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Green treasury strategies for the future

Banks' tools for a more sustainable world

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> **“We want to do good, we don’t want to feel good.”**
>
> Sustainability Board of a Swiss Private Bank

Table of contents

Our house is on fire, and we can't fund the fire brigade

A sense of urgency began to emerge around the world at the beginning of this decade. Activists like Greta Thunberg have been trying to warn us for years that 'our house is on fire', but in many ways we are only starting to see the flames all around us now. The news is filled with summits of the world's greatest minds and most powerful people coming together to discuss how to fight the war that will define this century: climate change and its consequences.

So, to use Greta's metaphor, we have finally acknowledged that our house is on fire and decided to take action. The fire is caused by a number of behaviours and industrial processes (use of non-renewable energy sources, intensive farming, excessive waste production, etc.), and the plan for the next year seems simple at first glance: end the old polluting processes (which in this document we are going to refer to as 'brown') and replace them with sustainable ('green') ones – which are, essentially, the tools of our fire brigade.

Delivering this apparently simple plan, however, will mean tackling two major challenges:

- Someone has to pay for the fire extinguishers and other tools (electric plants from renewable sources, expansion of the electricity network, development of new technologies, etc. Funding the transition to a green world requires mobilising an unprecedented amount of capital, which is currently invested in different assets. In other words: there is not much money available, today, to fund the fire brigade.
- We can't assume the transition will be like an on/off switch. The world as it exists today needs brown processes to function. At least to some extent, building the green tools will require the use of brown processes and technologies.

The good news is that one solution can address both challenges at the same time. Banks are going to be the main actors when it comes to moving capital from brown to green in the coming years. The world will rely heavily on their internal processes to steer this transition at the right speed: fast enough to achieve our ambitious targets, but not so fast that the transition itself becomes unsustainable.

Every bank will have to define its own path towards green, on the basis of its risk appetite, stakeholder expectations and other factors. As we explain in this publication, Treasury functions can help to deliver the defined strategy by setting targeted FTP prices to buttress the demand for green loans and at the same time ensure that the banks' brown exposures can cross-finance the green ones.

We certainly have a bumpy road ahead: setting the right banking strategies will ensure we – as a global community – can meet the ambitious targets we have set ourselves, and leave a better, and greener, world for future generations.

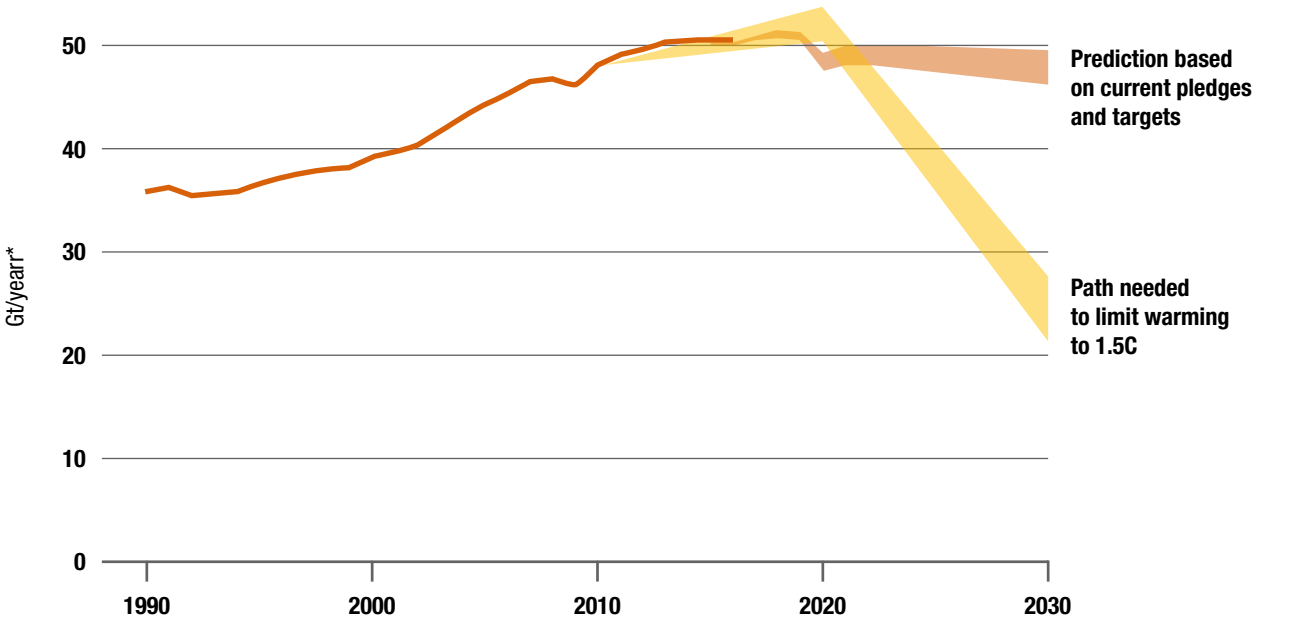
The green marble

Back in 1972 – 50 years ago – the crew of Apollo 17 took an image of Earth from space, which was destined to become one of the most reproduced images in history. That picture, called 'The Blue Marble', managed to awake the conscience of millions – if not billions – of people. For the first time, everyone could see Earth for what it was: a blue, fragile marble, lost in the immensity of space. We – as in 'inhabitants of Earth' – started to actually care about it, realising that it is up to us, all of us, to take care of it.

Although the first environmental movements became active in the seventies, we now know it took another 40 years until the word 'sustainability' stopped being an underground trend and finally became a necessity. It took years for companies and governments to realise that 'greenwashing' might have helped salve some consciences, but was not enough: the last report from the Intergovernmental Panel on Climate Change (IPCC) was the final wake-up call we all needed.[1]

Transitioning towards a more sustainable economy is a necessity we cannot ignore anymore: we need a collective effort to turn our Earth into a 'green marble', and everyone has a role to play in this. Companies need to reduce their emissions, governments need to invest in alternative energy sources, individuals need to rethink their lifestyles. And banks? Banks too have a key role in driving and incentivising the green transition, as we are going to detail in this document.

Global greenhouse gas emissions, historical and predicted



* Gigatonnes of Co_2 equivalent per year. One gigatonne = 1 trillion tonnes. Figures include land use, land use change and forestry.
Source: https://climateactiontracker.org/global/temperatures/

Too little, too late?

