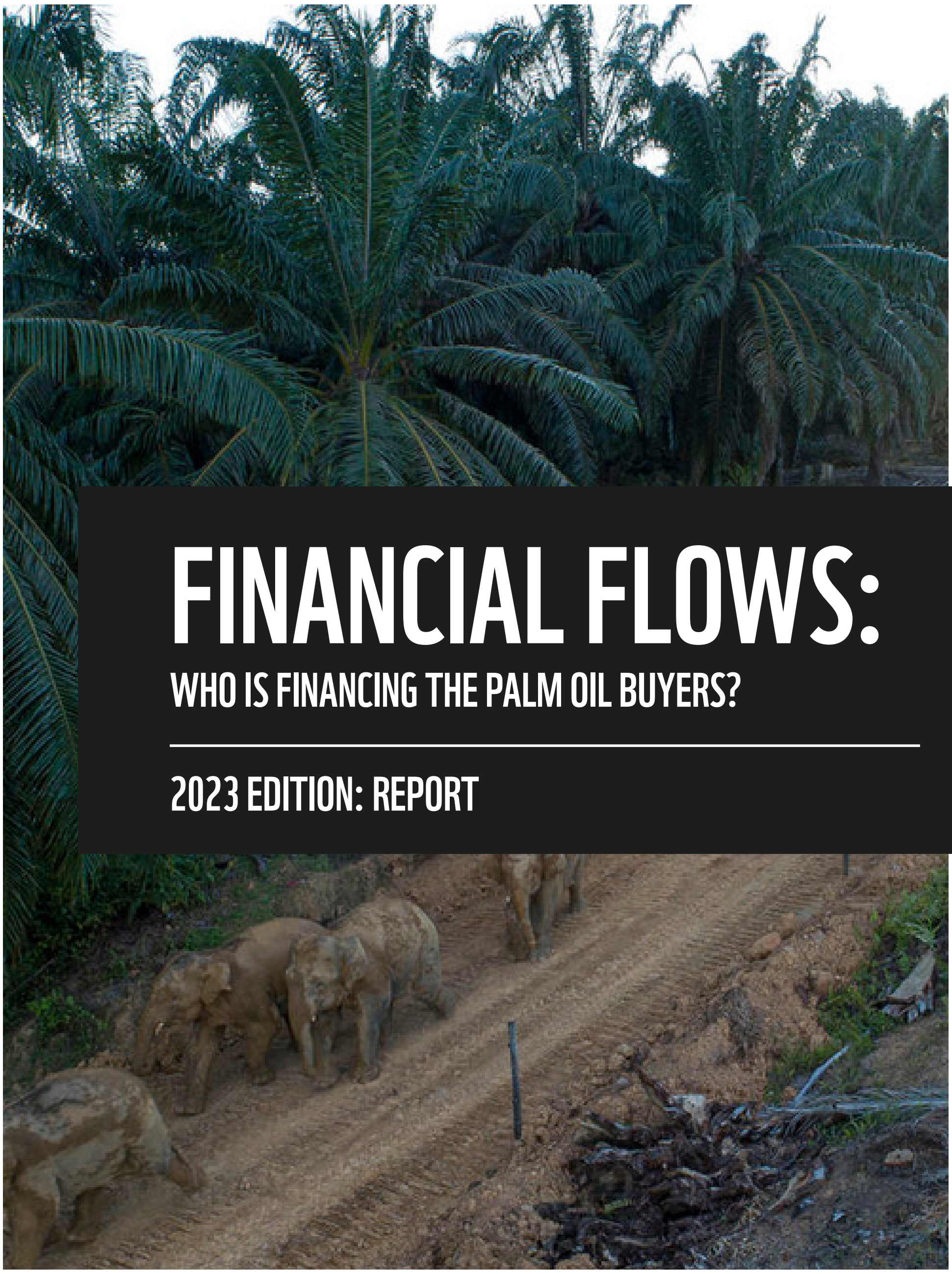


FINANCIAL FLOWS:

WHO IS FINANCING THE PALM OIL BUYERS?

2023 EDITION: REPORT

INDEX

ACKNOWLEDGEMENTS

WWF commissioned Profundo, a financial market research firm to conduct this research. Profundo conducted this study using publicly available datasets and information. The report is solely based on a desk-based review of information available in the public domain. The views expressed are independent views of the authors. WWF would like to gratefully acknowledge the assistance of colleagues within the WWF network, specifically the members of the palm oil working group (POWG) for their valuable input and support in developing this report. We would also like to thank the team from Profundo for conducting the research.

ABOUT WWF

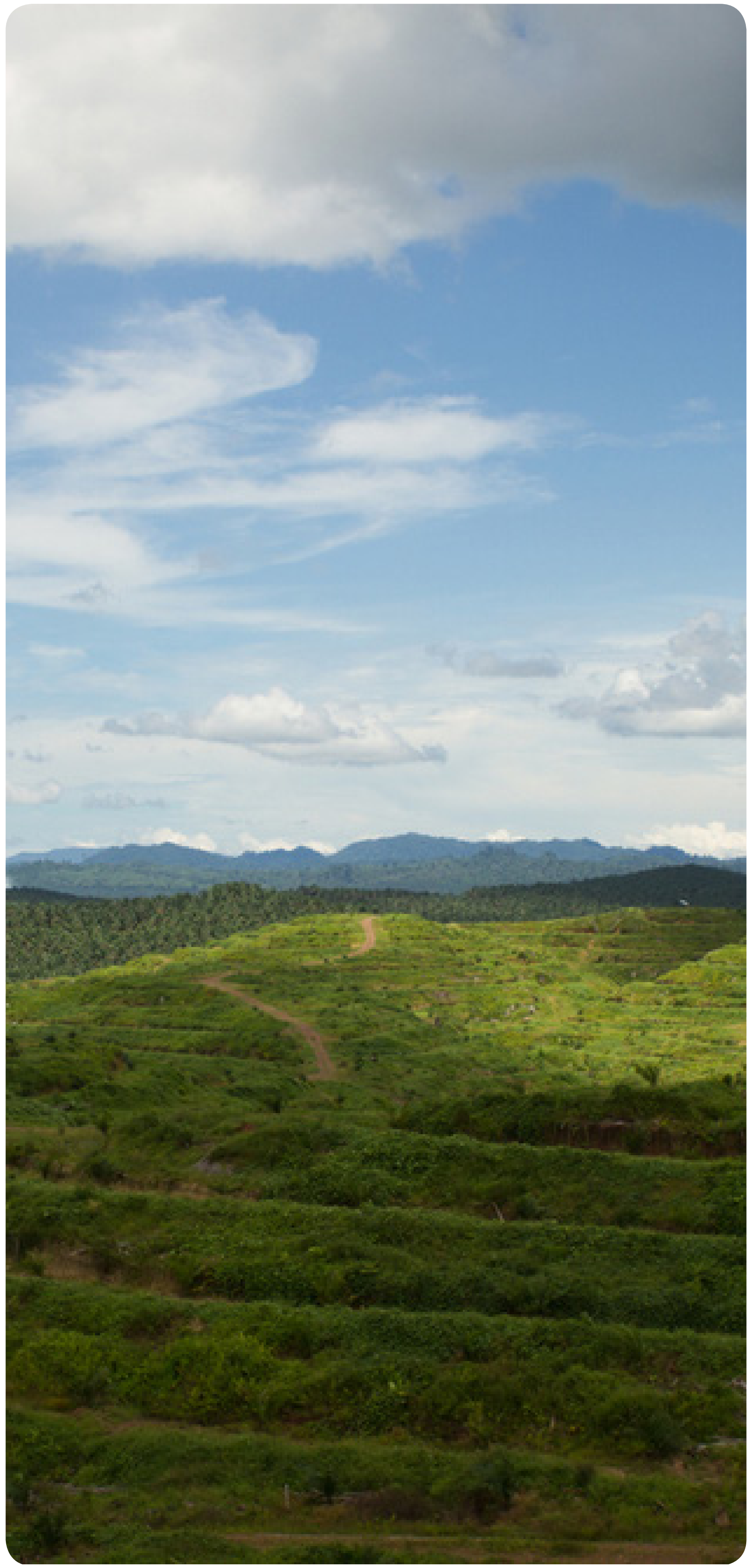
WWF is one of the world's largest and most respected independent conservation organisations. WWF's mission is to stop the degradation of the earth's natural environment and to build a future in which humans live in harmony with nature.

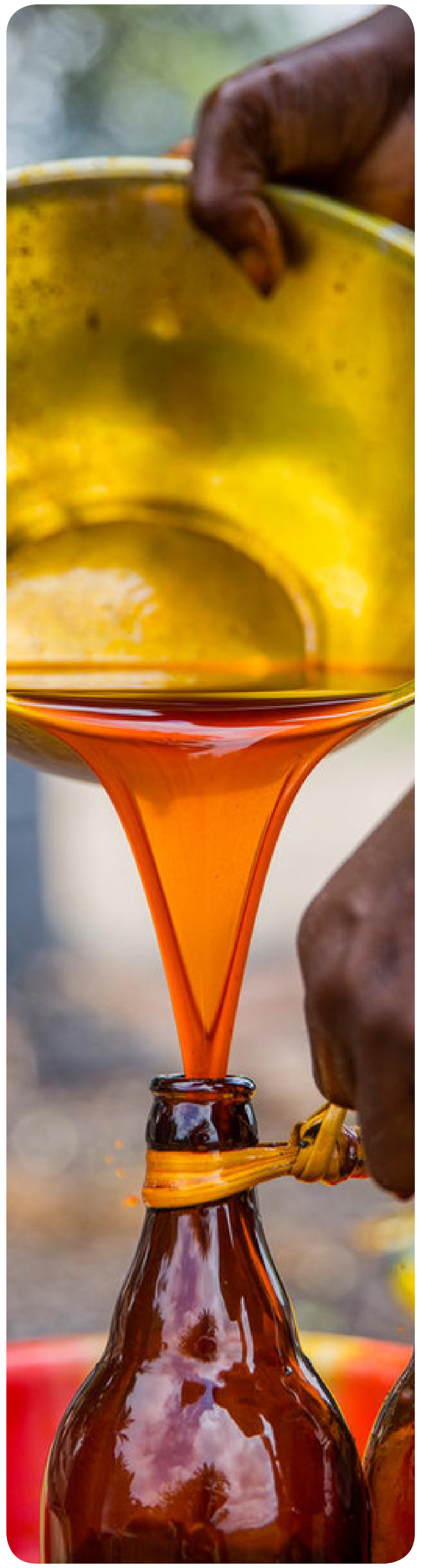
More information on www.panda.org

ABOUT WWF'S WORK ON PALM OIL

WWF's vision is to halt the conversion of natural ecosystems by ensuring that palm oil production, trade and consumption is responsible; protects, restores and connects landscapes; and benefits both people and nature. WWF believes that creating a sustainable and responsible palm oil industry that guarantees the wellbeing of people, wildlife and habitats requires a multi-faceted approach that is inclusive of, but not limited, to certification. Only through the use of a variety of tools and strategies involving all actors along the palm oil supply chain can the adverse environmental and social impacts of unsustainable palm oil production be addressed. To support both public and private efforts to improve the governance of palm oil production, WWF works in close collaboration with local governments, companies, communities and multi-stakeholder initiatives. WWF interventions focus on implementing integrated, landscape level solutions that aim to halt deforestation and conversion, ensure palm oil production is sustainable, restore degraded ecosystems, and support social equity. More information can be found here.

