

# The Box: algorithmic climate impact for FI markets

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This article proposes a counterparty de-selection algorithm – “the Box”<sup>1</sup> – as a dynamic and low-cost approach that asset managers, asset owners and bond issuers with climate goals can use to steer fossil fee focused banks into better climate alignment over time.

Our selection method, focusing on relative fee generation from fossil debt capital market transactions, indicates that SMBC, MUFG (regional banks, Asia), Société Générale (regional banks, Europe), RBC (regional banks, NA) and Citi (global banks) stand out on their high relative fee earnings from fossil intensive capital market transactions and thus should be at risk of being deselected and “boxed.”<sup>2</sup>

Our argument is that fee revenues from various market transactions are as attractive to banks as issuing loans from their own balance sheets, and even more so as direct loan book exposure to fossil deals has started to decrease. In order to proxy fee revenues from fossil activities, we construct league table data on relative fossil bond syndication, i.e. how much of total syndication fees come from high emissions related sectors.

Armed with this fee proxy, the article develops the algorithm that dynamically deselected banks as counterparties using a repeating “worst-of” method. The approach has the advantage of being quick to implement, quantitatively based, low cost as well as giving rapid positive feedback to at-risk banks’ potential efforts to reduce non-climate aligned debt capital markets activities. As such, it should be an effective way for asset managers, -owners and bond issuers to get better climate alignment from their financial services providers.

Figure 1. The Box candidates: league table (Sep 2019-21) in corporate bonds/loans issuance in fossil intensive sectors, normalized for total syndication revenues. Please refer to the full article for methodology and alternative rankings. Source: Bloomberg, AFII.

Bank	Fossil fee share of total	No. fossil deals	Fossil deals prorated USDbn	League rank: fossil	League rank: all	Rank change
SMBC	14.2%	297	31.28	6	15	9
MUFG	12.2%	320	32.92	5	14	9
SocGen	10.7%	195	22.53	15	19	4
Mizuho	7.7%	266	25.69	11	10	-1
HSBC	7.4%	218	29.59	7	11	4
RBC	7.2%	233	27.79	10	12	2
Credit Agricole	7.1%	174	20.91	18	18	0
Citi	7.0%	327	54.48	2	3	1
Wells Fargo	6.0%	248	28.23	8	5	-3
BNP	6.0%	218	40.71	4	7	3
Barclays	6.0%	224	28.11	9	6	-3
Deutsche Bank	4.6%	144	15.77	23	9	-14
JP Morgan	4.5%	331	58.12	1	1	0
BofA	4.4%	295	44.08	3	2	-1
Goldman Sachs	4.0%	178	21.44	17	4	-13
Morgan Stanley	3.4%	156	23.91	14	8	-6
UBS	3.0%	35	3.13	57	34	-23
Credit Suisse	2.8%	123	9.21	35	13	-22

<sup>1</sup> The expression is derived from “putting [the relationship] in the freezer box”, i.e. to cease current activities with the option of thawing relationships once re-alignment has been achieved. It is a well-tested markets method to discipline unwanted behavior and ensure longer term alignment of a bank’s and its client’s interests. See “[EU freezes 10 banks out of bond sales over antitrust breaches](#)”, Financial Times, 15 Jun 2021, for a recent example. The concerned banks re-aligned within hours after the EU putting them in the freezer.

<sup>2</sup> See page 5ff. for the exact methodology as well as a battery of robustness tests.

## Background: Fee business vs loan book exposures

Traditionally, banking sector exposure to risk has generally been discussed in terms of loan book exposures, and less in terms of fee generation business. In the context of climate change mitigation efforts, looking at a bank's loan book to fossil companies has been the natural starting point. And pressure has definitely started to build on that front:

*"We can't do it any more. If banks want to be seen to be green, they can't have clients like SUEK."* [IFR](#), 10 Sep 2021.

For banks, fee business – as opposed to balance sheet business – is key to profitability, especially in light of capital restrictions following the Great Financial Crisis. A bank may have a return on equity (ROE) requirement of 10% from its shareholders. If the bank then gives a loan to company, and the regulator requires a risk weight of 20% on that loan<sup>3</sup>, the effective revenue that the bank requires from the loan is  $10\% \times 20\% = 2\%$ . If we take an example of a USD100mn loan, the bank needs to make USD2mn in order to make the deal satisfy its ROE requirement. This means that the bank needs a 200 basis point / 2% margin on the loan.

