

NATURE AS AN ASSET CLASS COULD ALSO CREATE SIGNIFICANT FINANCIAL STABILITY RISKS

Open letter to Bank of England governor Mark Carney

Brussels, 18 June 2019

Dear Mr Carney,

In your brilliant speech '*Breaking the tragedy of the horizon*',¹ you famously highlighted significant risks for financial stability stemming from climate change.

We could not agree more, and also want to highlight that carbon and biodiversity as an asset class would also be a serious cause for concern from a financial stability perspective.

Up until now, carbon markets have been relatively small and dysfunctional markets with a very marginal impact on capital markets. This is however likely to change over the coming years: major new carbon markets are being created on civil aviation emissions, in China, and linked to the Paris agreement,² and the new European sustainable finance agenda fosters carbon capture and storage. The recent revision of the European carbon cap and trade scheme has also made carbon one of the most profitable commodities of 2018,³ generating a renewed interest from financial institutions.

Similarly, a number of international initiatives are fostering the creation of offset markets on biodiversity and other ecosystem services,⁴ and conservation finance is increasingly being perceived as a new asset class.⁵

While the increasing awareness and calls to action to address biodiversity loss are extremely welcome, proposals to create offset markets on biodiversity and make it a new asset class could

¹ Carney M, Breaking the tragedy of the horizon – climate change and financial stability, speech at Lloyd's of London, London, 29 September 2015, <https://www.bis.org/review/r151009a.pdf> ; Financial Times, Banks should recognise the risks of climate change, 18 December 2018, <https://on.ft.com/315Heff>

² Hache F, 50 shades of green part I: carbon, Green Finance Observatory, March 2019, <https://greenfinanceobservatory.org/2019/03/11/50-shades/>

³ Financial Times, Sheppard D, Hedge funds and Wall St banks cash in on carbon market's revival, 7 September 2018, <https://on.ft.com/2wOFk58> ;

The Telegraph, Evans-Pritchard A, Soaring carbon prices turn Europe's energy landscape upside down, 27 August 2018, <https://bit.ly/2KyhsuB>

⁴ Hache F, 50 shades of green part II: the fallacy of environmental markets, Green Finance Observatory, May 2019, <https://t.co/vUj6MA6h2v>

⁵ Credit Suisse and McKinsey Centre for Business and Environment, Conservation finance – from niche to mainstream: the building of an institutional asset class, 2016. Online. Available at: <https://www.credit-suisse.com/media/assets/corporate/docs/about-us/responsibility/banking/conservation-finance-en.pdf>

CFA Institute, Environmental markets: a new asset class, 2014. Online. Available at: <https://www.cfainstitute.org/en/research/foundation/2014/environmental-markets-a-new-asset-class>

generate significant financial stability risks⁶ that need to be researched, as work on these initiatives is progressing.

Beyond the significant environmental integrity issues of these markets, linked to incalculable additionality,⁷ highly uncertain valuations and the absence of a reliable price signal⁸, once created on a big enough scale they could indeed create a higher risk of market failure and abrupt loss of market confidence than traditional capital markets:

- The very high scientific uncertainty combined with an incomplete scientific knowledge and weak valuation methodologies would translate into highly uncertain valuations;
- The artificial unbundling and selective pricing of only some ecosystem services, the ignorance of interdependencies could foster the build-up of unmonitored risks, further increasing the risk of abrupt price changes;
- The high regulatory uncertainty stemming from the hybrid nature of these markets - created by the need to comply with a regulation - would compound the issue. As a recent example of regulatory uncertainty, the market briefly priced 2024 carbon futures contracts at around EUR 5.5 t/CO₂, before the expected reform of the EU ETS phase IV led to a jump in prices over EUR 25;
- Once included in commodity indices and new sustainable finance indices, these markets could transmit very quickly the high uncertainty of carbon and biodiversity offset prices to other asset classes and the wider economy;
- Biodiversity as an asset class could foster subprime offsets, procyclicality (by amplifying real estate boom and bust cycles) and speculative bubbles on land ownership, as available land for offset projects is limited and likely to grow scarcer in the future.

Obviously for these risks to materialise, these markets would have to grow to a significant scale. This is in our view a realistic enough prospect over the next five years to warrant consideration and adequate planning.

If you allow us, let us imagine the following hypothetical scenario: we are seven years from now, habitat banking – a specific form of biodiversity offsetting - is now mandatory in Europe. As population continues to grow and we have maintained our economic model, real estate and infrastructure development continues at a rapid pace and the cheapest land available for offset projects has already been purchased.