Published in April 2023 by WWF.





EXECUTIVE SUMMARY

Palm oil is the world's most produced, consumed, and traded vegetable oil, accounting for 41% of global vegetable oil consumption and over 60% of annual vegetable oil trade[1]. As the world's population continues to grow, global demand for palm oil is forecast to increase from 76 million MT in 2019 to between 264–447 million MT by 2050[2]. Financial institutions have a key role to play in working with palm oil companies and help them transition to a more sustainable future.

At COP26 in Glasgow in 2021, there was a significant shift in understanding and expectations to address deforestation. Financial institutions stepped up commitments to attain net zero and have been in the spotlight to deliver on their commitments. In addition, 141 countries signed the Glasgow Leaders Declaration on Forests and Land Use and there is an expectation that financial institutions and businesses will contribute to efforts to stop deforestation by 2030[3].

Financial institutions are prone to material sustainability challenges through their financing and investments in companies. Therefore, to assist the financial sector in their role to promote sustainable palm oil, this study aims to raise awareness of the risks and exposure associated with forest-risk commodities like palm oil. There is a clear role and a strong need for financial institutions to address palm oil's sustainability challenges and one of the tools that financial institutions can put to practical use is WWF's Palm Oil Buyers Scorecard (POBS).

The report maps financial institutions that have financial relationships through credits and/or investments in the palm oil companies analysed under the POBS study and priority companies identified by WWF. Once the financial institutions understand the risks the next step is to understand their role to drive more sustainable palm oil practices. Financial institutions have a unique position to drive capital away from activities that result in deforestation and conversion. At the same time, they can also lead the way and divert capital to reverse the damage and restore natural ecosystems.

[1] USDA (2019). FAS Home, Market and Trade Data, [online] https://apps.fas.usda.gov/psdonline/app/index.html#/app/compositeViz

[2] Afriyanti, D., Kroeze, C. and Saad, A. (2016). 'Indonesia palm oil production without deforestation and peat conversion by 2050', Science of the Total Environment, 557: 562-570.

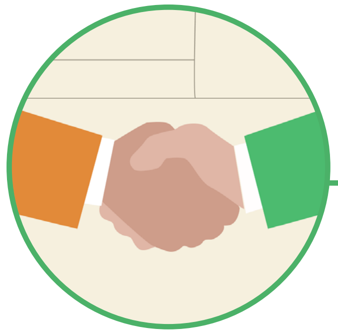
[3] https://www.unepfi.org/themes/climate-change/blog-cop26-the-moment-private-finance-promised-to-lead/

The report further shows that financial institutions have acknowledged the systemic nature of environmental, social and governance (ESG) issues in finance and are working on drafting policies but the progress has been slow. Moreover, policies are only a starting point, the financiers also need to demonstrate their commitments by acting on it.

The report therefore aims to support financial institutions to actively engage with their clients to align their activities as per the institutions' deforestation and conversion free policies. This would help to showcase the intent that the financial institutions are serious about implementing their policies and supporting overall business transformation. The report offers recommendations on how the financial institutions can embrace sustainability through its portfolio investments.

PALM OIL IS FORECAST TO INCREASE TO 264-447 MILLION MT BY 2050

The “Financial Flows” study aims to identify the linkage between the financial institutions and the key palm oil buyers and traders. The palm oil sector is capital intensive and so financial institutions are key enablers to palm oil production. It is critical to highlight exposure financial institutions have to deforestation through their downstream banking and investment portfolio. At the same time, it is important to highlight their potential role in incentivising key buyers toward eliminating deforestation from their supply chains. The report, therefore, has four key objectives:



1. Identify the financial institutions providing credit to and investing in the bonds and shares of key palm oil supply chain actors;

2. Analyse the types of finance attracted by key palm oil supply chain actors;

3. Provide financial institutions with insights into how they are exposed to forest risks – such as deforestation, conversion, and human rights issues – through the palm oil buyers they finance;

4. Identify the financial institutions that have the potential to drive a shift towards more sustainable palm oil supply chains through their links to key palm oil supply chain actors.

Recent research conducted by Forests & Finance found that in the period January 2016 to June 2021, financial institutions provided $238 billion in forest-risk attributable loans and underwriting services. Approximately 16% of this credit ($38 billion) was attributable to palm oil financing. Additionally, at the most recent filing date in May 2021, financial institutions held $42 billion in forest-risk attributable bonds and shares. Just under half of this ($9.7 billion) was attributable to palm oil.

Numerous publications by Forests & Finance, Chain Reaction Research, WWF, Global Witness, and many others, show that financial institutions continue to be exposed to deforestation, conversion, and human rights risks through the up- and midstream palm oil companies they finance. However, these financiers of the palm oil industry have the potential to drive more sustainable palm oil industry practices through engagement with the companies active in the industry.

IN MAY 2021 FINANCIAL INSTITUTIONS HELD

$42 BILLION

IN FOREST-RISK ATTRIBUTABLE BONDS AND SHARES

An important tool that financial institutions can use to drive more sustainable palm oil practices is WWF’s Palm Oil Buyers Scorecard (POBS). In order to further leverage the financial sector to drive more sustainable palm oil, WWF is seeking to identify the financiers of key palm oil supply chain actors (POBS companies, as well as other priority palm oil buyers). This complements the work done by initiatives such as Forests & Finance and leverages major stakeholders in the palm oil supply chain. It is crucial for financial institutions to meet their net-zero targets and for addressing the growing demand for ESG to understand their exposure to commodity-driven deforestation in their portfolios.

METHODOLOGY

The following methodology was used to conduct this study. All the research was conducted using publicly available data.

1. Financing research methodology
2. Financial institution forest-risk commodity policy reviews

1 FINANCING RESEARCH METHODOLOGY

The financing research consists of two components: creditor research (i.e. loans and issuance underwriting), and investor research (bond- and shareholdings). The methodologies are described in more detail in Appendix 1.

CREDITOR RESEARCH

This research uses financial databases Refinitiv, Bloomberg, TradeFinanceAnalytics, IJGlobal, annual reports other company periodic disclosures, company websites, company registry entries where available, and media archives, to identify the financial institutions providing loans and issuance underwriting services to the selected palm oil buyers. This research approach helps to uncover both syndicated and bilateral financing where this information is available. Creditor links are researched for the period January 2016 to December 2021.

INVESTOR RESEARCH

This research uses Bloomberg, Refinitiv, EMAXX, Profundo's pension fund portfolio database, and Preqin to identify the investors in the bonds and shares of the selected palm oil buyers. Bond- and shareholdings are researched at the most recent filings at the time of the research. All identified investor data is integrated into the fully referenced Palm oil buyers' financiers dataset. Investor dataset is based on the most recent filing made by the financial institution in April 2022.

2 FINANCIAL INSTITUTION FOREST-RISK COMMODITY POLICY REVIEWS

This research reviewed the forest-risk policies of the top 20 financiers of the selected palm oil buyers (top 10 creditors, top 10 investors) to determine the extent to which they cover the entire palm oil supply chain. The review focused on three publicly available sources: Forests & Finance; Forest 500, and; WWF's SUSBA.

As a founding member, and the research organisation behind Forests & Finance, Profundo has access to the detailed financial institution policy assessments as hosted on Forests & Finance. The website provides 200 forest-risk policy assessments of financial institutions (100 top creditors, 100 top investors). All policy assessments have been shared with the relevant financial institutions. The assessments were last updated in September 2021.

The objective of the F&F Policy Assessment Methodology is to assess the quality and robustness of the financing and investment policies that financial institutions have adopted to avoid getting involved in or contributing to deforestation and related environmental, social, and governance issues. The 35 assessment criteria included in the F&F Policy Assessment Methodology are based on international agreements, and conventions (mostly from bodies linked to the United Nations, such as the ILO and UNEP) and best practices in the global business community and the financial sector with respect to forest-risk commodities.

KEY FINDINGS

Nearly $4.4 trillion invested in the palm oil buyers companies. Out of this $1.5 trillion in loans and underwriting from January 2016 to Dec 2021, $2.9 trillion in bonds and shares as of April 2022. Financing for forest-risk commodities is substantial and few financial institutions are exerting their influence on companies despite their ESG requirements. In this study creditors and investors investing in 227 companies assessed on POBS in 2021 and 12 priority companies identified by WWF were analysed. Financial flows were traced to these companies to understand the risks and exposure financiers are operating in when they provide finance to these companies.

1 FINANCE RELATED FINDINGS

1.1 LINKING POBS SCORE TO THE FINANCIAL FLOWS

Mapping linkages between key palm oil supply chain players among the POBS group of companies and their financial institutions provide additional granularity in terms of risk exposure of these financiers.

