Adjustment is a provision in SII which seeks to recognise that matching long-term assets to long-term liabilities reduces risks and that insurers that do so are less risky when determining their overall Solvency Capital Requirements (SCR). Given the high risk profile of fossil fuel assets, these assets should not be considered when the matching adjustment for an insurance undertaking is calculated.

60 See for example: EIOPA, “April 2021 Risk Dashboard”, 03 May 2021, 20p., p. 5-6, which shows that the share of investments of insurance companies in corporate bonds with a credit quality step higher than 3 has been increasing despite the capital charges; or COHN, C., “Insurers walk tightrope of risky corporate credit”, Reuters, July 2020; or KHAN MIAN, A., DYSON, B., “Europe’s insurers stock up on riskier assets to combat low interest rates”, S&P Global Market Intelligence, February 2018; or MOORE, R., “Insurance Companies Are Experiencing Investment Challenges”, PlanAdviser, November 2019.
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The view that matching fossil fuel assets and liabilities presents a prudential risk for insurers and should be avoided has seemingly also been acknowledged in a paper containing recommendations to supervisors of insurance companies published in May 2021 by the International Association of Insurance Supervisors (IAIS), an international standard setting body for the insurance sector. In this paper, the IAIS states that: “Climate change can negatively affect the matching of assets and liabilities, primarily through transition risk, as insurers with long duration products use longer-term bonds to match the liability cash flows. Due to the long-term nature of the bonds, insurers should consider the potential that individual firms or an entire sector could be significantly impaired over the matching period when constructing their investment portfolios.”

IV. Addressing climate change-related financial risks on the liabilities-side of insurance undertakings’ balance sheets

When addressing the climate-finance doom loop for the insurance sector, there is also a need to address it on the liabilities-side of insurance undertakings’ balance sheets.

Articles 29 and 30d of the Delegated Regulation (EU) 2015/35 of Solvency II rightly stipulate that the estimated cash in- and out-flows (the so-called best estimate) insurance undertakings must calculate to determine the technical provisions they need to settle their insurance and reinsurance obligations must take account of the uncertainty in expected future developments. Article 29 points out that this includes environmental and economic developments. We agree that not taking this into account would result in insurance companies underestimating the technical provisions they need to meet their liabilities, which could endanger their solvency and with it financial stability and policyholder protection.

In the case of the liabilities arising from insurance policies covering policyholders engaged in new fossil fuel exploration and production, the best estimate is impacted by the future environmental developments (climate risks) explored throughout this report.

For one, when providing insurance coverage to policyholders engaged in new fossil fuel exploration and production, insurance undertakings are highly likely to incur losses as these companies will go out of business and therefore lapse on their premium payments and experience insurable events against which they will make claims such as business interruption insurance claims.

In addition, when providing insurance coverage to a new fossil fuel business, insurance undertakings accelerate physical and disruption risks, which will result in increasing claims for insurers across the board. The acceleration of climate change leads to a rise in the frequency and intensity of climate change-related natural catastrophes such as floods, storms or wildfire. This will result in a growing occurrence of physical destruction of assets covered by insurance companies’ existing property and casualty insurance business, not only with regards to policyholders engaged in fossil fuel business but clients (both business and retail) across the board. In addition, as mentioned in Chapter 2, climate change will lead to a rise in mortality rates and health problems, leading to more life insurance and health insurance claims. These resulting high amounts of unexpected claims will endanger individual insurers’ solvency and financial stability in general since insurers will not have taken these unexpected claims into account when estimating how much capital they need to meet their overall future obligations. Some in the insurance

industry claim that insurance undertakings can manage these physical risks by re-pricing their insurance products or withdrawing from insuring certain risks which are caused and/or exacerbated by climate change on an annual basis. However, this action would in fact exacerbate disruption risk. By withdrawing from insurance coverage, more and more businesses in the real economy would be left uninsured. This, in turn, would lead to the collapse of the economic system as we know it as businesses require insurance to function. This would ultimately lead to the worst-case scenario of the climate-finance doom loop, i.e. the collapse of the financial system and with it the insurance sector. The IAIS and SIF warned of this scenario in a report from 2018 where they stated that “…uninsured losses from physical risks may affect resource availability and economic productivity across sectors, the profitability of firms and individual assets, pose supply chain disruptions, and ultimately impact insurance market demand. Uninsured losses arising from physical risks may have cascading impacts across the financial system, including on investment companies and banks.”62

Considering the above, in order to ensure that the calculation of the best estimate for insurance policies covering new fossil fuel business is consistent with the high risk associated, the calculation should assume a 100% loss and apply a 0% discount rate for these policies.