Most institutional investors have started to invest in biodiversity offset projects, either via green bonds, new sustainable finance indices, commodity indices or through securitisations of offset projects' future cash flows. They are attracted by the relatively high returns and low correlation of this new asset class. Capital guaranteed structured products whose return is linked to offset credits are also popular with retail investors thanks to their new Ecolabel. The relatively large profit margins of this new asset class combined with high investors' appetite have made biodiversity one of the most profitable commodities, attracting in turn the interest of hedge funds and banks.

⁶ Hache F, 50 shades of green part I: carbon, Green Finance Observatory, pages 41-49, March 2019, <https://greenfinanceobservatory.org/2019/03/11/50-shades/>

Hache F, 50 shades of green part II: the fallacy of environmental markets, pages 53-58, Green Finance Observatory, May 2019, <https://t.co/vUj6MAGh2v>

⁷ Additionality refers to the added environmental value of an offset project, compared to what would have occurred without the offset

⁸ It has been demonstrated that beyond a certain level of volatility, no trend is objectively observable in prices.

Competition for and speculation on land start to resemble real estate bubbles, and some start to worry that we are already entering bubble territory. Investors are a bit more nervous than in real estate, due to the much more uncertain valuations of ecosystem services and rising doubts about the environmental integrity of third-party green ratings and subcontracted due diligence: should these doubts persist, this could lead to a severe repricing of land from its offset value to its agricultural or other alternative uses value. They also fear a political backlash as agriculture is being progressively priced out of Europe.

In addition, in order to feed the demand from investors, new offset projects of lower quality and with a higher risk of not being approved are being launched. Some call them subprime offsets. Lack of available land also leads to structured credit products synthetically replicating the pay-off of biodiversity offset projects.

So far, there have been only a few cases of disputes over settlements of derivatives instruments linked to habitat banking: unclear valuation methodologies have led to disagreements over whether trigger events happened and some accusations of market manipulation have been made, reminiscent of past disputes over settlements of credit default swap contracts.

Regulators start to be nervous, as thanks to a new green supporting factor, less regulatory capital is required to hold these products. As a result, European banks' solvency has declined as sustainable finance was growing. Regulators know that should the market turn, the shock could spread rapidly to other markets through the usual contagion channels: indices mixing biodiversity credits with other commodities, securitisations of offset credits that spread the risk far and wide, and traders exiting trades in other asset classes to lock in some gains, in order to compensate for their losses on offsets.⁹ Such channels could transmit very quickly the high uncertainty of biodiversity offset prices to other asset classes and the wider economy.

As happened with commodity derivatives, biodiversity as an asset class has also attracted a new type of speculators, trend-following index investors whose insensitivity to prices amplifies market shocks.¹⁰

It had been foreseen that, just like the price volatility of the EU ETS is correlated with global oil prices, *'it may be that habitat credits will be similarly correlated to land prices, or world food prices. However, habitats, land and food markets are likely to be subject to greater market failures (e.g. seasonality, fewer traders) than EU CO₂ and global oil markets. The EU ETS has also been able to adjust allocations over time (through allocations rounds), learning from experience and gradually altering performance targets. There is room to do this with CO₂ emissions because they are fungible over time. Biodiversity does not share this quality, as losses can be irreversible.'*¹¹ Through commodity indices, a shock affecting habitat credits could impact not only land prices but also global agricultural commodity prices.

In addition, regulators know that biodiversity offsetting is procyclical: demand for offsets and thus credit prices is correlated with real estate development and global growth, potentially amplifying the financial impact of construction boom and bust cycles.

⁹ The mere fact of considering biodiversity as an asset class has made traders look at it from the prism of so-called risk appetite and implicitly correlates it with other major asset classes in times of crisis.

¹⁰ See Hache, *supra*

¹¹ Eftec, The use of market-based instruments for biodiversity protection – the case of habitat banking, February 2010, http://ec.europa.eu/environment/enveco/pdf/eftec_habitat_technical_report.pdf

EU institutions hold an emergency meeting to debate whether to modify the rules of the market, and there is pressure on central banks to intervene in order to save big European private pension funds from significant losses.

Does any of it sound familiar? While this scenario is obviously highly hypothetical, it highlights why regulators should in our view monitor developments in this area in order to be able to prevent rather than cure any future potential issue.

We hope that central banks and regulators will investigate these concerns with a view to ensure that sustainable finance 2.0 does not create threats to financial stability.

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