Figure 1 analyses creditors. It depicts the amount of money each creditor has provided during the period January 2016 to December 2021, the number of POBS companies they have credit relationships with, and the correlation with the average POBS score of their client.

THE AVERAGE POBS SCORE HELPS TO DETERMINE THE DEFORESTATION RISKS

BNP Paribas has provided $72 billion in loans and underwriting services to 72 POBS companies over the last 5 years and the average score of their POBS clients is 14 out of 24. Similarly, Bank of America provided $127 billion in loans and underwriting services over the last 5 years to 53 companies and the average score of their POBS client is 13 out of 24.

The average POBS score helps to determine the deforestation risks that these financiers face in their financial portfolio through their credit relationship with these companies.

1.1.1 CREDITORS WITH THE HIGHEST NUMBER OF POBS RELATIONS

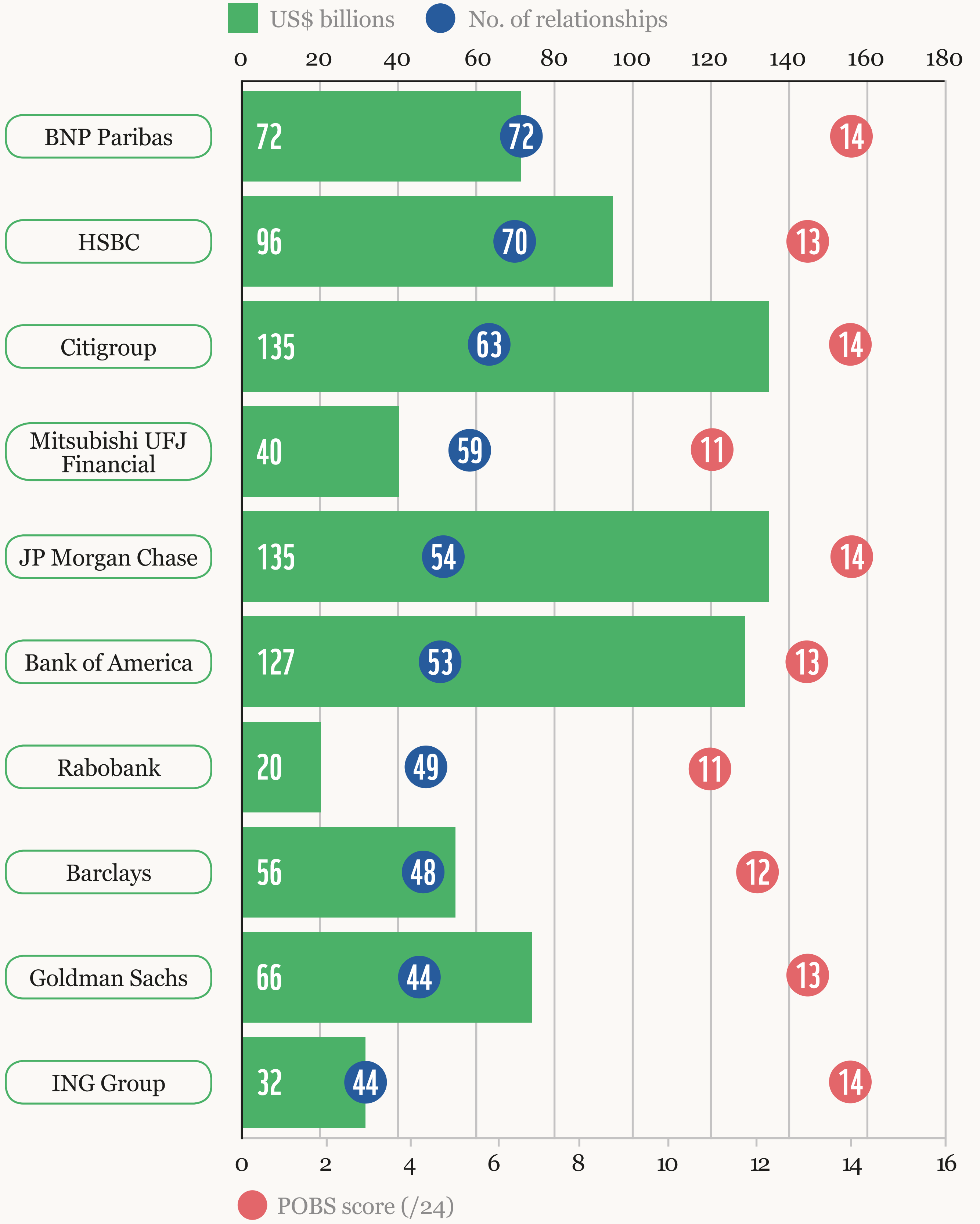


Figure 1: Creditors - Note: Financing from January 2016-December 2021

Similarly, among the investors, in April 2022, State Street had the highest relationship with POBS group of companies, holding bonds and shares issued by 98 POBS companies with an average POBS score of 13 out of 24, and total investments adding up to $158 billion. BlackRock held bonds and shares issued by 96 POBS companies, similar average POBS score as State Street and investments worth $309 billion. Vanguard also held bonds and shares worth $309 billion in 90 POBS companies with an average POBS score of 13 out of 24.

1.1.2 INVESTORS WITH THE HIGHEST NUMBER OF POBS RELATIONS

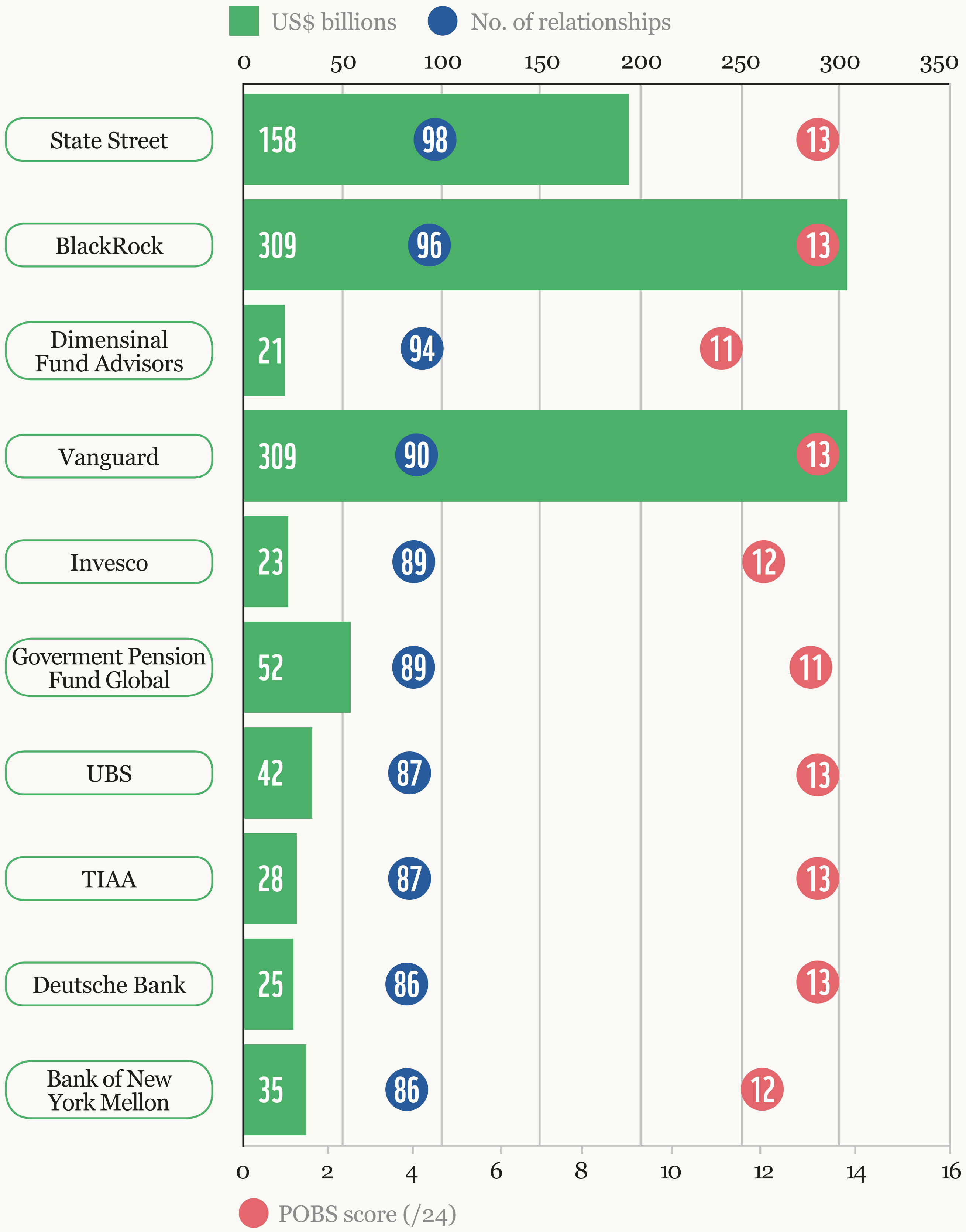


Figure 2: Investors - Note: Investments held in bonds and shares in April 2022

4 https://www.unpri.org/signatories/signatory-resources/signatory-directory
5 https://www.gfanzero.com/membership/

1.2 REGIONAL AND SECTORAL DISTRIBUTION OF FINANCIAL FLOWS

Among the creditors, 75% of the total identified credit for the companies came from these 5 countries- the US, the UK, France, Japan, and Germany. Out of this, the US accounted for 42% of the credit flow in these companies.

Among the investors, 91% of the total identified investments came from these 7 countries- the US, the UK, Canada, Japan, Switzerland, Germany, and France. On the investor side too, US investors accounted for 75% of the total identified investment in the palm oil sector. So, the study shows that the top 4 investors of these companies are the US asset management firms. One of the reasons for this trend could be the lack of data availability of Asian financiers[6].