However, if the bank is instead able to let the company raise the loan through the bond market, with the bank just syndicating the transaction, then the bank has very little balance sheet exposure. In this example, let us assume that the bank only takes a USD300k equity-equivalent exposure<sup>4</sup> in a bond syndication process, but is able to generate a USD100k fee from it. The ROE on such a transaction is then  $100/300 = 33.3\%$ . This is the reason why DCM bankers drive better cars than commercial loan bankers when they are successful at bringing in deals.

The lines between on-balance-sheet lending business and fee business often become blurred. Banks will take on low-margin lending to a company in order to win the lion's share of the company's fee business, e.g. banking services or certain associated trades such as bond or equity capital financing.

Figure 2. (Left) SUEK preliminary bond deal information. (Right) USD1bn loan facility maturing in 2022 deal information. Source: Bloomberg.

Role	Name	Amount (M)
Joint Lead Managers-Books	Alfa Bank	
Joint Lead Managers-Books	Bank of China	
Joint Lead Managers-Books	BofA Securities	
Joint Lead Managers-Books	Citi	
Joint Lead Managers-Books	Commerzbank	
Joint Lead Managers-Books	Gazprombank	
Joint Lead Managers-Books	Renaissance Capital Holdings Ltd	
Joint Lead Managers-Books	Sberbank CIB CJSC	
Joint Lead Managers-Books	VTB Capital	

Agent(s)	Name
	Deutsche Bank AG/Amsterdam

Lender(s)	Name
	Bank of China Ltd/London
	China Construction Bank Corp/L.
	Commerzbank
	Credit Suisse
	Deutsche Bank AG/Amsterdam
	ING Bank NV
	Intesa Sanpaolo
	Raiffeisen Bank International
	Sberbank CIB CJSC
	Societe Generale
	UniCredit Bank AG
	VTB Capital

Enter climate change and the growth of ESG in the banking and financial sector. Following the focus on balance sheets, a number of banks have started making various commitments around not

<sup>3</sup> This means that in order to make a loan of USD100mn, the bank needs to stow away USD20mn of equity. For simplicity's sake, we disregard non-regulatory capital costs here.

<sup>4</sup> The bank may need to charge some risk to a bond syndication transaction through intermediary holdings of bonds as part of market stabilization, etc.

using their *balance sheet* for deep fossil purposes. But to our knowledge, there is still little being committed with regard to the *fee* business.

Consider the narrative provided by a recent inaugural bond deal for Russian coal miner SUEK<sup>5</sup> referenced in the loan banker quote above. Rather than seeking a loan, the issuer tapped the bond market instead. The bond deal, SUEK USD3.375 09/26, ISIN XS2384174228 (REGS) US78486MAA80 (144a), is likely to be part of a prefunding program for a maturing USD1bn loan deal, FIGI BBG00GSMKLL3, provided by Commerzbank, Credit Suisse, Deutsche Bank, ING, Intesa, Société Générale and Unicredit.<sup>6</sup> We would be hard-pressed to see those banks – or indeed any banks – rolling over / renewing that loan facility given the low popularity of bringing thermal coal onto balance sheets, as indicated by the loan banker quote above. However, the deal met a healthy appetite for syndication into the bond market instead, with Commerzbank (CMZB), Bank of America and Citibank willing to collect fees for the trouble, despite being criticized for the transaction.<sup>7,8</sup> One could argue that the deal is a prime example of a perceived ESG arbitrage between loan book and fee revenue exposure.

Another recent example is the Saudi Aramco bond issuance in early June (2021).<sup>9</sup> The banks leading that DCM effort were in general fairly committed ESG pledgers, despite – we would argue – Aramco scoring fairly low on climate alignment, social issues such as women and gay rights, as well as governance.<sup>10</sup>

This deal also presents some interesting implications for other bond issuers. Some of the Aramco syndicating banks went straight on to sell green products which may strike market outsiders as odd: can the same syndication and sales teams pitch a heavily fossil and non-ESG compliant deal one day, and a green bond the next?<sup>11</sup> In our observation, that question has actually rarely been asked before.

It is important to note that fee business has the same negative ESG impact implications as on-balance-sheet lending. The question that could be asked in this context: is it as ‘bad’ to provide a bond syndication service as it is to provide a straight loan to a thermal coal miner? We apply the following logic: a loan to a high-emitting issuer can be seen as increasing the supply of capital to that ‘bad’ issuer, thereby increasing the price – conversely decreasing the yield or financing interest rate – of the associated bad asset. Fee business, such as bond syndication, seeks to achieve the same goal: the bond syndicate seeks to maximize the supply of capital to the ‘bad’ issuer with the

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<sup>5</sup> SUEK is one of the biggest thermal coal exporters in the world. AFII conducted an analysis of this particular bond issue in “[Banking on coal: SUEK bond review](#)”, 2 Sep 2021.