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Conclusion

Climate change poses a grave threat to financial stability. Despite being a universally acknowledged fact, insurance undertakings continue to enable climate change by providing capital and insurance coverage to the fossil fuel industry and thereby endanger their own existence.

Little time remains to address this climate-finance doom loop. Our carbon budget will be exhausted in 10 to 15 years. The longer policymakers wait to take decisive policy action that will make a notable difference, the higher the chances are that we will face another financial crisis worse than the crisis of 2008.

Policymakers have started to address climate risks in the insurance sector and we welcome this step in the right direction. However, the policy measures and recommendations taken so far – on their own – fall short of being able to make the swift and decisive impact needed to avert a new financial crisis. They largely rely on the precise quantification of climate risks which proves an impossible task given the risks’ forward-looking nature as well as them being subject to radical uncertainty.

Therefore, a pressing need exists for an ambitious solution to complement existing measures that is not based on or reliant on the modelling of risks which is, even by policymakers’ own admission, extremely difficult to achieve. As US Treasury Secretary Janet Yellen stated in a speech in April 2021 at a global climate summit hosted by the US government: “The thinking goes that because we know so little about climate risk, let’s be tentative in our actions — or even do nothing at all. This is completely wrong, in my view. This is a major problem and it needs to be tackled now.”

A recast of the capital requirements rules applied to fossil fuel exposures within the prudential rulebook for insurers, Solvency II, based on a qualitative approach to the problem, would be such a solution. The capital requirements rules of the current rulebook were written at a time when the link between financial stability and climate change was not yet recognised and understood and therefore failed to treat fossil fuel exposures in a comparable way to other risks deemed high. This can be easily rectified by making amendments to the capital requirements rules for equity and corporate bond investments and the rules on calculating the technical provisions insurers must have in place to meet their obligations to policyholders.

The imminent review of the Solvency II Directive provides policymakers with a chance to make the needed amendments proposed in this report to address the climate-finance doom loop. Those simple changes would not result in a revolution of existing rules. These proposals would remove the current risk of insurance companies exposed to climate risks being undercapitalised. Likewise, they would remove the effective incentives Solvency II now provides insurers to invest in fossil fuel assets due to capital charges that are effectively too low given the risk profile of these assets.

Given that the climate-finance doom loop problem has global reach, the proposals we present in this report should also be adopted at the international level. Major insurance companies in the

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63 For example, see: BASEL COMMITTEE ON BANKING SUPERVISION (BCBS), “Climate-related financial risks – measurement methodologies”, April 2021, 50p., p. 39, which recognises: i) numerous issues associated with the climate-related financial risk measurement and quantification; and ii) the nascent of the efforts to model and measure the risks to-date

64 HOOK, L., POLITI, J., “US to propose emissions cut of at least 50% by end of decade”, Financial Times, April 2021.
United States, the United Kingdom and East Asia, for example, are heavily involved in providing finance and insurance to the fossil fuel industry as well. A report published by Share Action shows, for example, that only 35% of insurance companies in Asia and a mere 21% of insurers in the United States have an investment policy covering climate change.\(^{65}\) Policymakers outside of the European Union have acknowledged the link between climate change and financial stability, publicly declaring a strong willingness and determination to tackle this.\(^{66}\) Proposals outlined in this paper would give these policymakers the chance to translate this commitment into results with an immediate impact.

Putting the measures suggested in this report in place would reap huge benefits at a small cost. They would enable us to avoid a situation where insurance undertakings are under considerable stress both on the assets- and liabilities-side of their balance sheet, which could ultimately lead to insurance failures and financial stability impacts. For policyholders, implementing these measures would mean protecting them from a situation where insurance companies are not able to meet their obligations, and where taxpayers are asked to bail out insurance companies. Moreover, our proposed amendments would help put a stop to the current trend of climate risks becoming so bad that they are making the world increasingly uninsurable, leaving citizens and businesses exposed to risks against which they can no longer be insured.