We have all become familiar with the Paris agreement in recent years. In 2015, 200 countries agreed to pursue efforts to keep the global temperature rise to 'well below' 2.0°C above pre-industrial levels, with an aspiration to limit it to 1.5°C. A series of pledges were made to achieve this target, and the agreement came into force in 2016.

Five years on we are faced with a harsh reality: global greenhouse gas emissions are not on track, based on current pledges and targets, to meet the Paris agreement. It may not be too late yet, but definitely too little has been done so far.

The Paris agreement is not the only global programme designed to create a greener future. Another good example are the 17 United Nations sustainable development goals (see the details on page 17). These are not focused solely on 'green' considerations, however, and cover several different ESG (Environmental, Social and Governance) dimensions.

In this document we address how banks can support environmental goals. However, the approach we suggest here can be easily applied to the other ESG components.

What does ‘green’ really mean?

Clearly the world is pushing towards a greener version of itself – but that leaves a fundamental question to be answered: what does ‘green’ really mean? Is it something that generates zero emissions? Can an activity aimed at reducing existing emissions (but not removing them completely) be considered green? And what about production activities that are not green per se, but are necessary stepping stones to creating new greener processes?

This is not just a philosophical question. It is a question we need to address if we want to have a chance of reaching our ambitious targets. Let’s take an apparently simple example: is an electric car a ‘green’ asset? The car itself has zero emissions, but we need to consider its production process, the materials used for the battery, and of course we cannot forget that the electrical power still needs to be generated somewhere: is that plant ‘green’? An electrical car powered with energy produced by a solar plant has a completely different footprint than one powered by a coal-based plant.

Greenwashing, i.e. publicly endorsing responsible investments and processes, but really having a low or negative ESG impact, is a phenomenon that could flourish thanks to the confusion around the definition of what is green. Companies decide to greenwash (more or less consciously) as the public endorsement of green issues normally generates a positive financial return for the company.

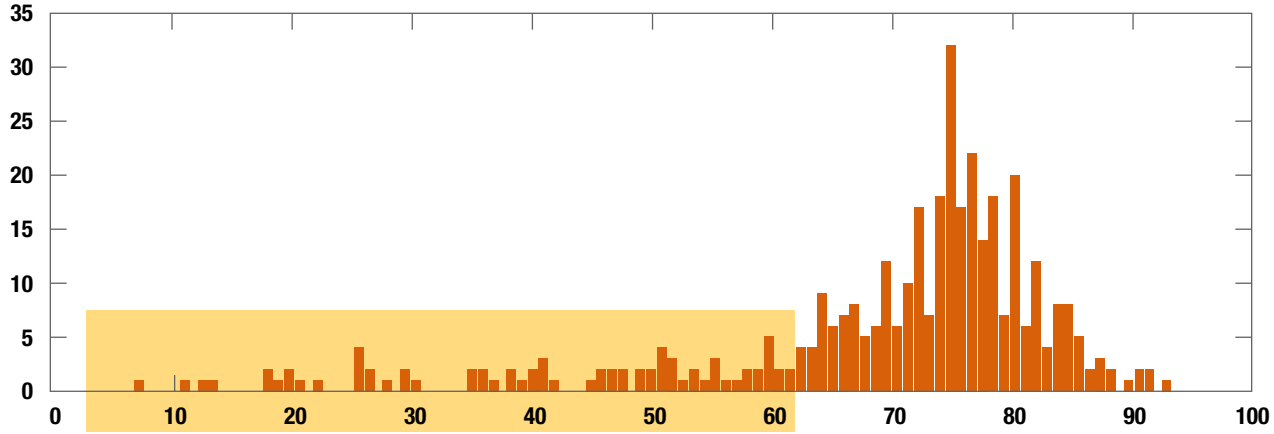
Hedge funds, which have on average a low perception of the relevance of ESG in the upcoming years,[2] are among those most known for their greenwashing (at least in the academic world, as investors seem not to react to this. The chart below,[3] we show data related to hedge funds that publicly endorse responsible investment (as indicated by the fact they have all adopted the United Nations Environment Programme – Finance Initiative Principles for Responsible Investment). The chart shows the distribution of those funds versus the annual ESG scores.[4]

> “Greenwashing hedge funds underperform both truly green and nongreen funds, are more likely to trigger regulatory violations and report more suspicious return patterns.”

The yellow box on the chart highlights those hedge funds that seem to be engaging in greenwashing, as they have a low ESG score, despite publicly supporting sustainable investments.

Interestingly, according to Liang, Sun and Teo (2021),[5] greenwashing hedge funds underperform both truly green and nongreen funds, are more likely to trigger regulatory violations and report more suspicious return patterns. Nevertheless, greenwashers attract larger inflows compared to other funds. This is due to the fact that investors generally do not discriminate between genuinely green funds and greenwashing ones – which calls for more stringent regulation and, before that, clearer guidelines to define what is truly green.[6] Until that happens, as we will cover later, banks can create their own classification to define which assets are green and which are not.

Distribution of hedge funds publicly endorsing responsible investments in relation to their actual ESG scores



Distribution of ESG scores for United Nations Principles for Responsible Investments signatories.
Source: Mosk (2021) "Spot The-Greenwashing Hedge Funds Activity" [Comment on Liang, Sun, and Teo (2021)] Linkedin. Available at: https://www.linkedin.com/posts/thomas-mosk_spot-the-greenwashing-hedge-funds-activity-6863734589341409280-C5aA

Key Performance Indicators defined by Art. 8 Delegated Act

Type of undertaking	Key Performance Indicators
Non-financial undertakings	
	• Turnover KPI • Capital expenditure (CapEx KPI) • Operating expenditure (OpEx KPI)
Financial undertakings	
Asset managers	• Green share of investments
Credit institutions	• **Green Asset Ratio (GAR)** • Green ratio for financial guarantees to corporates (FinGuar KPI) • Green ratio for assets under management (AuM KPI) • Fees and commission income (F&C KPI) • Trading book portfolio KPI
Investment firms	• KPI for services and activities dealing on own account • KPI for other services and activities
Insurance/reinsurance undertakings	• KPI related to investments • KPI related to underwriting activities

Focus point – Art. 8 of EU taxonomy[7]

The European Union has addressed the question of how to define what is green by means of the EU Taxonomy,[8] a classification system that establishes a list of environmentally sustainable economic activities. This should play an important role in helping the EU scale up sustainable investments: it will provide companies, investors and policymakers with appropriate definitions for economic activities that can be considered environmentally sustainable. The aim is to increase transparency to help prevent greenwashing and enlarge the space for green finance.