THERE ARE MORE THAN 100 COUNTRIES WITH LEGALLY BINDING NET ZERO EMISSION TARGETS TO BE ACHIEVED IN THE NEXT 30 YEARS

Currently, there are more than 100 countries with legally binding net zero emission targets to be achieved in the next 30 years that includes the UK, France and Germany. In fact, 80% of countries make explicit reference to land use and/or forestry in their nationally determined commitments (NDCs) under the Paris Agreement, while 58% reference specific policies and measures for forestry[7]. If countries are to meet their targets they need to follow through on their commitments and create new and stronger policies for nature-positive finance opportunities.

6 Note: There are increasing reporting standards demanded by the Securities Exchange Commission (SEC) in the US. https://www.sec.gov/news/press-release/2022-92

7 Deutsche Gesellschaft für Internationale Zusammenarbeit. Sectoral implementation of nationally determined contributions (NDCs), May 2017, https://www.transparency-partnership.net/sites/default/files/u2618/giz2017-enndcs-sectoral-implementation-forestry.pdf.

1.2.1 75% OF CREDIT COMES FROM 5 COUNTRIES

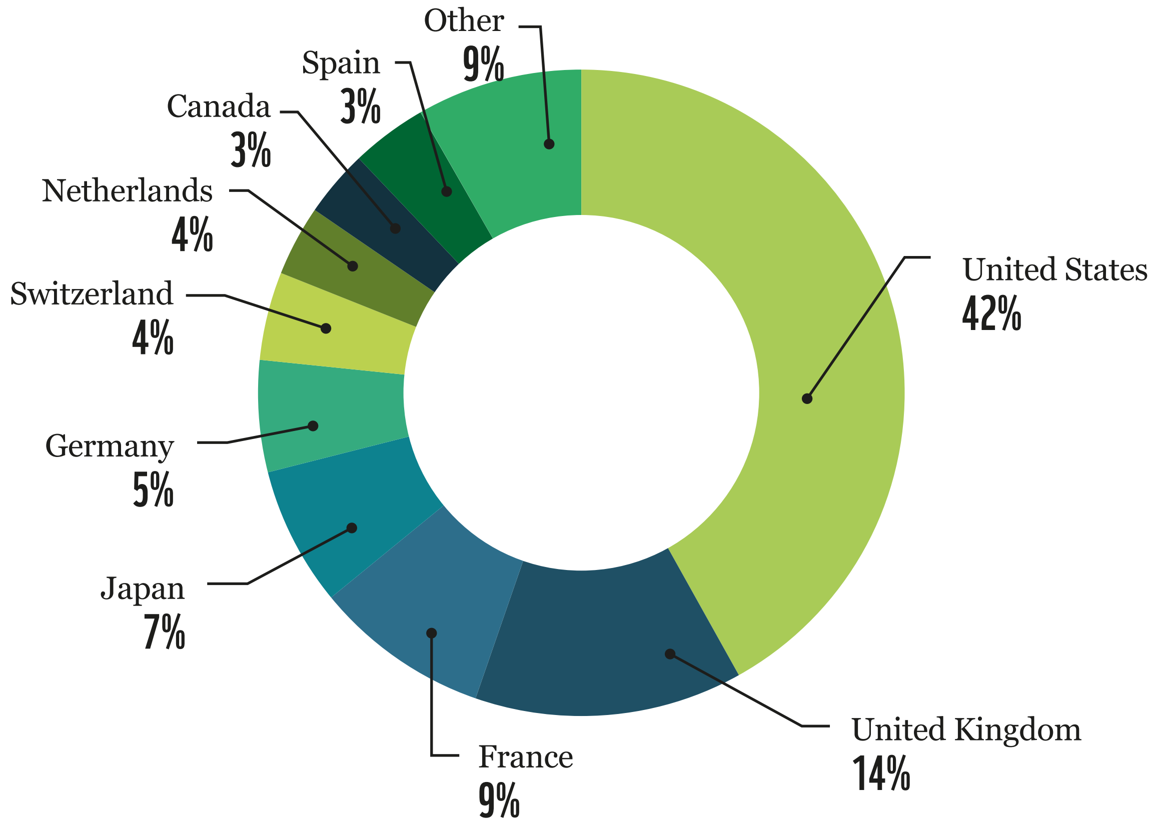


Figure 3

1.2.2 91% OF INVESTMENT COMES FROM 7 COUNTRIES

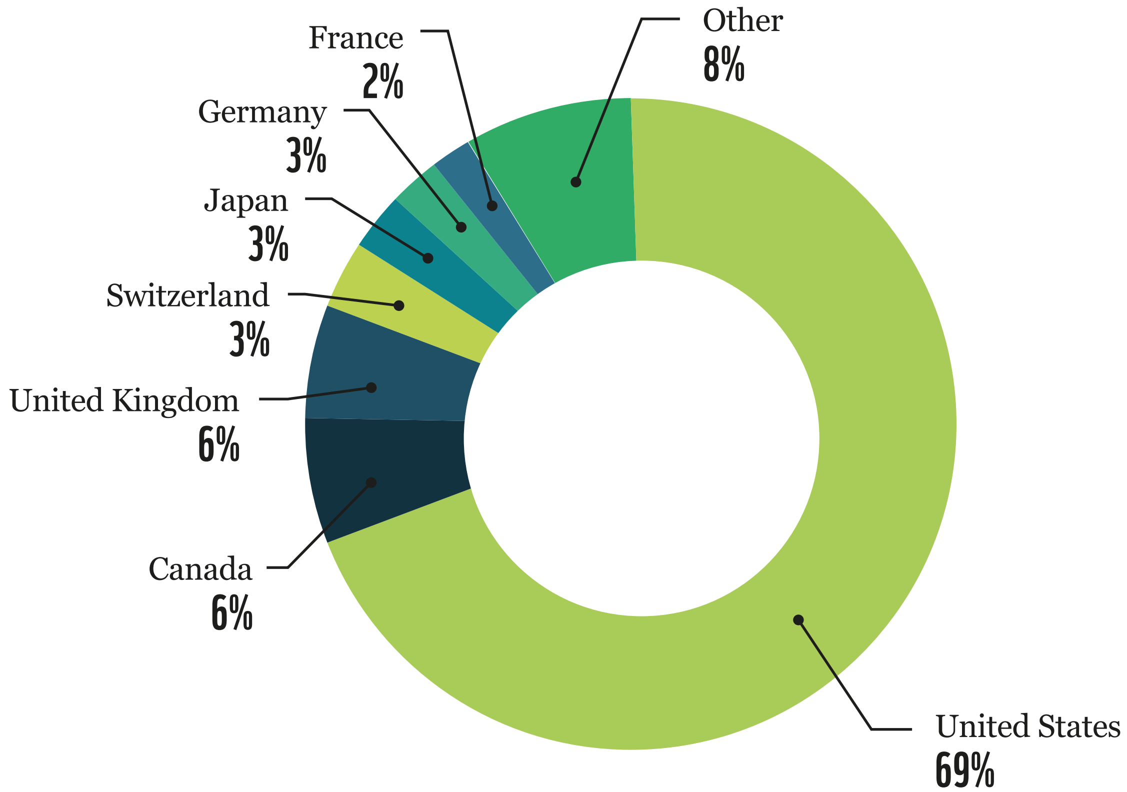


Figure 4

1.2.3 CREDITORS

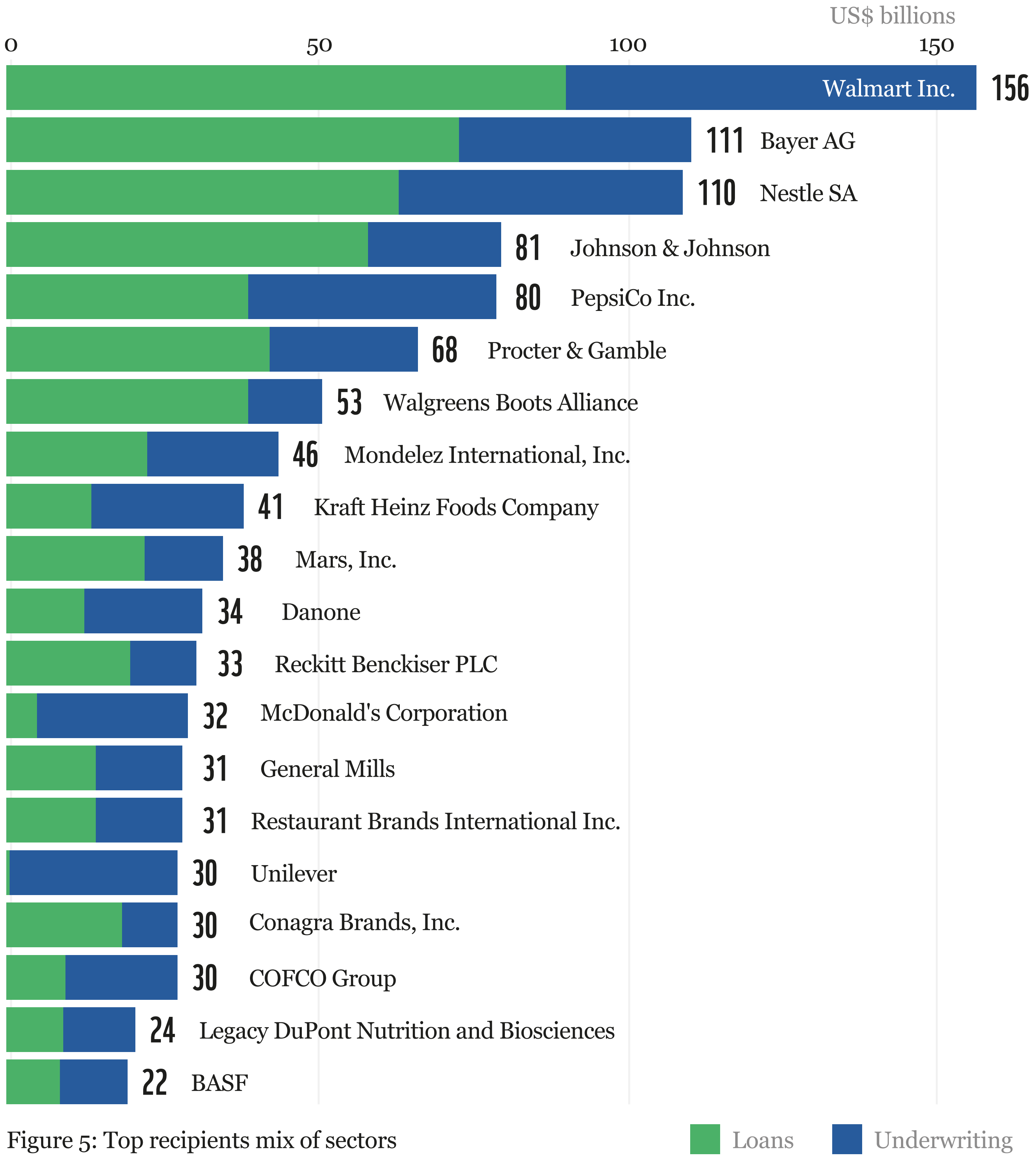


Figure 5: Top recipients mix of sectors

Overall, there's a good mix of sectors right from food and beverage to healthcare to cleaning products amongst others that have drawn capital investments. This shows that the capital flow is sector agnostic.