The proposals contained in this report, along with the ones presented for credit institutions in a previously published Finance Watch report on the subject, aim to provide policymakers with the opportunity to address the climate-finance doom loop from a comprehensive point of view. They provide together a regulatory solution for both banks and insurers – the two main financial actors providing financing to the fossil fuel industry. The Finance Watch approach to resolving the climate-finance doom loop has already garnered broad-based international support. It has been recognised by a panel of 50 banks, NGOs, academics, regulators and investors from the United States, Canada, the EU and United Kingdom as the top-ranked policy proposal at the nexus of finance and climate change.\(^{67}\)

The proposals presented in this report could hurt some private interests in the short-term. But policy must take the long view, and pursue the overall benefits to all stakeholders that far outweigh the costs incurred. If policymakers heed calls from near-term-focused economic actors and fail to act now, a new financial crisis could be around the corner – just at a time when the world is recovering from the economic consequences of the Covid crisis. Inaction proves too costly, both in terms of the impacts on the world’s economic and financial system as well as the push back from a discontent public. If nothing is done, then they will eventually ask why governments failed to act despite having had the policy tools and solutions to address the problem.

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\(^{65}\) SHAREACTION, “Insuring Disaster - A ranking of 70 of the world's largest insurers' approaches to responsible investment and underwriting”, May 2021, 90p., p. 36.

\(^{66}\) For example, in May 2021, US President Joe Biden signed an executive order asking government agencies to issue a report on how to address climate-related financial risk, including through new or revised regulatory standards as appropriate: THE WHITE HOUSE, “Executive Order on Climate-Related Financial Risk”, 20 May 2021.

Annex


i. Capital requirements for equity investments:

   Article 164a
   Qualifying infrastructure investments

1. For the purposes of this Regulation, qualifying infrastructure investment shall include investment in an infrastructure entity that meets the following criteria:

   (g) (new) the infrastructure entity is not involved as part of its business in any fossil fuel activities as defined in Article 164c.

   Article 164b
   Qualifying infrastructure corporate investments

For the purpose of this Regulation, qualifying infrastructure corporate investment shall include investment in an infrastructure entity that meets the following criteria:

   (7) (new) the infrastructure entity is not involved as part of its business in any fossil fuel activities as defined in Article 164c.

   Subsection 1 b (new)

   Article 164c (new)
   Fossil fuel investments

1. For the purpose of this Regulation, fossil fuel investment shall include investments in the following:

   (a) A fossil fuel company or activity

   (b) A fossil fuel power plant

   (c) Fossil fuel resources

2. For the purpose of this Regulation, the investments listed in paragraph 1 are to be defined as follows:

   (a) A fossil fuel company or activity is defined as a company or facility engaged in coal, oil, gas, shale gas or bituminous sand exploration, production or exploitation;

   (b) Fossil fuel power plants are plants burning coal, oil, natural gas or shale gas to produce power;

   (c) Fossil fuel resources are defined as coal, oil, natural gas, bituminous sand and shale gas.
Subsection 3
Equity risk sub-module

Article 168
General provisions

7. (new) The following equities shall in any case be considered as type 2:

(a) all equity investments in any fossil fuel companies, activities, reserves and fossil fuel power plants as defined in Article 164c. They shall also comprise all assets and indirect exposures referred to in Article 84(1) and (2) in fossil fuel companies, activities, reserves and fossil fuel power plants held within collective investment undertakings where the look-through approach set out in Article 84 of this Regulation is possible for all exposures within the collective investment undertaking, or units or shares of those funds where the look through approach is not possible for all exposures within the collective investment undertaking;

Article 168a
Qualifying unlisted equity portfolios

1. For the purposes of point (e) of Article 168(6), a qualifying unlisted equity portfolio is a set of equity investments that meets all of the following requirements:

(b) the ordinary shares of each of the companies concerned are not listed in any regulated market and are not fossil fuel companies as defined in Article 164c;

Article 169
Standard equity risk sub-module

1. The capital requirement for type 2 equities referred to in Article 168 of this Regulation shall be equal to the loss in the basic own funds that would result from the following instantaneous decreases:

(c) an instantaneous decrease equal to the sum of 49 % and the symmetric adjustment as referred to in Article 172, in the value of type 2 equities, other than those referred to in points (a), (b) and (d).