On 6 July 2021, the European Commission adopted the delegated act on the new disclosure obligations under Art. 8 of the Taxonomy Regulation ('Art. 8 Delegated Act'). The delegated act defines the new transparency requirements of undertakings in their non-financial statements:

- First, it specifies the information on the key performance indicators (KPIs) that undertakings have to report to demonstrate to what extent their assets and activities are associated with environmentally sustainable economic activities. In particular, it lays down the definitions for the KPIs and specifies how they are to be determined. The KPIs are specific to the type of undertaking, i.e. whether it is a financial or non-financial undertaking.
- Secondly, it specifies extensive information that must accompany the KPIs.
- Thirdly, it sets out the methodology for reporting KPIs. In particular, the information is to be presented in tabular form by using predefined reporting templates listed in the Annex to the Art. 8 Delegated Act.
- Lastly, it should be noted that the Art. 8 Delegated Act foresees a phased entry into force with simplified reporting requirements.

Dollars are not the only green that matters on Wall Street

Let's reflect on the role of banks in the economy. First and foremost they are key actors in financing companies and individuals. Due to their role, historically they have been a key driver of 'brown' investments, and to the same extent they will have to support the 'green' transition. As a society, we should ask banks to invest more in 'green' and less in 'brown', and this is now also institutionalised in the form of the green asset ratio reporting requirements. However the fundamental question remains: what is a 'green' asset? How can banks quantify their 'green' exposure?

The green asset ratio

For credit institutions, the Art. 8 delegated Act of the EU Taxonomy explicitly requests the reporting of the green asset ratio or GAR.

The GAR should show the proportion of the credit institution's assets financing and invested in taxonomy-aligned economic activities, as a share of total covered assets. The trading portfolio is excluded from the denominator and coverage of the total GAR.

The assets covered by the GAR are loans and advances, debt securities, equities held, and repossessed collateral and all other on-balance sheet assets, including:[9]

- Financial assets at amortised cost
- Financial assets at fair value through other comprehensive income
- Investments in subsidiaries
- Joint ventures and associates
- Financial assets designated at fair value through profit or loss and non-trading financial assets mandatorily at fair value through profit or loss
- Real estate collaterals obtained by credit institutions by taking possession in exchange for the cancellation of debts.

Asking credit institutions to report on their green asset ratio is an important step towards more sustainable finance. For the moment it is only a reporting obligation, but in time credit institutions might be requested to achieve a specific target on this metric. Even without such a target, the GAR publication will increase transparency for investors. As they are increasingly keen to move capital towards more sustainable businesses, the mere reporting of the GAR will incentivise banks to refocus their portfolio towards greener horizons. Also, the GAR is based on a defined taxonomy: it can be used as a reliable measure of green activities and, as such, will leave less room for greenwashing.

Green banks

In a recent publication,[10] the Bank for International Settlements (BIS) looks at different definitions of green banks. BIS classifies a bank as 'green' if it recognises openly the challenges posed by environmental and social issues through its operations, for example by adopting the Equator Principles (EP) or the Principles for Responsible Investment (PRI) of the United Nations Environment Programme – Finance Initiative (UNEP FI).[11]

The EP is a risk management framework and common baseline for financial institutions to identify, assess and manage environmental and social risks within project finance. By signing the EP, banks aim to ensure that the projects they finance are developed in a socially responsible manner and reflect sound environmental management practices.[12]

The UNEP FI is a partnership between UNEP and the global financial sector that aims to mobilise private sector finance for sustainable development. The UNEP FI established and co-created frameworks for the introduction of sustainability into financial institutions' strategy and operations. The Principles for Responsible Investment (PRI) are one of the frameworks established by the UNEP FI.[13]

On top of these existing green bank classifications, in its paper the BIS introduces the concept of 'de facto' green banks, which is based on their carbon exposure, as generated by projects financed via syndicated loans. Lead banks in the lowest quartile of the carbon intensity distribution are defined by BIS as 'de facto' green banks.

According to the analysis performed by BIS, 'labelled green banks', i.e. banks who have adopted the EP or PRI, have a greater proportion of loans with lower carbon intensity than other banks, as expected. EP and PRI green banks also seem to behave very similarly in terms of carbon intensity of their syndicated loans (signalling that the two sets of principles apply to similar banks).

However, the BIS also observes that there is a significant gap between labelled green banks and 'de facto' green banks,[14] with the latter showing lower carbon exposures via loans syndication, when compared to labelled green banks.

This analysis once again highlights how green definitions and labels might differ depending on how we define what is green. It emphasises the need for a clear, universal definition of 'green' in order to increase tangible actions undertaken by banks to steer the economy in a greener direction.

Financing the transition to a greener world

Banks and financial institutions from all over the world are facing a massive undertaking in the coming decades: they need to keep providing liquidity to the economy and maintain their capital solidity, all while funding the green transition. As if this was not enough, they are also confronted with fundamental dilemmas.

Everyone agrees that polluting economic activities need to transition from 'brown' to 'green' (or, where this is not possible, cease to exist), however reality is more complex:

1. Although no-one doubts that brown should turn into green, the path to ensure this is not straightforward. The Financial Times has written about the example of lithium:[15] a mineral that is key to a greener automotive industry (owing to its use in electric car batteries), but which is also a cause of concern, as mining it has a potentially catastrophic environmental impact. Financing lithium extraction, although necessary for the transition, is not per se a sustainable initiative.

2. Steve Schwarzman of Blackstone pointed out at the end of October 2021 how the ongoing energy credit crunch was at least partly due to the ESG focus of investors.[16] "If you try and raise money to drill holes, it's almost impossible to get that money," he said – which shows how banks have effectively already shifted their focus towards sustainability. It is also a potential concern at this point in time. The unfortunate truth is, the world as it is today still requires a lot of energy, most of which cannot currently come from a sustainable source. Building those sustainable sources requires energy and technology, which is currently still very much 'brown' – financial institutions need to find the right balance (and incentives) to drive the green transition at the pace we currently can afford (which is not 'everything now', despite what we all would prefer).

3. Another factor that needs to be taken into account is the so-called 'carbon bubble', i.e. an overvaluation of fossil fuel firms. As documented by Delis, de Greiff, Iosifidi, and Ongena (2021),[17] there is no significant evidence that banks charge higher loan spreads to fossil fuel firms (that due to their nature have higher exposure to climate policies). In other words, banks currently don't consider in their loan price calculation the risk that fossil fuel reserves will eventually become stranded assets with the move to a low-carbon economy. This financial risk faced by investors in fossil fuels, banks included, highlights even more the importance of a smooth transition to green.