1.2.4 INVESTORS

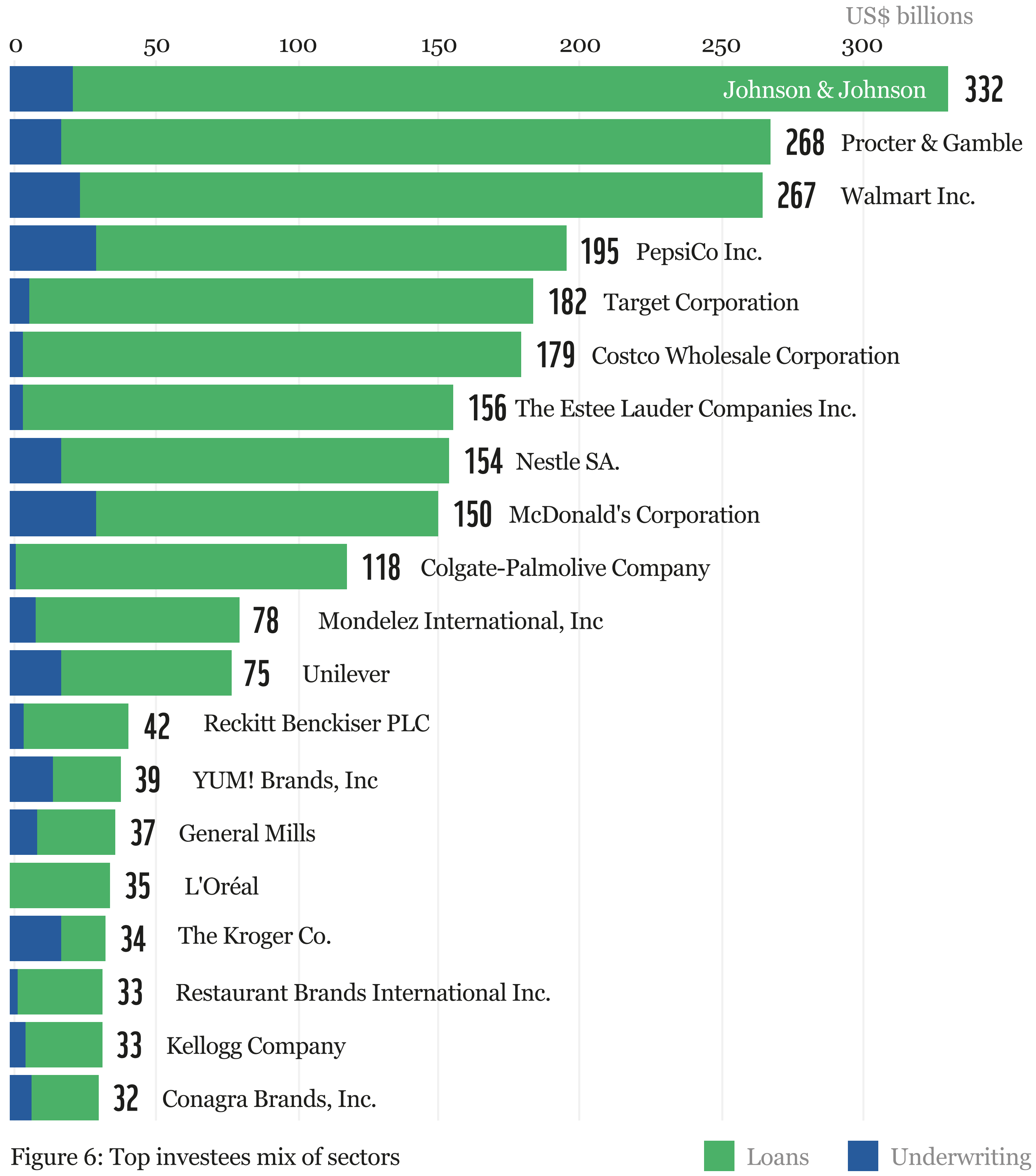


Figure 6: Top investees mix of sectors

Looking at these companies that have attracted the most capital, Walmart tops the chart (Figure 5). Among the investees, Johnson & Johnson ranks the highest, receiving the highest investment value of $332 billion (Figure 6).

2 POLICY RELATED FINDINGS

2.1 PALM OIL CONSIDERATION IN SUPPLY CHAIN POLICIES

Given the changing role of financial institutions from purely service providers to ecosystem builders, along with financial indicators, this analysis also reviewed the forest-risk policies of the top creditors and investors of the selected palm oil companies. This helped to determine the extent to which the financiers' policies cover the entire palm oil supply chain. Policies that financial institutions adhere to clearly have a significant influence on financial access to companies, and as such can enable best-practice ESG integration to receive capital, versus those that cause environmental harm.

THIS ANALYSIS HELPED TO DETERMINE THE EXTENT TO WHICH THE FINANCIERS' POLICIES COVER THE ENTIRE PALM OIL SUPPLY CHAIN

The study reviewed forest risk policies outlined by creditors and investors which are publicly available on Forest 500 and Forest and Finance. Once the financial institutions are aware of their exposure to deforestation, the next logical step is to draft policies that ensure nature-positive and deforestation and conversion-free financing. These policies act as a roadmap for financial institutions to engage with their clients and investees. The analysis showed that most creditors have taken efforts to deliver on their fiduciary and moral responsibility.

2.1.1 CREDITORS HAVE BETTER POLICIES, BUT INVESTORS HAVE A LONG WAY TO GO

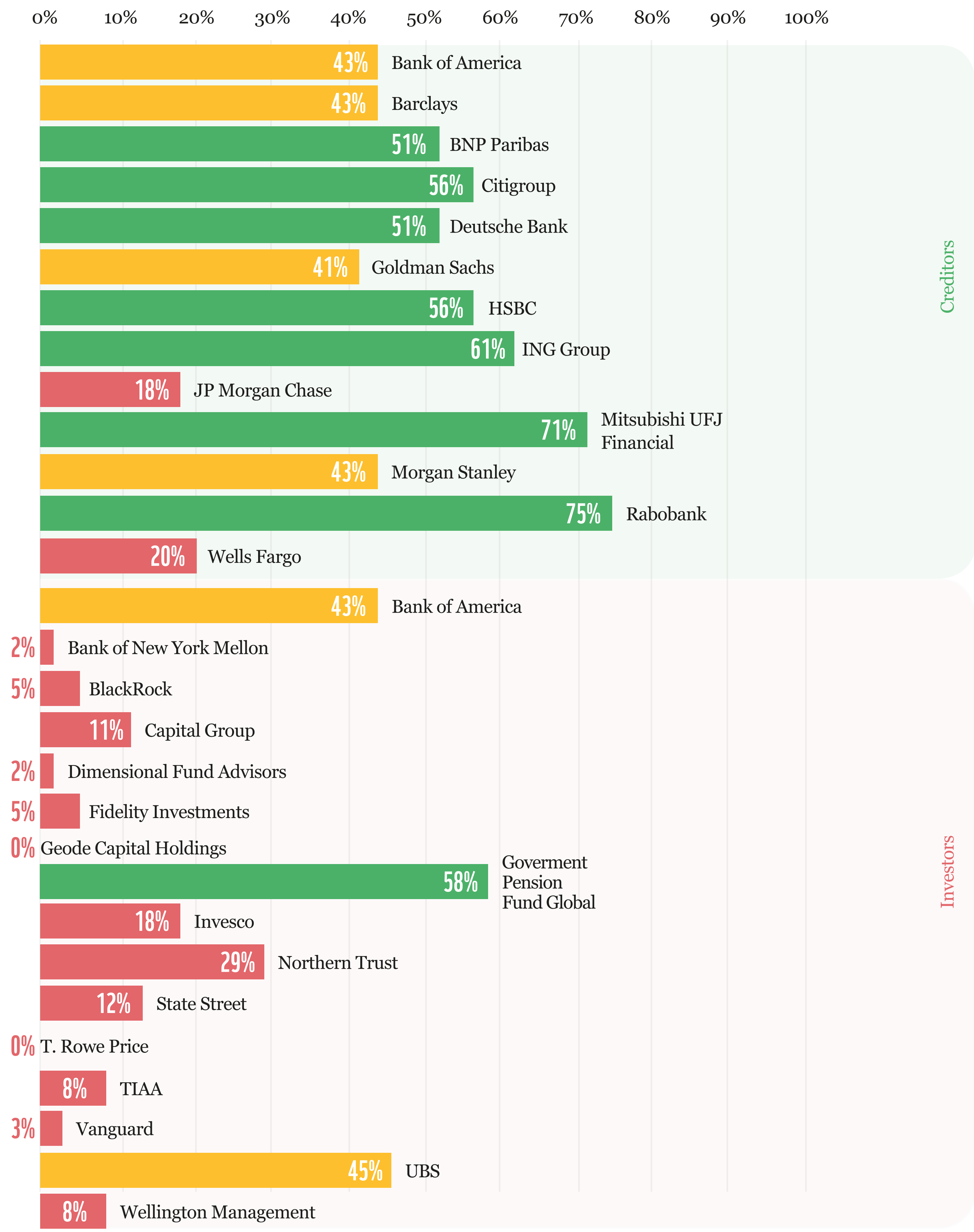


Figure 7

The higher the percentage, the greater the extent to which the creditor's policies include palm as a forest risk commodity in their whole supply chain. Rabobank has demonstrated leadership in framing strong forest-risk policies that takes into account palm oil and it recognises palm oil as a priority forest-risk commodity. They were followed by Mitsubishi UFJ Financial (71%) and ING Group (61%).