<sup>6</sup> Additional regional lenders on the book, see Figure 2.

<sup>7</sup> There were additional joint lead managers but with domestic rather than global footprint.

<sup>8</sup> As a precursor to the issuance, please see “[Investors raise red flag over coal miner’s debut plans](#)”, IFR, 3 Sep 2021. “[Suek finds sanctuary in bond markets](#)”, IFR, 10 Sep 2021, has a telling title with regard to how the deal eventually progressed.

<sup>9</sup> The largest tranche of that issuance was the Aramco USD1.602 06/26 Sukuk bond, ISIN XS2352861814 (REGS), US78397PAB76 (144a). Tier 1-2 JLMs were BNP, Citi, Credit Agricole, Goldman Sachs, HSBC, JPMorgan, Mizuho, Morgan Stanley, MUFG, SMBC, SocGen and Standard Chartered.

<sup>10</sup> For purposes of this analysis, we consolidate the ESG balance sheet of Aramco and its 98.18% owner, the Kingdom of Saudi Arabia and its monarch. We recognize that our view on the ESG quality of the Aramco bond deal is disputed. For example, Capital Group took down an impressive USD375mn of the issue while “systematically incorporating environmental, social and governance issues into [the] investment process,” [ESG at Capital Group](#), Capital Group website, accessed 10 Sep 2021.

<sup>11</sup> Terna issued a green bond, TRNIM EUR0.375 06/29 ISIN XS2357205587 a week after the Aramco deal. Prominent leads on the TRNIM deal were BNP, DB, JP Morgan, Natixis, ISPIM, UCGIM and Santander.

same favorable price and interest rate implications. In terms of access / supply of capital and hence real-world impact, the on-balance-sheet and fee activities are very similar.

Applying that logic and referring back to the SUEK and Aramco examples, it is in our opinion clear that the institutions engaged in such bond syndications are actively trying to increase the supply of capital to and lower financing interest rates for such issuers – to the detriment of many of their other counterparties (those affected by climate change) – in order to generate economic gains.

### Fee business as a market impact tool

There is a further side to fee generation. Banks rely on fees not only from bond syndication for ‘bad’ businesses but also ‘good’ ones, as well as from other activities (e.g. bid-offer spreads in secondary market trading) with their broader client base.

By the end of the year, the fees that a bank made from issuing green bonds will be mixed into the same bag of fees generated from SUEK-like bond deals. Given the fungibility of money, it is impossible to split the fees ex post. Hence, the only real way to achieve separation is not to direct one’s fees into the same bag at all, which leads us to:

#### *The Box*

The process of ceasing doing business with a certain bank is generally called “putting the bank in the freezer / box.” It is simply a process of putting a relationship into cryostasis, i.e. ceasing to do business with a view to letting the relationship thaw out once certain objectives have been achieved. It is a potentially powerful, yet low-cost, tool for bank counterparties to manage bank relationships and incentives.

The effect of “boxing” a bank can be impressive, especially if action comes from a large counterparty. It is not only a matter of the direct revenue effects, but has a reputational dimension too: if sovereign wealth fund X says that they are not doing business with bank Y, then bond issuer Z will be less inclined to issue their bond through Y. At the prospect of such feedback effects, banks as business organizations are likely to seek to change. Losing an important buy-side client with associated reputational loss (even if temporarily) will probably prove more consequential than any gain from running the odd bond mandate.

Figure 3. [EU freezes 10 banks out of bond sales over antitrust breaches](#), Financial Times, 15 Jun 2021. Redacted. Note that the approach taken by the EU differs from the one proposed in this article in terms of its breadth.



At the same time, de-selecting a bank counterparty poses low costs to the asset manager / owner / bond issuer. Indeed, that side engages in this practice today, effecting positive changes in service or economic terms over the medium to long term.

Now, what if we could use this time-tested method to actually make a positive climate impact? For example, consider the table at the front ( Figure 1) as a proxy indicator of which banks have the most appetite to do fossil funding deals. As an investor, one might consider that the top fossil banks’ business efforts leading to further global warming are not aligned to one’s own stakeholders’ long-term economic interests. The bond issuer has both that broad but also a

narrower interest: with the flow and preference of investors into ESG / climate aligned products, why let teams with low credibility on climate sell one's bonds? The answer should be simple: put one or two in the box.