4. With the inclusion of climate stress testing, exposures which face increased climate risks may effectively be more costly for banks to provide. The move to a greener economy should eventually decrease the climate-related risks of a bank's existing exposures, and hence reduce the capital cost to banks. However, the greenification of an individual bank's exposures is unlikely to achieve a global reduction in climate-related risks (especially not in the short term, where physical and transition risks are very much present in brown and green exposures alike). Hence regulation, such as the green asset ratio, will likely need play a role in order to avoid the 'tragedy of the commons' issue.

The bottom line is: banks need to finance green activities, but also ensure that credit continues to flow (at an ever-reducing pace) to the rest of the economy. It is a delicate balance, but something we believe they can achieve by applying the right tools – especially in the area of Treasury and internal fund transfer pricing, as we will cover in the next chapters.

Focus point: ESG/climate rating for loans?

The EU Taxonomy is a good starting point for defining what is green and what is not. There are different nuances when it comes to sustainable investing, however. The taxonomy allows banks to assign a yes/no flag to different companies, but they have the capabilities to take this a step further. By partnering with the right data provider and obtaining the right information from their creditors, banks have the option to assign a sustainability rating to their assets. This would give them the flexibility to focus on a greener portfolio allocation without having to disregard those activities that are not fully taxonomy-aligned.

Assessing the sustainability score of a loan would be akin to banks' role as 'delegated monitors' in their traditional loan business. In this role, the banks screen and monitor their borrowers for credit risk on behalf of their capital providers, as opposed to the capital providers individually monitoring the borrowers and investing directly. Loosely translated: with your banking deposit you can invest indirectly in a loan to company X without having to actively monitor company X yourself.

This system has proven to be efficient as it reduces the total fixed cost of monitoring borrowers. Further, the model is effective as banks have 'skin in the game' (i.e. they are exposed to credit risk themselves), and thus monitor their borrowers to the best of their abilities.

A similar delegated monitoring model could be extended to ESG ratings, where banks screen and monitor their borrowers for ESG-related topics on behalf of the capital providers. Similar to credit monitoring, this would reduce the total fixed cost of creating ESG ratings. However, adequate incentives would have to be created, as banks do not face direct losses if they are too optimistic about an ESG rating. A potential solution could be for national supervisors to monitor the banks' ESG rating systems to ensure they are correctly specified.

Treasury and dynamic FTP setting

The Treasury function as a bank within a bank

A bank's Treasury lies at the heart of its operations. This is where the different lines of service within the bank come together and where important strategic decisions are made. The main goal of Treasury is to promote an efficient allocation of the bank's resources (i.e. how assets and liabilities are managed) while also ensuring compliance with the various regulations.

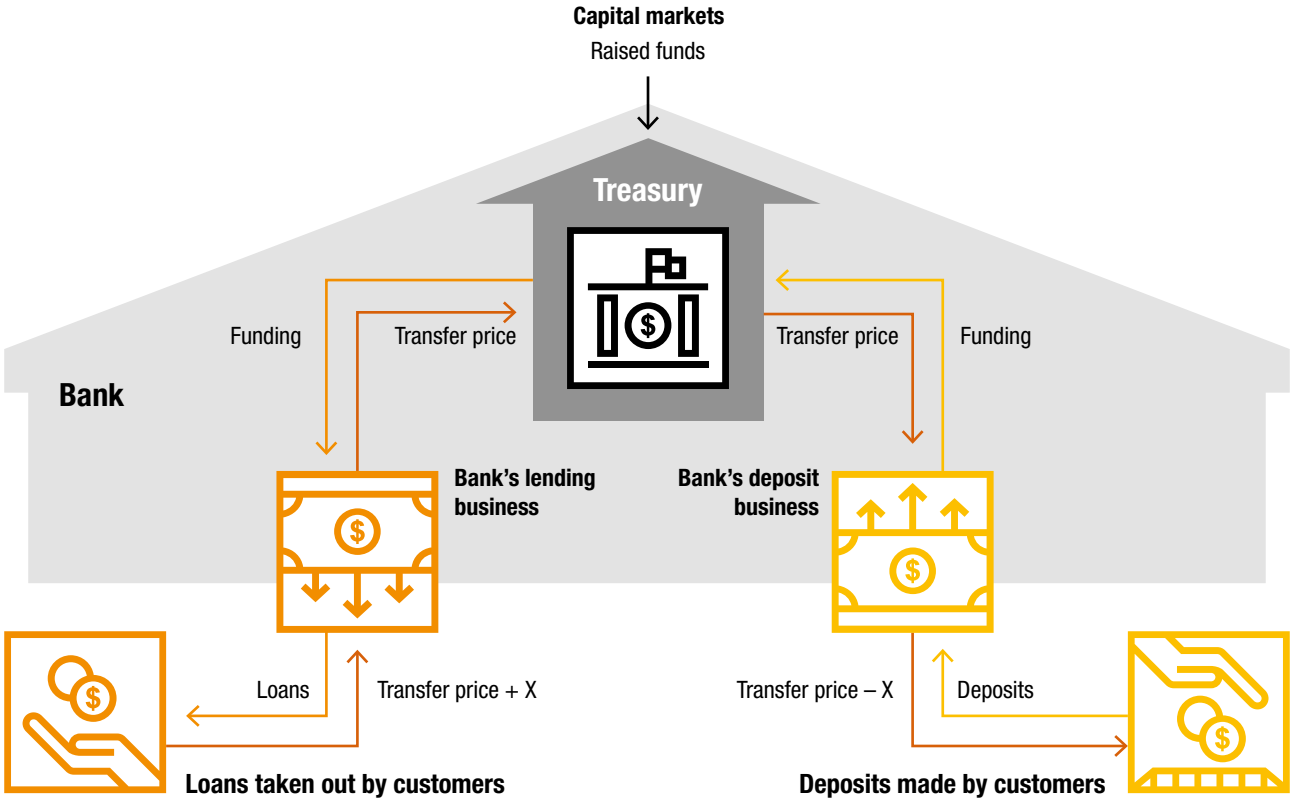
Treasury performs a wide range of activities which can be grouped into two main functions.

1. **Management of the bank's assets and liabilities (which is described here)**
2. **Regulatory compliance**

Treasury functions are effectively a bank within a bank. They get funds from the market and internal functions and then reallocate these funds to the different business lines within the bank.