On the flip side, investors seem to be lagging behind. Most investors do not seem to have policies in place that take into account palm oil in their entire supply chain before making investment decisions. The lack of policies to prevent deforestation and conversion results in poor policy scores for investors analysed in this study. Although creditors have a relatively higher score as compared to the investors, both still have a long way to go to actively develop and implement sustainable policies that can facilitate making an informed decision before offering their financial services. Moreover, policies are only a starting point, the financiers also need to publish their firm commitments.

2.2 VALUE OF INVESTMENT AND POLICY SCORES OF FINANCIERS

INVESTORS WITH POOR POLICY SCORES TEND TO INVEST HIGHER AMOUNTS IN THESE COMPANIES

Looking at the policy scores of the financiers and their investment values, there seems to be some correlation. The correlation between policy scores and investment value is stronger among investors as compared to creditors. Investors with poor policy scores tend to invest higher amounts in these companies. A similar trend and correlation were not observed among the creditors.

A low policy score indicates that the financier's policies do not cover the entire palm oil supply chain, which could potentially increase their exposure to deforestation and conversion risk. From the study, it can be seen that investors who lack proper integration of existing sustainability regulations tend to offer larger financial assistance which could be due to the absence of enough screening processes. A stronger correlation between policy scores and investment value among investors can be attributed to the lack of incentives among investors to endorse sustainability-linked financing. On the contrary, creditors seem to have better policies due to the nature of their relationship. Creditors tend to be more cautious as their relationship with their clients is long term and non-payment of loans and underwritings is a financial risk.

The robustness of ESG policies and other sustainability regulations of financiers covering the entire palm oil supply chain has an impact on their policy scores.

2.2.1 CORRELATION BETWEEN POLICY STRENGTH AND FINANCING VALUE IN CREDITORS OF PALM OIL COMPANIES

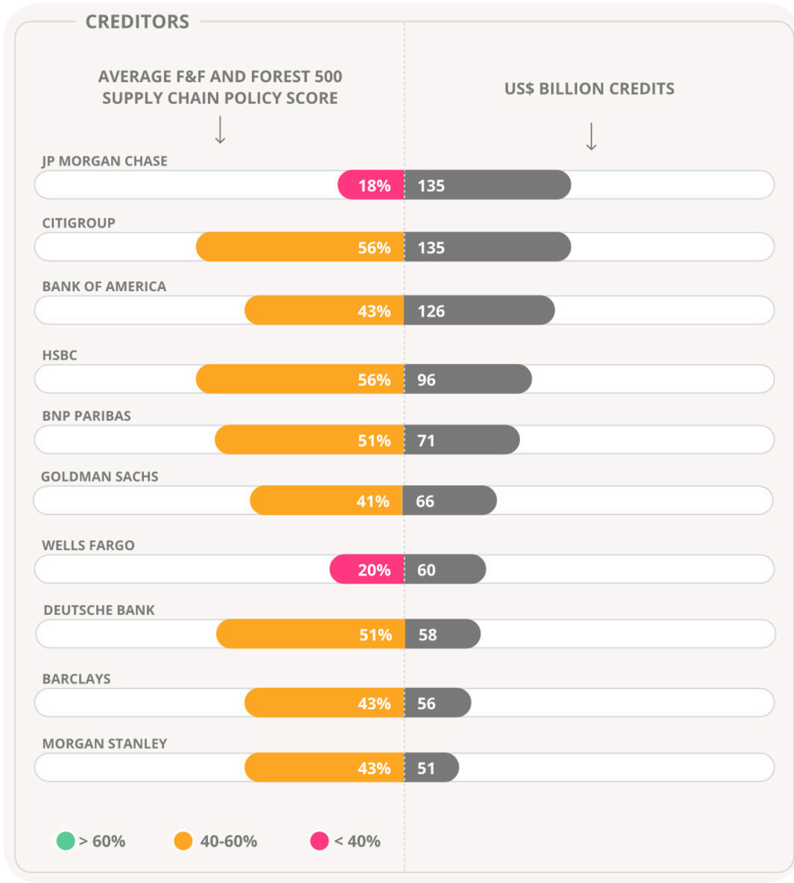


Figure 8

2.2.2 CORRELATION BETWEEN POLICY STRENGTH AND FINANCING VALUE IN INVESTORS OF PALM OIL COMPANIES

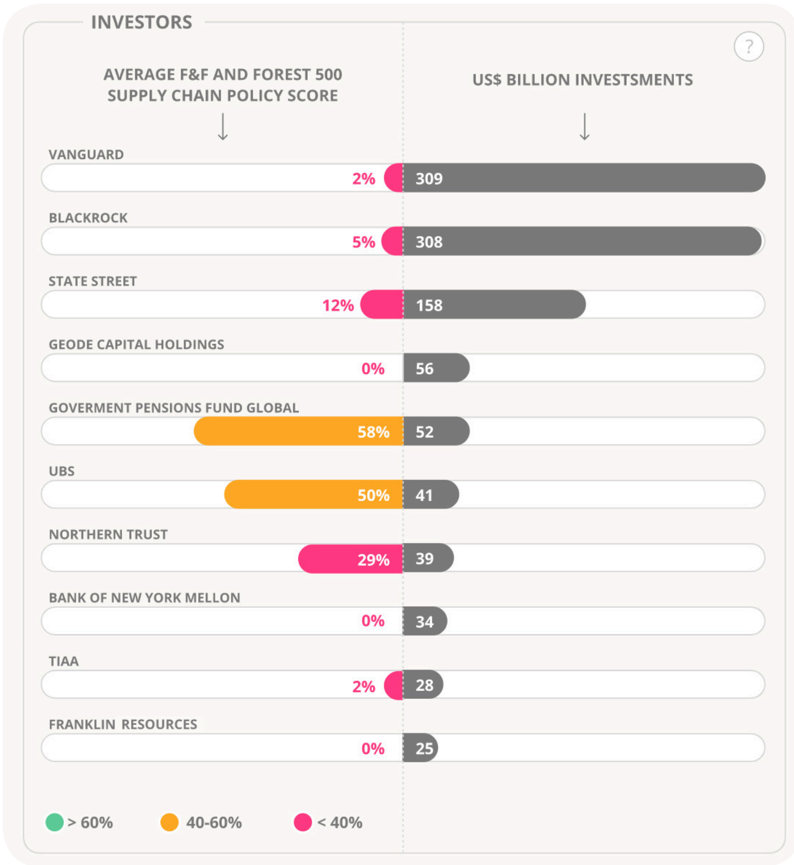


Figure 9

2.3 GAPS IN THE POLICIES AMONG FINANCIERS

An increasing number of financial institutions now include commodity-specific policies. Both creditors and investors largely have policies that focus on specific commodities like palm that they use as a screening mechanism. In addition, free prior and informed consent (FPIC) has also become a minimum standard among financial institutions. We are also seeing financial institutions ensuring the inclusion of transparency requirements from their clients. Increasingly, grievance mechanisms are also demanded from companies they finance.

This shows that financial institutions are taking some steps to mitigate environmental risks associated with certain commodities but their policies need to be strengthened. The study highlights that often labour and gender considerations are not commonly included in the policies of financial institutions. There needs to be greater transparency from financial institutions on their forest impact and their corporate engagement to understand their exposure efficiently. Fewer financial institutions demand their clients to abide by the spirit of existing tax laws. Policies do not explicitly cover instances of corruption and bribery, and concession area transparency.

To set a strong foundation for effective risk mitigation, deforestation, and conversion-free finance policy must cover all financing, investments, insurance, and underlying financial products, and encompass all material risks identified and across the entire supply chain. Investing in POBS companies that are also leading the way in supporting sustainable palm oil within and beyond their supply chain is one of the ways to mitigate these risks.

FINANCIAL INSTITUTIONS ARE TAKING SOME STEPS TO MITIGATE ENVIRONMENTAL RISKS ASSOCIATED WITH CERTAIN COMMODITIES BUT THEIR POLICIES NEED TO BE STRENGTHENED

KEY RECOMMENDATIONS

Our planet can no longer wait for palm oil buyers to turn promises into action. From deforestation to biodiversity loss to global warming, unsustainable practices by the palm oil industry have contributed to the climate and nature crises we currently face. Tackling them calls for accelerated and concerted corporate action, with practices and systems in place to ensure effective implementation and greater stewardship in driving change across the industry. Governments in producer and consumer countries alike, alongside the finance sector, also have a key role to play in promoting palm oil supply chains that protect forests, natural ecosystems, and local communities. With the growing pressure and increasing scrutiny, the financial sector has begun to commit to sustainable financing. However, financial institutions need to increasingly start assessing, managing, and monitoring their deforestation risk exposure.

WWF CALLS ON:

COMPANIES

To ensure and verifiably demonstrate that their own palm oil supply chains are free of deforestation, conversion, and human rights abuse; require their suppliers to take action across their entire operations and only purchase sustainable palm oil that is traceable to the palm oil mill or plantation; and support industry-wide transformation by actively taking part in sustainability platforms and taking on the ground action in palm oil producing landscapes.

POLICYMAKERS

To adopt and enforce binding legislation in both consumer and producer countries that will enable and require all agricultural commodity supply chains to be free of deforestation, conversion, and human rights abuse.