## “The Box” algorithm for asset managers, –owners and bond issuers

Where this leads us is to an alternative route of generating positive climate impact by not only putting demands on banks' balance sheet exposures, but also on their fee generation business. The basic principle is straightforward: penalize the worst offenders today in order to incentivize those institutions to align better with the asset owner / manager / bond issuer's (AOMBI's) own preferences around climate in the medium to long term.<sup>12</sup>

A core principle here, derived from the practical experience of using boxing in the market in general, is that one does not try to fight all perceived bad actors at once. Rather, one focuses on one or two at a time. This has two advantages. First, an AOMBI in international fixed income markets will often have 20+ banks to select from. Cutting one will only marginally affect the liquidity and trading cost, or fee cost, spectrum for the AOMBI. Second, it increases the incentives for the boxed out institution to better itself through pure peer pressure. Naming one thief in the monastery is powerful; naming half the monks thieves is less so. Peer pressure also works internally in the banks that get boxed: all the traders and other activities that lose business due to the oversteps of one particular activity in the bank have a very strong incentive to fix the latter.

To operationalize this, we suggest the following algorithm simply named “The Box”:

1. Generate a league table of banks' fossil activities, illustrated in the section below.
2. Communicate to the top fossil bank(s) that they are ‘at risk’, either bilaterally or publicly. This will give a fair chance to more banks than the one(s) being de-selected to improve their business a priori.
3. Execute and communicate a de-selection for the top fossil bank(s) in terms of business flows. For example:
  - a. Asset owners/managers: De-list the institutions from the eligible counterparty list for new trades for a certain set of products such as cash bonds, credit derivatives, IR swaps and futures, FX transactions. On primary market transactions, communicate such preferences to the syndicate.
  - b. Bond issuers: De-list the institution from syndicating bond deals or executing other financing transactions over the boxed period.
4. After a pre-set period, say 3-6 months, repeat the process starting at step 1.

In terms of practical viability, as noted before, “box” strategies are already in play in many institutions. Furthermore, most AOMBIs have prepared routines to shut out particular financial suppliers, using hard-won experiences from the Lehman Brothers era. We note that this could generate some interesting KPIs and data on behalf of AOMBIs. If one of the de-selected banks actually adjusts its fee business' efforts that serve to lower the cost of capital for climate-negative activities, this will be tallied in the league tables, and the AOMBI can make an argument for its contributory efforts to that. A successful intervention provides a good narrative to share in the organization's annual sustainability report.

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<sup>12</sup> As a climate focused organisation, we will use climate as the main KPI, but the proposed methodology is straightforward to implement across essentially any KPI.

## Fossil fee league table generation

We suggest looking at fossil bond syndication volume and scaling it for general bank syndication revenues to get a gauge of banks' relative focus on capital provisioning to the fossil sectors. In essence, a big bank will have more fossil related fees just because of its size in the market – what should be important is rather the relative fee intake from fossil deals. Following this, we generate %-age fossil fee revenue numbers as the ratio of fossil syndication fees / total syndication fees. Note here that the fee revenues are a mix of reported and Bloomberg estimated numbers. We would be careful to interpret the absolute values of such numbers, but rather focus on ordering.

We define a fossil bond issue/deal as any issue with a BICS2 level classification of “Coal Operations”, “Exploration & Production”, “Integrated Oils”, “Oil & Gas Services & Equipment”, “Pipeline” or “Refining & Marketing” and, to start with, tally all new league table eligible syndicated bond issues and loans between Sep 2019-Sep 2021 on a fee revenue and bank-by-bank basis.

As the algorithm needs to operate vis-à-vis counterparties that the asset manager, -owner and bond issuer, we divide the set of banks into three categories, tier 1, tier 2 and others, where:

**Tier 1 (high probability counterparties):** Banks in the top-20 of global issuance or otherwise important trading counterparties

**Tier 2: (lower probability counterparties):**– Banks that we have traded sporadically with or considered to pick up, or alternatively important regional institutions

This categorization is somewhat subjective and reflective of the author's own trading experience in a hard-currency corporate bond context,<sup>13</sup> but can be replicated by AOMBIs themselves vis-à-vis their individual business relationships. We provide a list in Figure 4 where we establish two Japanese banks (SMBC and MUFG) as clear sector leaders in fossil fee generation. Mizuho, another Japanese bank is in fourth place. From the global trading banks, Société Générale (SocGen) comes in at a high 10.7% and is followed by a cluster of banks just north of 7% (HSBC, RBC, Credit Agricole and Citi). We note that with BNP Paribas also relatively high on the list, French banks seem to have considerable fossil fee revenue generation tendencies.

Figure 4. Fossil league table based on normalized proxy, Tier 1 (left) and tier 2 (right) counterparties. Note that the tier 2 table is abbreviated and only covers the top names in terms of fossil fee dependency. Source: Bloomberg, AFII.