Treasury is primarily responsible for balancing and managing daily cash flows and the liquidity of funds within the bank. Most positions on a bank's balance sheet are exposed to different levels and types of risk, and the value of those assets and liabilities may fluctuate considerably. Treasury functions continuously run models to forecast the future movements of financial markets and their impact on the bank's positions in order to ensure that the bank's assets always match its liabilities. In case of a shortage or surplus, treasuries trade cash and other assets with central banks and other banks. This ensures that all functions within the bank can readily access the resources they need for their operations and enough liquidity is always available to cover all cash payments.

Treasury: the bank within the bank



The key role of funds transfer pricing

In order to efficiently allocate the bank's resources, Treasury uses a system called funds transfer pricing (FTP). The central treasury lends to and borrows funds from the bank's different businesses at an internal interest rate called the transfer price, which depends on the risk and duration of the underlying asset / liability.

Each line of service uses this transfer price as a basis for their own operations. A customer wanting to take out a loan will thus be charged the transfer price plus a markup that covers the line's costs and profit margin. Similarly, an individual depositing money at a bank will receive the transfer price minus the bank's markup as an interest rate. By setting different transfer prices, Treasury can then incentivise certain types of asset/liability allocation over others.

On top of the direct effect within the bank, the choice of the internal transfer price has an indirect effect on the overall economy as it determines the terms on which a bank is ready to do business:

- It indirectly defines the incentives for clients to deposit money in the bank or invest in debt issued by the bank
- It indirectly drives the pricing of credit offered to clients
- It influences trading decisions when it comes to the risk and expected return of investments
- It also influences the decisions of other banks and their clients as they adjust to the prices their competitors set

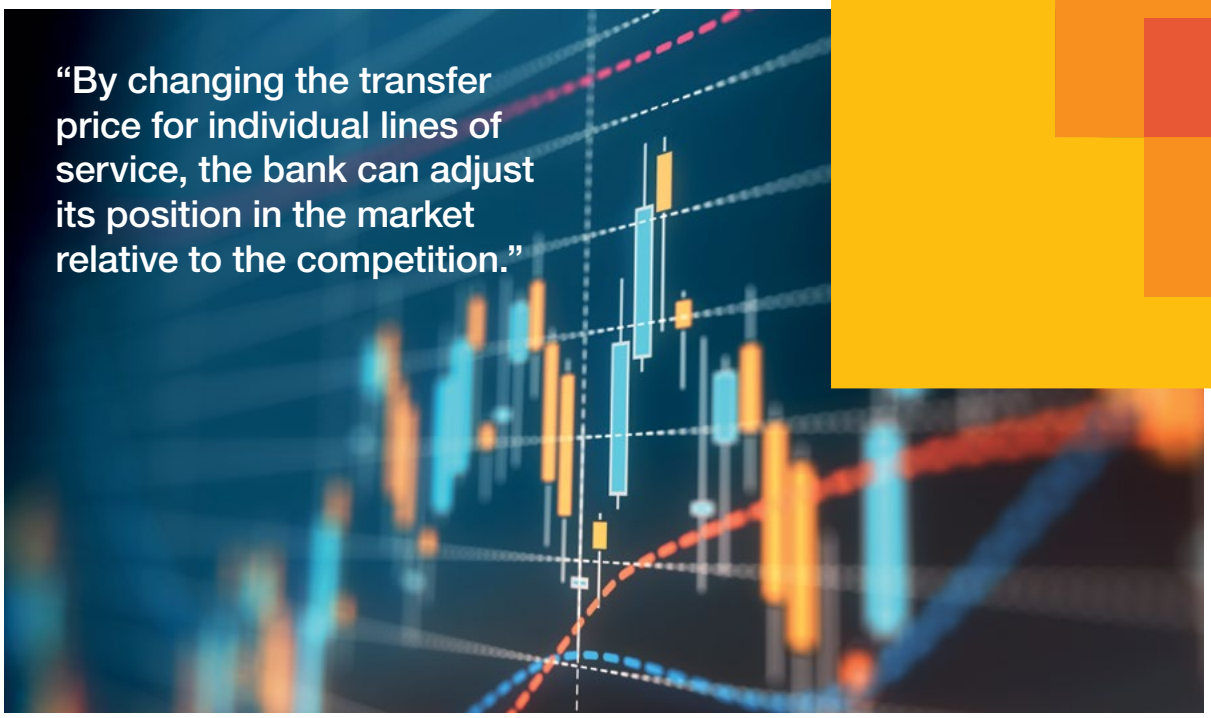
Given the important consequences of the FTP level, Treasury takes account of several factors when setting the transfer prices:

1. The main determinant is the marginal funding cost, which consists of a reference interest rate determined in the market plus an additional funding premium reflecting the bank's costs;

2. A second component is the management's strategic decisions. By changing the transfer price for individual lines of service, the bank can adjust its position in the market relative to the competition. For example, if a bank is willing to offer loans at a lower price than the competition it may incentivise its loans business by setting lower prices for them to access the funds;

3. The final component of the transfer price is the cost of holding additional liquid assets; banks need to hold such assets so that they can deal with large and unexpected withdrawals or sudden defaults if necessary.

The exact calculation of transfer pricing is highly complex, and is influenced by additional subjective variables. For example, in order to choose the right cost of funds, banks must make assumptions about the expected maturity of loans and deposits and differentiate the pricing accordingly. These assumptions are often made based on the clients' expected behaviour, which is hard to predict. This process of determining the behavioural maturity as opposed to contractual maturity is known as 'behaviouralisation' and is a key element in modern FTP processes.



Further, funding requirements can be broken down into different categories. For example, a direct funding requirement represents the positions as they are on a given day, while a contingent requirement represents the additional funding requirement in the case of a stress event. Each funding type has an associated price. For example, contingent requirements are most often charged at the cost of holding liquid assets, as these assets are held for the purpose of fulfilling contingent funding requirements.

To avoid excessive complexity some treasuries may resort to using an average cost of funds, which can be calculated more easily. However, a cost calculated in this way ignores the fact that the maturity of a loan determines how long money is tied up in different positions and how this can have a large impact on a bank’s risk exposure.

In summary, the wrong calculation of the transfer price can have serious implications for a bank’s profitability and the incentives it sets for each line of service. This explains why banks invest significant amounts of resources in achieving the optimal pricing set.

Dynamic FTP setting and its role in steering funding uses

Among the many design decisions in creating an FTP process, banks should determine how dynamic their FTP process should be. A simplified way of looking at FTP is to consider two components:

- **quantum,** i.e. the behavioural cash flow at each given tenure,
- **price,** i.e. the curve on which these quantums are charged.