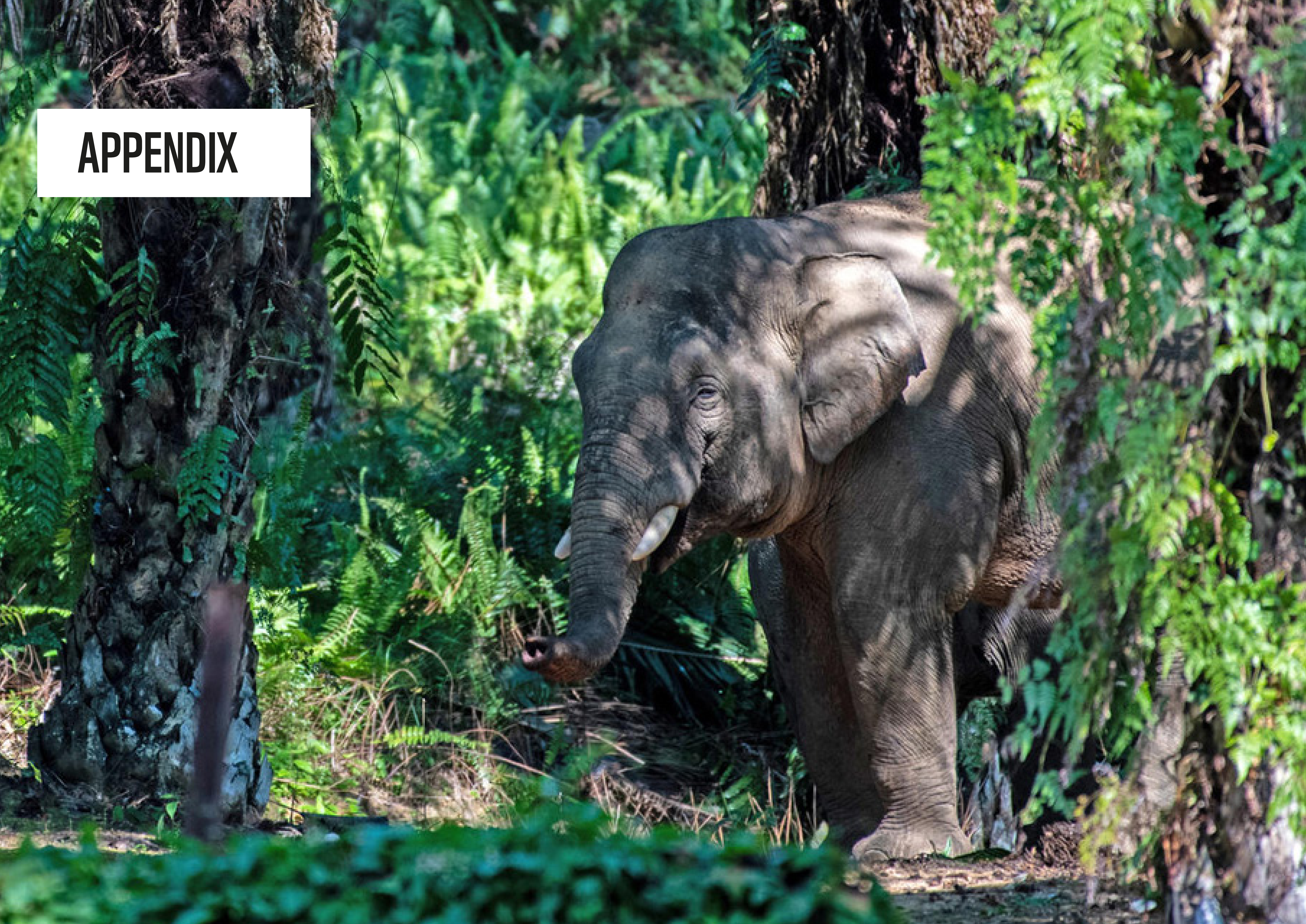
FINANCIAL INSTITUTIONS

To use the POBS scorecard to identify and review any risk of deforestation, conversion, and human rights abuse represented by the buyers assessed in their portfolio, and use the methodology to engage buyers not covered in this scorecard.

CONSUMERS

To use the scorecard to see how well their favourite brands are doing on sustainable palm oil, use social media to raise awareness, and make responsible consumption and purchasing decisions based on the information provided.

APPENDIX



SELECTED FINANCIAL INSTITUTIONS 1

All types of financial institutions are included in the study – commercial banks, asset managers, insurance companies, pension funds, sovereign wealth funds, and private equity funds, among others.

TYPES OF FINANCE 2

This section describes the types of finance included in the research. Financial institutions can invest in companies through a number of modalities. Financial institutions can provide credit to a company. This includes providing loans and underwriting shares and bond issuances. Financial institutions can also invest in the equity and debt of a company by holding shares and bonds. This section outlines the different types of financing, how they were researched and the implications for the study.

CORPORATE LOANS

The easiest way to obtain debt is to borrow money. In most cases, money is borrowed from commercial banks. Loans can be either short-term or long-term in nature. Short-term loans (including trade credits, current accounts, leasing agreements, et cetera) have a maturity of less than a year. They are mostly used as working capital for day-to-day operations. Short-term debts are often provided by a single commercial bank, which does not ask for substantial guarantees from the company.

A long-term loan has a maturity of at least one year, but generally of three to ten years. Long-term corporate loans are particularly useful to finance expansion plans, which only generate rewards after some time. The proceeds of corporate loans can be used for all activities of the company. Often long-term loans are extended by a loan syndicate, which is a group of banks brought together by one or more arranging banks. The loan syndicate will only undersign the loan agreement if the company can provide certain guarantees that interest and repayments on the loan will be fulfilled.

- **Project finance:**
  One specific form of corporate loan is project finance. This is a loan that is earmarked for a specific project.

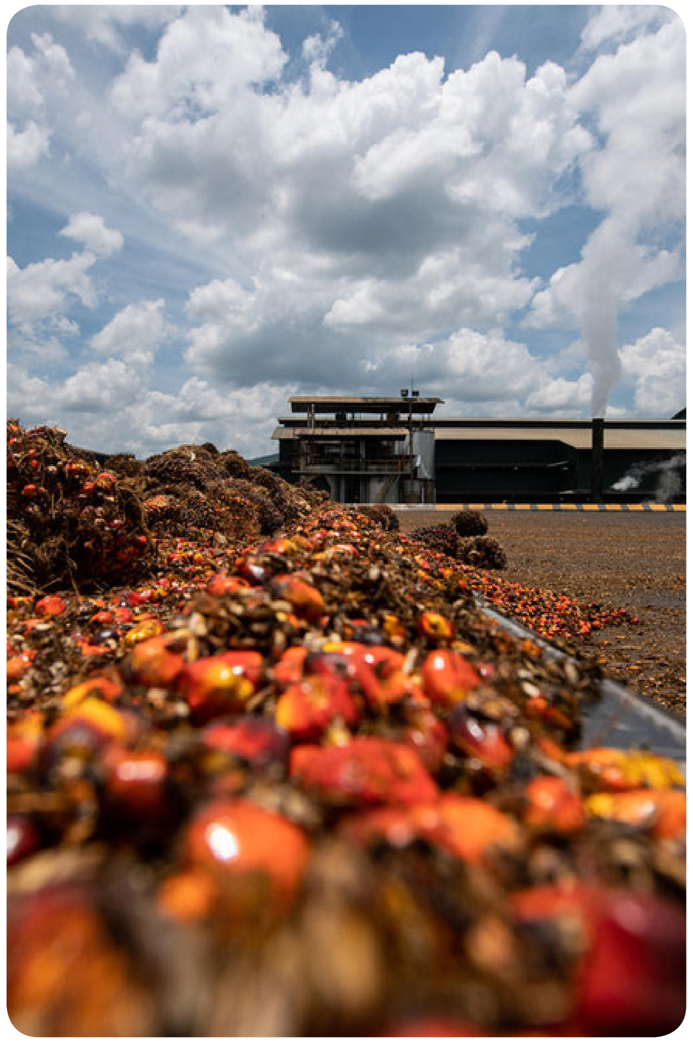
- **General corporate purposes / working capital:**
  Often a company will receive a loan for general corporate purposes or working capital. On occasion, while the use of proceeds is reported as general corporate purposes, it is in fact earmarked for a certain project. This is difficult to ascertain.

SHARE ISSUANCES

Issuing shares on the stock exchange gives a company the opportunity to increase its equity by attracting a large number of new shareholders or increasing the equity from its existing shareholders.

When a company offers its shares on the stock exchange for the first time, this is called an Initial Public Offering (IPO). When a company's shares are already traded on the stock exchange, this is called a secondary offering of additional shares.

To arrange an IPO or a secondary offering, a company needs the assistance of one or more (investment) banks, which will promote the shares and find shareholders. This process is called "underwriting". The role of investment banks in this process therefore is very important.
The role of the investment bank is temporary. The investment bank purchases the shares initially and then promotes the shares and finds shareholders. When all issued shares that the financial institution has underwritten are sold, they are no longer included in the balance sheet or the portfolio of the financial institution. However, the assistance provided by financial institutions to companies in share issuances is crucial. They provide the company with access to capital markets, and provide guarantee that shares will be bought at a predetermined minimum price.



BOND ISSUANCES

Issuing bonds can best be described as cutting a large loan into small pieces and selling each piece separately. Bonds are issued on a large scale by governments, but also by large corporations. Like shares, bonds are traded on the stock exchange. However, in contrast to equity, bonds are not a title of ownership of the company. To issue bonds, a company needs the assistance of one or more (investment) banks which underwrite a certain amount of the bonds. Underwriting is in effect buying with the intention of selling to investors. Still, in case the investment bank fails to sell all bonds it has underwritten, it will end up owning the bonds.

(MANAGING) SHAREHOLDINGS

Banks can, through the funds they are managing, buy shares of a certain company making them or their clients part-owners of the company. This gives the bank a direct influence on the company's strategy. The magnitude of this influence depends on the size of the shareholding and whether the bank manages the relationship with the company on behalf of the asset owner or not.

As financial institutions actively decide in which sectors and companies to invest, and are able to influence the company's business strategy, this research will investigate the shareholdings of financial institutions of the selected companies. Shareholdings are only relevant for stock-listed companies. Not all companies in the study are listed on a stock exchange. The company selection has tried to take this into account by including the major companies in the relevant sectors. However, some ownership forms may dominate in certain sectors under analysis. Additionally, some ownership forms are more prominent in some countries.