Bank	Fossil fee share of total	No. fossil deals	Fossil deals prorated USDbn	League rank: fossil	League rank: all	Rank change	Bank	Fossil fee share of total	No. fossil deals	Fossil deals prorated USDbn	League rank: fossil	League rank: all	Rank change
SMBC	14.2%	297	31.28	6	15	9	NAB	14.1%	33	1.57	82	98	16
MUFG	12.2%	320	32.92	5	14	9	StanChart	13.4%	127	8.10	38	49	11
SocGen	10.7%	195	22.53	15	19	4	TD Securities	12.6%	175	25.31	12	21	9
Mizuho	7.7%	266	25.69	11	10	-1	ABN Amro	10.2%	27	1.55	83	96	13
HSBC	7.4%	218	29.59	7	11	4	Scotiabank	9.9%	218	21.80	16	20	4
RBC	7.2%	233	27.79	10	12	2	ICBC	9.6%	99	24.96	13	17	4
Credit Agricole	7.1%	174	20.91	18	18	0	Lloyds	8.4%	25	2.88	62	77	15
Citi	7.0%	327	54.48	2	3	1	Santander	7.9%	118	13.43	25	27	2
Wells Fargo	6.0%	248	28.23	8	5	-3	ING	7.7%	103	8.65	36	31	-5
BNP	6.0%	218	40.71	4	7	3	ANZ	7.5%	59	2.60	66	75	9
Barclays	6.0%	224	28.11	9	6	-3	UniCredit	6.6%	75	10.84	33	30	-3
Deutsche Bank	4.6%	144	15.77	23	9	-14	DNB	5.7%	32	2.53	67	73	6
JP Morgan	4.5%	331	58.12	1	1	0	BMO	5.7%	114	18.01	19	22	3
BofA	4.4%	295	44.08	3	2	-1	BBVA	5.7%	81	4.00	48	48	0
Goldman Sachs	4.0%	178	21.44	17	4	-13	ISPIM	5.5%	55	1.55	84	53	-31
Morgan Stanley	3.4%	156	23.91	14	8	-6	Natixis	5.4%	67	3.98	49	42	-7
UBS	3.0%	35	3.13	57	34	-23	Rabobank	5.1%	37	3.43	52	59	7
Credit Suisse	2.8%	123	9.21	35	13	-22	[Further list - lower exposures - available upon request]						

<sup>13</sup> For example, we exclude a fair number of EM/Chinese banks from the lists – although sizable in syndication, their flow trading activities are deemed to be small in the international context.

Among the “super-prime”, HSBC and Citi stand out. Indeed, if there is anything contrary to popular belief about the table, it is the relatively low ranking of US banks. One could speculate that the relatively low fossil fee dependency percentages on the Americans could be due to high issuance in sectors that the other banks are not accessing, e.g. US munis, but looking at the third column of “Fossil deals prorated,”<sup>14</sup> it is evident that in absolute numbers, the high fossil banks actually are not far off the much larger US banks. SocGen with annual earnings around EUR24bn is attributed USD22.5bn versus JP Morgan with estimated quarterly earnings of USD29.6bn is attributed 58.1bn. Had SocGen just been a small JP Morgan, that would have put the expected fossil fee generating volume to USD13.9bn instead.

Another way to look at the relative effort of banks to run fossil deals is highlighted in the final column, where we simply compare the rank of each bank in the total league table versus their rank in the fossil league table. A high positive number indicate staunch efforts: for example, SMBC and MUFG improve their league table rankings by 9 positions when looking specifically at fossil issuance. On the other side, we see DB and GS move down more than a dozen notches on the league table when switching to the fossil criteria.<sup>15</sup>

Turning to tier 2 banks, National Australia Bank (NAB) comes out at a level almost in line with the sector-leading Sumitomo, which is perhaps not surprising for those who have followed the name over 2021 (e.g. see “[NAB’s Port of Newcastle loan is peak greenwashing](#)”, AFR, 6 May 2021). Standard Chartered ranks high, which is not too surprising given a high EM focus, similarly to TD with its high Canada focus. Slightly more interesting is ABN Amro, an early bank green bond issuer, coming in near the top of the list, along with ING, another fairly prominent green bond issuer, ranking fairly high.

Naturally, we need to corroborate the above list(s) with more screening to see that we are not capturing unintended sample biases. The sample considered so far covered a broad range of bonds and loans, with 2,460/235,172 fossil/corporate bonds and loans in total. First, we use a pre-selection of “Corporate bonds” algorithm available in the system, which yields a total of 1,373/20,372 deals in the sample with a total volume of USD 653bn/6.4trn. The results from this for tier-1s is available in the left-hand panel of Figure 5. The main change we see in this context is an advancement of SocGen ahead of SMBC and quite a notable move up the rankings for Citi.