A dynamic FTP setting is one in which each of these two components, the behavioural assumptions and the pricing curves, are updated on a regular basis. If a non-dynamic model is chosen, best practices suggest that the pricing curves should be reviewed at least quarterly, while the behavioural assumptions should be reviewed at least annually.

Dynamic FTP setting is normally employed by banks that want to constantly reflect current market conditions in their pricing and/or incentivise business units in a certain direction. For example, if a bank has a significant funding gap at the longer end of the maturity spectrum, it could set a steeper FTP curve to incentivise business units to raise long-term liabilities to reduce this funding gap. Similarly, FTP curves could be adjusted differently for different products, in order to incentivise businesses towards specific products.

A targeted FTP setting can support a specific ESG strategy

The entire world is looking to the financial services industry as one of the key actors in the fight against climate change. From one side, it is under scrutiny for having recklessly financed activities with a dubious (or even obviously negative) climate footprint. From the other side, it is being called on to support and finance the transition towards a greener world. The stakes have never been higher.

The fine balance between green and brown assets

As discussed earlier, the transition to net zero cannot be seen as an on/off switch. The world as it functions today could not possibly withstand an instant step back from all 'brown' energy sources (example: we can't suddenly ask everyone without an electric car to stop driving). Similarly, the transition will require accepting some new brown activities, to enable the use of greener assets (example: if car manufactures stop producing petrol cars, the electricity networks and power plants all over the world will need a massive make-over, and this transformation won't necessarily have a zero CO2 footprint).

At this point, we can summarise the role of banks in the climate change fight as: providing enough capital and liquidity to fund green assets, while keeping the tap open for brown investments, but only in just the right amount to get us to our desired net zero target by 2050.

If this does not sound challenging enough, here's the final twist: climate change is not just a nice buzzword, it's a reality that comes with a number of financially quantifiable risks. Investing in brown and green assets alike comes with an intrinsic climate change risk, which at some point will require a certain capital allocation by banks,[18] and can be categorised into 3 dimensions:

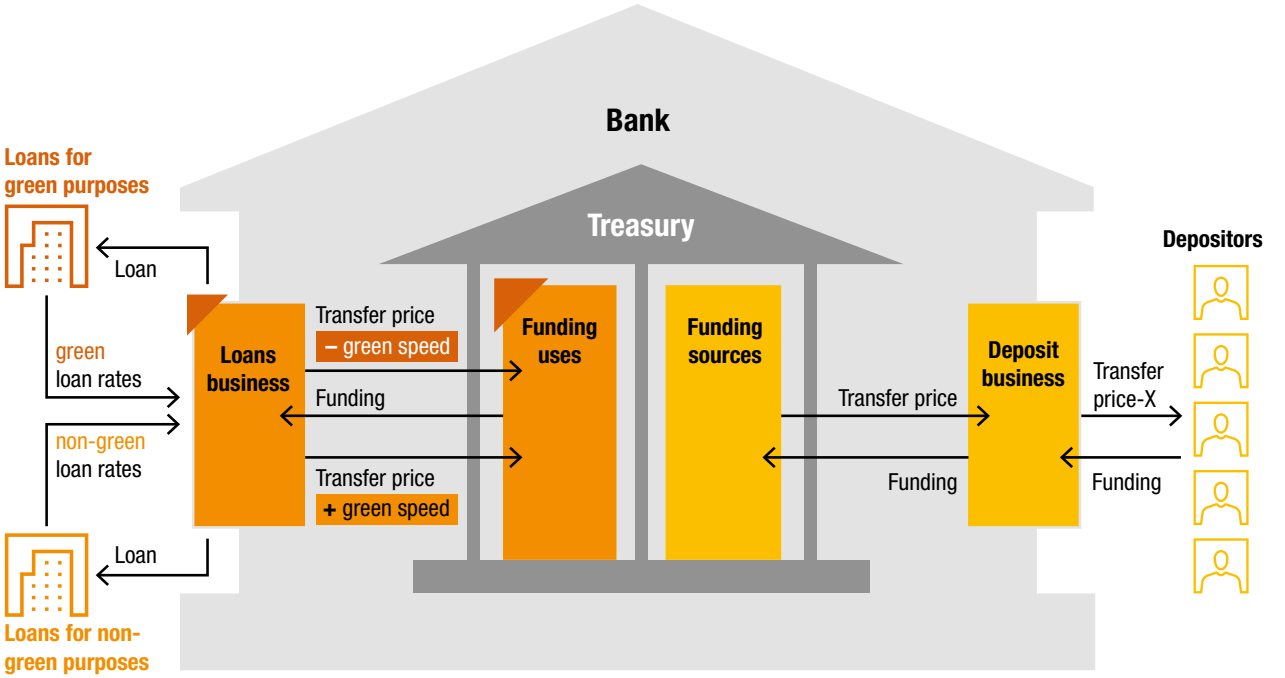
- **Physical risk**
  Physical risks resulting from climate change can be event-driven (acute) or longer-term shifts (chronic) in climate patterns. Physical risks may have financial implications for organisations, such as direct damage to assets and indirect impacts from supply chain disruption.
- **Transition risk**
  Transitioning to a lower-carbon economy may entail extensive policy, legal, technology, and market changes to address mitigation and adaptation requirements for climate change. Depending on the nature, speed, and focus of these changes, transition risks may pose varying levels of financial and reputational risk to organisations. This risk has different dimensions, including policy & legal, technology, market and reputational risks.
- **Liability risk**
  These risks come from people or businesses seeking compensation for losses from the physical or transition risks of climate change outlined above. Liability cases could also include people who have suffered from physical events, such as flooding, making claims against polluting companies who they argue are at least in part responsible.

So, when defining the green vs brown investment strategy, banks also need to take into account these new risks, and how they are going to cover them from a capital perspective in future. The twist is that a green asset will not necessarily have a low climate change risk and brown assets a high risk. Some green assets that are fundamental to reach net zero might be subject to extremely high climate risk: imagine the construction of a new solar-powered plant in a country particularly affected by floods due to climate change. The plant is required, but there is a high physical risk attached to it. This is an important issue to be aware of, as it may disincentivise banks from investing in specific assets that are fundamental to the transition.

Cross-financing the net zero journey with brown assets

Every bank will have to define their 'brown' vs 'green' strategy (and the final decision will depend on many factors), and we are confident that a strategy that privileges 'green' will find the agreement of investors, stakeholders, clients and regulators. The real challenge will be in implementing this strategy: operationally, it would be easier to say 'stop any brown investment', but we know that such a model is not a sustainable strategy – not for now, at least.