(d) (new) an instantaneous decrease equal to the sum of 100 % and the symmetric adjustment as referred to in Article 172, in the value of type 2 equity investments in fossil fuel companies, activities, reserves and fossil fuel power plants for the business of exploring, extracting or exploiting new coal, oil and gas resources or developing new fossil fuel power plants.

Article 170
Duration-based equity risk sub-module

2. Where an insurance or reinsurance undertaking has received supervisory approval to apply the provisions set out in Article 304 of Directive 2009/138/EC, the capital requirement for type 2 equities shall
be equal to the loss in the basic own funds that would result from an instantaneous decrease:

a) equal to 22 % in the value of the type 2 equities corresponding to the business referred to in point (i) of Article 304(1)(b) of Directive 2009/138/EC, excluding any type 2 equity investments in any fossil fuel companies, activities, reserves and fossil fuel power plants as referred to in Article 164c.

c) equal to the sum of 49 % and the symmetric adjustment as referred to in Article 172 of this Regulation, in the value of type 2 equities, other than those referred to in points (a), (b) or (d).

d) (new) equal to the sum of 100 % and the symmetric adjustment as referred to in Article 172, in the value of type 2 equity investments in fossil fuel companies, activities, reserves and fossil fuel power plants for the business of exploring, extracting or exploiting new coal, oil and gas resources or developing new fossil fuel power plants.

**Article 171**

**Strategic equity investments**

For the purposes of Article 169(1)(a), (2)(a), (3)(a) and (4)(a) and of Article 170(1)(b), (2)(b), (3)(b) and (4)(b), equity investments of a strategic nature shall mean equity investments for which the participating insurance or reinsurance undertaking demonstrates the following:

(c) (new) that the equity investment is not in any fossil fuel companies, activities, reserves and fossil fuel power plants as referred to in Article 164c.

**Article 171a**

**Long-term equity investments**

1. For the purpose of this Regulation, a sub-set of equity investments may be treated as long-term equity investments if the insurance or reinsurance undertaking demonstrates, to the satisfaction of the supervisory authority, that all of the following conditions are met:

(i) (new) the sub-set of equity investments does not include any equities that are equity investments in fossil fuel companies, activities, reserves and fossil fuel power plants as referred to in Article 164c;

**ii. Capital requirements for corporate bond investments:**

**Article 176**

**Spread risk on bonds and loans**

3a. Exposures in the form of bonds and loans to existing fossil fuel companies, activities, reserves and fossil fuel power plants as defined in Article 164c shall be assigned a credit quality step of 5 and 6. This is regardless of whether a credit assessment by a nominated ECAI is available or not and regardless of whether the debtor has posted any collateral or not.

3b. A risk factor stress i of 100% shall be applied to all exposures in the form of bonds and loans to fossil fuel companies, activities, reserves and fossil fuel power plants for the business of exploring, extracting or exploiting new coal, oil and gas resources or developing new fossil fuel...
power plants. This is regardless of the duration of the bond/loan, and regardless of whether a credit assessment by a nominated ECAI is available or the debtor has posted any collateral or not.

iii. Matching adjustment:

Article 53
Calculation of the matching adjustment

3. (new). For the purpose of the calculation of the matching adjustment, any assets in fossil fuel companies, activities, reserves and fossil fuel power plants as referred to in Article 164c shall be ineligible.

iv. Technical provisions rules:

Subsection 3
Cashflow projections for the calculation of the best estimate

Article 30
Uncertainty of cash flows

2. The high uncertainty of future developments as referred to in Article 29 must be taken into account when calculating the best estimate for losses stemming from non-life insurance policies covering policyholders which are engaged in exploring, extracting or exploiting new coal, oil and gas resources or developing new fossil fuel power plants.

Given the high probability of losses arising from these policies due to future climate risks, an estimation of a 100% loss should be used for the cash-flow projection for these insurance obligations. In addition, the time value of money (expected present value of future cash-flows) used for these insurance obligations should equal 0%.

3. For the purpose of paragraph 2 of this Article:

(a) A fossil fuel company or activity is defined as a company or facility engaged in coal, oil, gas, shale gas or bituminous sand exploration, production or exploitation;

(b) Fossil fuel power plants are plants burning coal, oil, natural gas or shale gas to produce power;

(c) Fossil fuel resources are defined as coal, oil, natural gas, bituminous sand and shale gas.
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