Second, we use our own vanilla selection mechanism, but for bonds only and only considering deals at benchmarks size ( $\geq$ USD250mn at issuance). Using that, we get 1,554/19,590 deals for a volume of USD 663bn/16.9trn. The results are available in the right-hand panel of Figure 5. The notable data points here is the Japanese hegemony at the top, and Citi’s top spot among traditional investment banks as well as its top rank in absolute numbers (e.g. 246 benchmark deals vs 229 for JP Morgan).

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<sup>14</sup> This number is generated as the sum of all fossil deals allocated to the individual banks. I.e. if JP Morgan was allocated (in Bloomberg data) USD200mn from a USD1bn deal for a fossil issuer, the prorated amount would be the USD200mn. Pro-ration is used/decided between banks to for fee splitting purposes.

<sup>15</sup> The Swiss banks come in at the bottom of the list with UBS exhibiting a quite low issuance volumes all-in-all (rank 34 on total issuance).

Figure 5. (Left) Fossil fee league table based on generic search algorithm. (Right) Based on benchmark-sized bond issuances. 2019-2021. Source: Bloomberg, AFII.

Bank	Fossil fee share of total	No. fossil deals	Fossil deals prorated USDbn	League rank: fossil	League rank: all	Rank change
MUFG	18.3%	269	22.25	5	13	8
SocGen	16.3%	173	13.89	13	16	3
SMBC	13.4%	222	13.46	14	14	0
RBC	13.0%	231	16.40	10	12	2
Citi	12.6%	343	42.62	2	3	1
Credit Agricole	12.1%	149	11.13	16	18	2
HSBC	11.0%	181	20.05	8	11	3
Mizuho	10.2%	232	15.92	11	9	-2
Wells Fargo	10.0%	228	15.40	12	10	-2
JP Morgan	9.7%	345	45.34	1	1	0
BofA	8.8%	306	34.70	3	2	-1
Barclays	8.4%	225	23.51	4	6	2
BNP	7.8%	166	17.46	9	7	-2
Goldman Sachs	7.6%	214	21.37	7	5	-2
Credit Suisse	7.3%	156	8.98	20	15	-5
Deutsche Bank	7.2%	123	11.09	17	8	-9
Morgan Stanley	6.6%	182	22.13	6	4	-2
UBS	6.1%	36	2.48	51	45	-6

Bank	Fossil fee share of total	No. fossil deals	Fossil deals prorated USDbn	League rank: fossil	League rank: all	Rank change
MUFG	11.7%	200	17.77	7	19	12
SMBC	8.3%	173	11.18	15	20	5
Mizuho	6.8%	176	13.77	10	13	3
Citi	5.7%	246	35.60	1	3	2
SocGen	5.7%	117	10.65	16	18	2
RBC	5.4%	168	11.66	14	12	-2
Credit Agricole	3.9%	116	9.34	21	15	-6
HSBC	3.9%	137	16.72	8	9	1
Barclays	3.8%	172	20.42	4	6	2
Wells Fargo	3.7%	156	9.86	18	10	-8
JP Morgan	3.5%	229	32.87	2	1	-1
BofA	3.4%	216	27.46	3	2	-1
Goldman Sachs	3.3%	152	17.81	6	4	-2
BNP	3.2%	144	16.06	9	7	-2
Morgan Stanley	2.9%	132	19.00	5	5	0
Deutsche Bank	2.7%	102	9.35	20	8	-12
Credit Suisse	2.3%	96	6.20	29	11	-18
UBS	1.7%	17	1.67	58	25	-33

Figure 6. Time sensitivity: (Left) Longer horizon, 2017-Sep 2021, (Right) Shorter horizon, 2021 YTD. Source: Bloomberg, AFII.