FTP internal green incentivisation strategy

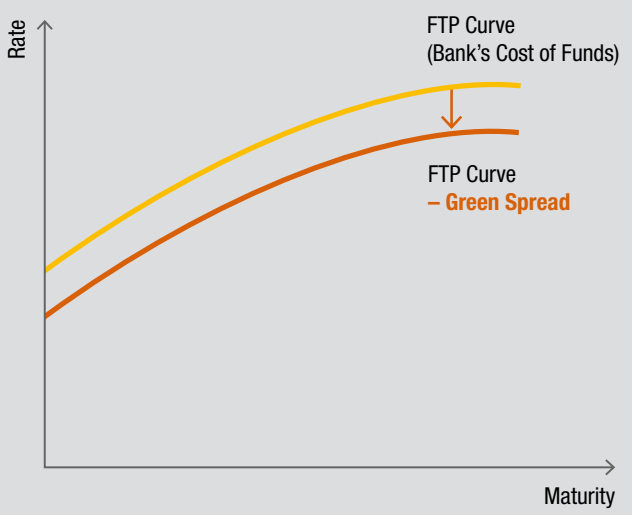


In this document, we suggest banks use the FTP-setting mechanism as a way to cross-subsidise their green investments using the bank's brown assets. In its basic form, our strategy can be defined as: demand a premium from every creditor who requires a loan for a 'brown' investment, and/or grant a discount on the FTP price for 'green' loans. This is based on the basic economics of the elasticity of demand: by reducing the internal and/or external price of green loans, banks can incentivise their demand, while increasing the price for brown loans will make them less attractive – i.e. will reduce their demand in time. When done with surgical precision, the right FTP setting can be the best ally in implementing a bank's green strategy.

How would this work in practice? Using the FTP process, banks may incentivise green loans over non-green loans. As depicted in the figure above, the transfer price to the loans business may be differentiated by type of counterparty or counterparty's use of loans; the front office would pay a lower transfer price for loans that are determined to be green (i.e. the transfer price minus a 'green spread') and a higher transfer price for non-green loans. In this setup the front office would pay a lower internal transfer price for funding that is used to provide loans to green counterparties or where the counterparty uses the loan for green purposes. This would incentivise the front office to provide green loans over non-green loans.

The figure on the right depicts a stylised version of an FTP curve setup in which green assets are priced on a lower FTP curve than non-green assets. Here the Green FTP curve is set using the bank's normal FTP curve minus a green spread. This green spread can be adjusted to increase or decrease the degree to which the bank's business units are incentivised to hold green assets over non-green assets, with a larger spread creating a lower FTP curve and hence increasing the level of incentivisation. An example of how this could be used to achieve a particular strategic green KPI, such as a certain green asset ratio, would be to set a larger green spread the further away the bank is from the target green asset ratio, and decrease the spread as it gets closer to the target ratio.

FTP curve with application of a green spread



Banks that apply a dynamic FTP setting typically incentivise functions through the FTP curve setting (i.e. the quantum). However, updating the behavioural cashflow assumptions may also reflect changes in market conditions. For example, green loans may be assumed to respond differently to liquidity shocks or roll off at a different rate than non-green loans. If this were to be reflected in the FTP setting, green loans would pay a lower contingent funding quantum or have the total quantum split differently across the maturity spectrum than non-green loans. This is another mechanism through which the loans business would be incentivised to provide green loans over non-green loans.

What should get a 'green' price?

The final component in being able to apply this method practically is to be able to assign this green FTP curve correctly to green assets. As we have already discussed, defining what is 'green' is currently not straightforward. In the simplest case, this definition would be a binary definition of green (i.e. a yes/no definition). In a more complex setup, banks could employ more granular green ratings, like credit ratings, each with its own green spread and hence FTP curve. Banks could potentially source this rating externally through ratings agencies, akin to relying on credit rating agencies to determine credit risk, or use internal models to determine the green rating of a particular asset.

Also worth mentioning: the green spread can be allocated either by counterparty or loan exposure. We suggest doing this on a single loan basis, as not all loans from a 'climate-friendly' company will be used for green purposes, and conversely a brown company might ask for a loan to finance an activity that has a positive impact on the environment (e.g. an oil company renovating its corporate headquarters to make it zero emission).

FTP setting for a greener world

Now that we have established how the FTP setting mechanism may be used to achieve a greener balance sheet for banks, the question becomes 'how will this affect the transition to a greener world?'. The answer depends crucially on the passthrough of the differentiated transfer price to the banks' customers.

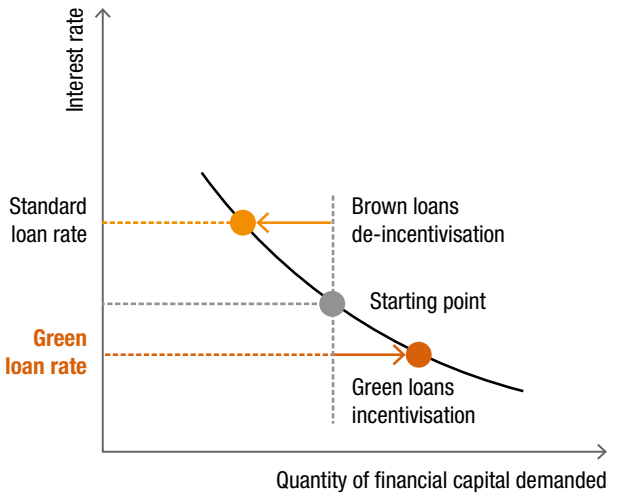
The figure on the right depicts the effect on loan demand when green loan borrowers are charged a green loan rate and non-green loan borrowers are charged a non-green loan rate. The case where the green loan rate is equal to the non-green loan rate, the starting point in the figure, would imply a non-transfer of the differentiated internal transfer price (i.e. the loans business pays lower internal fees for green loans, but this difference in price is not cascaded to the final customers). In this case, the loans business would still be incentivised to provide green loans over non-green loans, as their profits would be increased, but the real economy (i.e. the borrowers) would not benefit and hence green projects in the real economy would not be incentivised.

In the case where the green loan rate is less than the non-green loan rate, the loans business would be transferring some or all of the reduced transfer price to their green loan borrowers. This would increase the competitive edge of the loans business in the green loan market as it would be offering lower loan rates to green customers. More importantly from a societal perspective, this would decrease the hurdle rate for green projects, meaning more green projects are profitable and get financed. Hence, the bank would be contributing to a transition to a greener economy by incentivising green loans.