Shareholdings have a number of peculiarities that have implications for the research strategy. Firstly, shares can be bought and sold on the stock exchange from one moment to the next. Financial databases keep track of shareholdings through snapshots or filings. This means that when a particular shareholding is recorded in the financial database, the actual holding, or a portion of it, might have been sold, or more shares purchased. Secondly, share prices vary from one moment to the next.

(MANAGING) INVESTMENTS IN BONDS

Banks can also buy bonds of a certain company. The main difference between owning shares and bonds is that the owner of a bond is not a co-owner of the issuing company; the owner is a creditor of the company. The buyer of each bond is entitled to repayment of the principal after a certain number of years (at maturity), and to a certain interest during (fixed or variable) each of these years.

FINANCING RESEARCH METHODOLOGY 3

The financing research consists of two components: creditor research (i.e. loans and issuance underwriting), and investor research (bond- and shareholdings). The methodologies are described in more detail below.

CREDITOR RESEARCH 3.1

This research uses financial databases Refinitiv, Bloomberg, TradeFinanceAnalytics, IJGlobal, annual reports other company periodic disclosures, company websites, company registry entries where available, and media archives, to identify the financial institutions providing loans and issuance underwriting services to the selected palm oil buyers. This research approach helps to uncover both syndicated and bilateral financing where this information is available.
Creditor links are researched for the period January 2016 to December 2021. All identified creditor data is integrated into a fully referenced Excel workbook – Palm oil buyers financiers dataset. Financial databases often record loans and issuance underwriting when these are provided by a syndicate of financial institutions. Company reports and publications, company register filings, and the media will also provide information on loans provided bilaterally, i.e. between one bank and the company in question. The level of detail per deal often varies. Some sources may omit the maturity date or term of the loan, the use of proceeds, or even the exact issue date. Financial databases often do not report on the proportions of a given deal that can be attributed to the participants in the deal. In such instances, this research calculated an estimated contribution based on the rules of thumb described below.

Individual bank contributions to syndicated loans and underwriting (bond & share issuance underwriting) were recorded to the largest extent possible where these details were included in financial databases, or company or media publications.
In many cases, the total value of a loan or issuance is known as the banks that participate in this loan or issuance. However, often the amount that each individual bank commits to the loan or issuance has to be estimated.

In the first instance, this research attempted to calculate each individual bank's commitment on the basis of the fee they received as a proportion of the total fees received by all financial institutions. This proportion (e.g. Bank A received 10% of all fees) was then applied to the known total deal value (e.g. 10% x US$ 10 million = US$ 1 million for Bank A).

Where deal fee data was missing or incomplete, this research used the book ratio. The book ratio (see formula below) is used to determine the spread over bookrunners and other managers.

$$\textbf{Bookratio} = \frac{\textbf{number of participants - number of bookrunners}}{\textbf{number of bookrunners}}$$

Table 1 shows the commitment assigned to bookrunner groups with our estimation method. When the number of total participants in relation to the number of bookrunners increases, the share that is attributed to bookrunners decreases. This prevents very large differences in amounts attributed to bookrunners and other participants.

Table 1 Commitment to assigned bookrunner groups

Bookratio	Loans	Issuances
> 1/3	75%	75%
> 2/3	60%	75%
> 1.5	40%	75%
> 3.0	< 40%*	< 75%*

* In case of deals with a book ratio of more than 3.0, we use a formula that gradually lowers the commitment assigned to the bookrunners as the book ratio increases. The formula used for this:

$$\frac{\frac{1}{\sqrt{\text{bookratio}}}}{1.443375673}$$

The number in the denominator is used to let the formula start at 40% in case of a book ratio of 3.0. As the book ratio increases the formula will go down from 40%. In the case of issuances, the number in the denominator is 0.769800358.

INVESTOR RESEARCH 3.2

This research uses Bloomberg, Refinitiv, EMAXX, Profundo's pension fund portfolio database, and Preqin to identify the investors in the bonds and shares of the selected palm oil buyers.

Bonds and shareholdings are researched at the most recent filings at the time of the research. All identified investor data is integrated into the fully referenced Palm oil buyers' financiers dataset.

FINANCIAL INSTITUTION FOREST-RISK COMMODITY POLICY REVIEWS 4

This research reviewed the forest-risk policies of the top 20 financiers of the selected palm oil buyers (top 10 creditors, top 10 investors) to determine the extent to which they cover the entire palm oil supply chain. The review focused on three publicly available sources: Forests & Finance; Forest 500, and; WWF's SUSBA.

As a founding member, and the research organization behind Forests & Finance, Profundo has access to the detailed financial institution policy assessments as hosted on Forests & Finance. The website provides 200 forest-risk policy assessments of financial institutions (100 top creditors, 100 top investors). All policy assessments have been shared with the relevant financial institutions. The assessments were last updated in September 2021.

The objective of the F&F Policy Assessment Methodology is to assess the quality and robustness of the financing and investment policies that financial institutions have adopted to avoid getting involved in or contributing to, deforestation and related environmental, social and governance issues. The 35 assessment criteria included in the F&F Policy Assessment Methodology are based on international agreements, and conventions (mostly from bodies linked to the United Nations, such as the ILO and UNEP) and best practices in the global business community and the financial sector with respect to forest-risk commodities. Table 2 presents the Forests & Finance policy assessment criteria.

Table 2 Forests & Finance policy assessment criteria grouped by category

No	Category	Criteria
1	Environment	Companies and their suppliers must commit to zero deforestation and no conversion of natural forests and ecosystems
2		Companies and their suppliers must not drain or degrade wetlands and peatlands
3		Companies and their suppliers must not convert or degrade High Carbon Stock (HCS) in tropical forest areas
4		Companies and their suppliers must not operate in, or have negative impacts on, protected areas
5		Companies and their suppliers must identify and protect High Conservation Value (HCV) areas under their management
6		Companies and their suppliers must not use fire for land-clearing activities and fight fires

No	Category	Criteria
7	Environment	Companies and their suppliers must minimize their impacts on groundwater levels and water quality
8		Companies and their suppliers must not harvest, nor trade in, endangered species and must protect the habitats of endangered species
9		Companies and their suppliers must not use nor introduce genetically modified species or invasive alien species into the environment
10		Companies and their suppliers must minimize or eliminate the use of pesticides
11	Social	Companies and their suppliers must respect the right of Indigenous peoples to give or withhold Free, Prior and Informed Consent (FPIC) if they could be affected by planned operations.
12		Companies and their suppliers must respect the right of all communities with customary land rights to give or withhold Free, Prior and Informed Consent (FPIC) if they could be affected by planned operations.
13		Companies and their suppliers must establish human rights due diligence processes and monitoring systems
14		Companies and their suppliers must respect the broader social, economic and cultural rights of communities affected by their operations, including the right to health and the right to an adequate standard of living
15		Companies and their suppliers must commit to the resolution of complaints and conflicts through an open, transparent and consultative process
16		Companies and their suppliers must maintain zero tolerance towards violence and the criminalization of land, environmental, and human rights defenders
17		Companies and their suppliers must not engage in forced labour nor in child labour
18		Companies and their suppliers must uphold the rights to freedom of association, collective bargaining and freedom from discrimination

No	Category	Criteria
19	Social	Companies and their suppliers must pay at least a living wage
20		Companies and their suppliers must protect the safety and health of workers
21		Companies and their suppliers must have a gender-sensitive zero tolerance policy towards all forms of gender-based discrimination and violence
22	Governance	The financial institution has integrated sustainability objectives in its governance structure
23		The financial institution is transparent on the actions through which its forest-risk policies are implemented and enforced
24		The financial institution applies its forest-risk policies to the entire corporate group
25		The financial institution is transparent on its investments and financings in forest-risk commodity sectors
26		The financial institution discloses its forest-related impacts, including its forest-related financed GHG emissions and its forest footprint
27		The financial institution is transparent on its engagements with companies in forest-risk commodity sectors
28		The financial institution commits to a transparent and effective grievance mechanism regarding its financing of, or investments in, companies in forest-risk commodity sectors
29		Companies and their suppliers must provide proof of legality of their operations and commodity supplies, in particular proof of compliance with all prevailing laws and regulations on land acquisition and land operation
30		Companies and their suppliers must ensure supply chain transparency and traceability
31		Companies and their suppliers must publish geo-referenced maps of all the concession areas and, farms under their management

No	Category	Criteria
32	Governance	Companies and their suppliers starting new operations or expanding their operations must publish a social and environmental impact assessment
33		Companies and their suppliers must not get engaged in corruption, bribery and financial crimes
34		Companies and their suppliers must comply with the letter and the spirit of the tax laws and regulations in the countries in which they operate and must not set up corporate structures solely for tax avoidance purposes
35		Companies and their suppliers must publish their group structure and country-by-country data

The policy documents and other relevant publications, such as sustainability reports, of each financial institution have been researched to assess if the financial institution commits to the criteria listed in Table 2. For each of the Environmental, Social and Governance criteria, the financial institution is assigned 0, 8.5 or 10 points. In general, the scoring guidelines of the F&F Policy Assessment Methodology for the ESG criteria are as follows:

- **0 points:** the financial institution does not commit to the criteria
- **8.5 points:** the financial institution commits only partially to the criteria, often because the criteria are not applied to the suppliers of the company
- **10 points:** the financial institution commits unequivocally to the criteria and applies it to the company and its suppliers

More specific scoring guidelines for each of the ESG criteria are defined in extended assessment guidelines (available on request).

The F&F policy assessment scoring identifies when policies are applied throughout the supply chain, as when a policy is not applied to suppliers the financial institution will only score 8.5 if it has a relevant policy criteria.

This study combines the findings from the F&F policy assessment with further research on the Forest 500 financial institution policy assessments. Forest 500 includes an assessment element determining whether a financial institution's forest-risk mitigation policy applies to all segments of the palm oil supply chain.

These findings will be further combined with WWF’s SUSBA for additional information on bank policy assessments.

The findings from the three different policy assessment data sources are combined into an Excel file for analysis. The findings will be summarised in tables and charts to be integrated into the presentations.

For contact details and further information, please visit our international website at wwf.panda.org