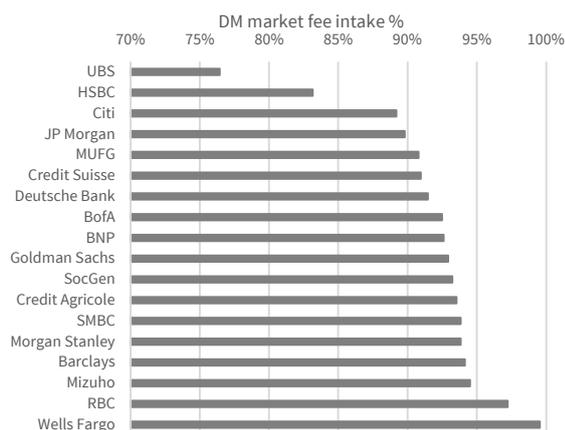
Bank	Fossil fee share of total	No. fossil deals	Fossil deals prorated USDbn	League rank: fossil	League rank: all	Rank change
MUFG	16.3%	496	41.50	5	13	8
RBC	15.0%	469	34.65	9	14	5
Citi	13.2%	677	79.39	2	3	1
Wells Fargo	12.5%	462	34.08	10	11	1
SocGen	12.3%	290	21.64	16	16	0
SMBC	12.2%	396	22.32	15	15	0
Credit Agricole	11.5%	267	20.12	18	17	-1
HSBC	11.3%	373	40.79	6	10	4
Credit Suisse	11.0%	337	26.27	14	12	-2
JP Morgan	10.8%	669	84.25	1	1	0
UBS	10.8%	112	10.73	28	30	2
Mizuho	9.7%	417	28.05	13	9	-4
BofA	9.4%	581	64.45	3	2	-1
Deutsche Bank	9.2%	300	31.00	11	7	-4
Barclays	8.0%	430	43.19	4	6	2
BNP	7.2%	296	28.08	12	8	-4
Goldman Sachs	7.0%	405	36.93	8	5	-3
Morgan Stanley	7.0%	346	39.26	7	4	-3

Bank	Fossil fee share of total	No. fossil deals	Fossil deals prorated USDbn	League rank: fossil	League rank: all	Rank change
SocGen	18.0%	44	3.88	14	19	5
RBC	16.7%	73	6.68	5	12	7
SMBC	15.9%	61	4.87	10	15	5
MUFG	14.3%	75	5.94	7	14	7
Citi	14.1%	93	11.20	2	3	1
Wells Fargo	12.1%	69	5.57	8	10	2
JP Morgan	11.7%	99	12.22	1	1	0
HSBC	11.0%	38	5.09	9	11	2
Mizuho	10.3%	60	4.40	11	8	-3
Credit Suisse	9.5%	50	4.20	12	13	1
Goldman Sachs	8.4%	61	6.85	4	5	1
Morgan Stanley	8.3%	60	6.13	6	4	-2
BofA	8.0%	80	7.32	3	2	-1
Barclays	7.6%	49	4.16	13	6	-7
Credit Agricole	6.9%	34	2.01	24	18	-6
BNP	5.8%	30	2.77	20	9	-11
Deutsche Bank	5.4%	24	3.85	15	7	-8
UBS	4.2%	9	0.91	44	39	-5

Figure 7. (Left) Issuance in developed markets/high- to middle-income geographies. (Right) Fee revenue as % of total syndication fee revenue from the developed market sample. Sep 2019-21. Source: Bloomberg, AFII.

Bank	Fossil fee share of total	No. fossil deals	Fossil deals prorated USDbn	League rank: fossil	League rank: all	Rank change
MUFG	14.7%	240	18.29	7	12	5
SocGen	14.2%	156	12.46	13	16	3
RBC	12.9%	232	16.40	8	13	5
SMBC	12.0%	212	11.11	14	14	0
Credit Agricole	11.7%	144	9.25	17	18	1
Citi	11.0%	310	36.25	2	3	1
Wells Fargo	9.9%	229	15.40	9	10	1
Mizuho	9.4%	224	13.52	12	9	-3
JP Morgan	8.7%	319	38.73	1	1	0
Barclays	8.3%	224	22.85	4	6	2
BofA	7.5%	288	29.70	3	2	-1
HSBC	6.8%	148	14.11	11	11	0
Goldman Sachs	6.6%	206	18.49	6	5	-1
BNP	6.3%	148	14.54	10	7	-3
Credit Suisse	6.2%	148	8.05	21	15	-6
Deutsche Bank	6.0%	114	9.97	16	8	-8
Morgan Stanley	5.8%	174	20.43	5	4	-1
UBS	4.7%	32	1.76	58	45	-13



As a third robustness check, we rerun our analysis but changing the time period over which the league tables are calculated. Results from this are presented in Figure 6. In general, the top fossil focused banks reappear in both the longer 2017-2021 sample as well at the 2021 year-to-date sample. Most notable is SocGen heading to the top in terms of 2021 year-to-date issuance, indicating an increased focus on fossil syndication activities.

Emerging markets tend to have a higher concentration of natural resources and fossil extraction exposures compared to developed markets. Hence, it makes sense to check if the league tables are altered by normalizing on the basis of banks’ emerging market syndications volumes as well.