Note that communication to the market, at this stage, will be key: the ideal strategy, in our opinion, would be to offer standard loans at standard prices, while offering a premium when a loan can be classified as green. i.e. we recommend not offering 'brown' pricing as such, as this would negatively reflect both on the final client and on the bank's stakeholders. The idea is not to punish the brown activities that are still required during the transition, but rather to support the new green ones that otherwise would have had difficulty being funded.

The goal should be to find the right equilibrium between green loan rate and non-green loan rate, in order to support green loans that would otherwise struggle to win funding, while not punishing brown activities still required during the transition. This will also initiate brown loans disincentivisation as part of the journey to a greener economy.

Cascading the green incentivisation to the final clients



Adaptation of UNDP Sustainable Goals

Source: https://www1.undp.org/content/dam/undp/library/corporate/brochure/SDGs_Booklet_Web_En.pdf

Focus point: FTP cross financing to support other UN goals

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries - developed and developing - in a global partnership. The goals cover different ESG (Environmental, Social and Governance) areas. They recognise that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests.

Only some of the 17 SDGs directly address climate change, and banks can contribute to those goals by applying the methodology set out in this document. Although we describe a methodology to incentivise green loans, the same framework can easily be applied to the other ESG dimensions covered by the goals. One idea could be to rate goals not just on the basis of their climate impact, but on a broader ESG dimension (with a focus on those areas that the bank wants to address in its strategy). Similarly, the green spread in FTP pricing can become a ESG spread.

Essentially, climate-adjusted FTP pricing could be an initial proof of concept for a real Treasury of the future, that can then be expanded to increase a bank's overall ESG impact.

“Climate-adjusted FTP pricing could be an initial proof of concept for a real Treasury of the future, that can then be expanded to increase a bank’s overall ESG impact.”

How can PwC help you?

The future of Treasury has only just begun, and at PwC we stay ahead of the curve. Our Treasury Transformation and ESG teams can call on a global network of professionals, with extensive expertise in liquidity and funding transformation programmes, as well as ESG programmes.

We have supported our clients in transitioning their Treasury functions towards the next level, and we can support your function in becoming the best ally of your front office in delivering a specific ESG strategy.

Our tested transformation framework will help you in:

1

Defining your ESG strategy:

Where do you stand today in terms of ESG? Where do you want to be in 5, 10, 30 years?

2

Understanding your data

Every bank is different, and the elasticity of loan demand to FTP setting needs to be evaluated on a case by case basis. How did the demand for loans evolve over time for your different businesses? How was that affected by changes in FTP setting?

3

Designing and implementing the FTP model

Should you have a static or dynamic FTP? How will you set up the climate or green spread for your loans? How should you communicate your pricing strategy internally and externally?

4

Monitoring the effectiveness of the strategy

How will you monitor the results of the new FTP settings? What controls do you need in place? Which KPIs should you look for?

Endnotes

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2 Liang, Sun, and Teo, "Greenwashing: Evidence from hedge funds" (2021). 1-68. Research Collection Lee Kong Chian School Of Business. Available at: https://ink.library.smu.edu.sg/lkcsb_research/6737

3 Mosk (2021) "Spot The-Greenwashing Hedge Funds Activity" [Comment on Liang, Sun, and Teo (2021)] Linkedin https://www.linkedin.com/posts/thomasmosk_spot-the-greenwashing-hedge-funds-activity-6863734589341409280-C5aA

4 The ESG score is used to measure the fund's ESG exposure. Quarterly ESG scores are the value-weighted average of the Refinitiv ESG scores (which measure a company's relative ESG performance) of the quarterly stock holdings of hedge fund firms. Annual ESG scores are computed by averaging quarterly ESG scores over the year.

5 Liang, Sun, and Teo, "Greenwashing: Evidence from hedge funds" (2021). 1-68. Research Collection Lee Kong Chian School Of Business. Available at: https://ink.library.smu.edu.sg/lkcsb_research/6737

6 ibid.

7 Scheja ,"Art. 8 of the EU Taxonomy Regulation in practice" (2021). PwC Viewpoint - Global. Available at: https://viewpoint.pwc.com/dt/gx/en/pwc/in_depths/in_depths_INT/in_depths_INT/Art-8-of-the-EU-Taxonomy-Regulation-in-practice/Art-8-of-the-EU-Taxonomy-Regulation-in-practice1.html

8 Regulation (EU) 2020/852 of 18 June 2020

9 Exposures to central governments, central banks and supranational issuers are excluded from the coverage of the GAR and the following assets are excluded from the numerator of the GAR: (a) financial assets held for trading; (b) on-demand interbank loans; (c) exposures to undertakings that are not obliged to publish non-financial information.

10 Ehlers, Packer, and de Greiff, "The pricing of carbon risk in syndicated loans: which risks are priced and why?" (2021) Journal of Banking & Finance, 106180.

11 ibid.

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14 Ehlers, Packer, and de Greiff, "The pricing of carbon risk in syndicated loans: which risks are priced and why?" (2021) Journal of Banking & Finance, 106180.

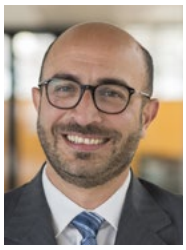
15 Pavoni, "Funding is key to helping polluters go green" (2021). Financial Times. Available at: https://www.ft.com/content/8ffa30d2-19fd-400a-ad36-40e1a4b64f14

16 Sorkin, Kessler, Gandel, de la Merced, Hirsch and Livni, "Why This Billionaire Is Worried About Green Investing" (2021). The New York Times. Available at: https://www.nytimes.com/2021/10/27/business/dealbook/schwarzman-energy-crunch.html

17 Delis, de Greiff, Iosifidi, and Ongena, "Being Stranded with Fossil Fuel Reserves? Climate Policy Risk and the Pricing of Bank Loans" (2021), Swiss Finance Institute Research Paper No. 18-10, Available at SSRN: https://ssrn.com/abstract=3125017

18 Although the Basel framework does not address climate change risk yet, discussions are ongoing on how to include it in the framework. It is hence reasonable to think that in the near future climate change risk may consume capital like other more traditional risks (credit risk, liquidity risk, etc.)

Contacts



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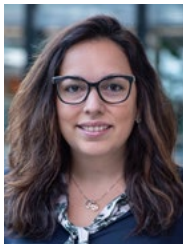

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