<sup>16</sup>Conversely, one can look at banks’ fossil league tables once EM bonds are removed from the sample. We do this in Figure 7: on the right hand side, we calculate each tier-1 bank’s revenue generation from developed markets as a percentage to total and note that most banks are in the region of 90% or more, with UBS and HSBC being the notable exceptions. When rebasing the league table for this, we obtain the results in Figure 7 (left). Results are mostly unchanged with the exception of HSBC that falls significantly in the table. This would suggest that HSBC’s relatively high position in the aggregated tables indeed stems from relatively high EM exposure.

As many investors have particularly strong views on the coal sector, and also to verify some of the previous results, we run a search on BICS code “Coal operations” only. The resultant list, based on 2019-2021 data is relatively sparse and dominated by Chinese institutions. Few bond deals in USD and EUR get classified under the BICS code anymore. Of the non-Chinese banks, we only find Deutsche, Standard Chartered and Citi with several occurrences of syndications in the sector, see Figure 8. DB’s engagement in coal is mainly through the Shanxi group and in CNY: this idiosyncrasy could explain why DB comes out on top whereas the franchise has come out close to the bottom in previous analyses. Standard Chartered’s work for Indika Energy, one of Indonesia’s top coal miners, in late 2020 lands it the runner-up spot.<sup>17</sup> Citi’s elevated placement in the league table is more consistent with earlier results. The remainder of the list also appears idiosyncratic – for example, had Bank of America’s DCM team not decided to go into the recent SUEK deal commented above, they would not be on the coal list at all.

Figure 8. Coal operations league, 2019-2021. Source: Bloomberg, AFII.

Bank	Fossil fee share of total	No. fossil deals	Fossil deals prorated USDbn	League rank: fossil	League rank: all	Rank change
Deutsche Bank	2.1%	17	1.93	12	8	-4
StanChart	0.8%	3	0.30	36	42	6
Citi	0.7%	8	0.78	24	3	-21
CMZB	0.3%	1	0.06	73	37	-36
UBS	0.3%	1	0.15	50	45	-5
Credit Suisse	0.2%	1	0.12	66	15	-51
Morgan Stanley	0.1%	1	0.20	44	4	-40
BofA	0.0%	1	0.06	73	2	-71
Goldman Sachs	0.0%	1	0.03	79	5	-74

<sup>16</sup> For purposes of this exercise, we define developed markets to include geographies where incomes are middle to high and where expansion of fossil production and associated capex is more of a preference than a necessity. This includes the usual suspects Western Europe and North America, as well as petro states such as Saudi Arabia, Qatar, UAE and Russia. Furthermore, we include China, Singapore, South Korea, Japan and Australia in this domain.

<sup>17</sup> Note that Standard Chartered is not listed with the tier 1 banks in the other comparisons. We added it to this list as it appears to be such a notable exception. For a reference to Indika Energy as an issuer, please refer to data on the recently issued INDYIJ USD8.25% 10/25 ISIN USY39690AA30 (REGS) US45569GAA04 (144a). Additional information can be provided by the credit team at HSBC as the franchise took down more than 13% of the whole issue (Oct, 2020), according to Bloomberg data.

One potential weakness of the approaches above is that it relies upon a mix of actual fees as well as estimated fees, where the process for the latter is not under our control. We simply are not party to how Bloomberg calculates its exact revenue shares. However, prior to using the Bloomberg data, we applied an internal fee estimation (as described in the Appendix) over June 2019 to June 2021. The internal model uses a number of factors such as maturity, number of JLMs, ratings, etc. and then creates rankings based on this “normalized proxy.” The results are available in Figure 9. This alternative approach corroborates the broad order in terms of fee generation, with MUFG again coming out on top and SocGen and Citi reaffirming their relatively high rankings.

Figure 9. AFII internal fee estimation algorithm. Source: Bloomberg, AFII.

Bank	No. fossil deals	Proxy metric	Total issuance USDbn	Normalized proxy
MUFG	207	74.4	117.6	0.632
SocGen	119	43.1	86.1	0.500
Credit Agricole	88	38.6	77.7	0.497
RBC	161	57.2	119.5	0.478
Citi	325	137.4	327.0	0.420
SMBC	120	49.8	120.3	0.414
HSBC	141	61.8	162.3	0.381
Barclays	213	80.3	225.8	0.355
JP Morgan	329	140.5	404.2	0.348
UBS	27	11.0	32.2	0.341
BofA	278	115.5	352.8	0.327
Mizuho	158	56.1	181.5	0.309
BNP	125	57.8	191.7	0.302
Wells Fargo	171	49.4	165.8	0.298
Goldman Sachs	150	67.9	250.4	0.271
Morgan Stanley	139	62.7	262.7	0.239
Credit Suisse	96	26.7	112.4	0.238
Deutsche Bank	72	32.0	182.9	0.175

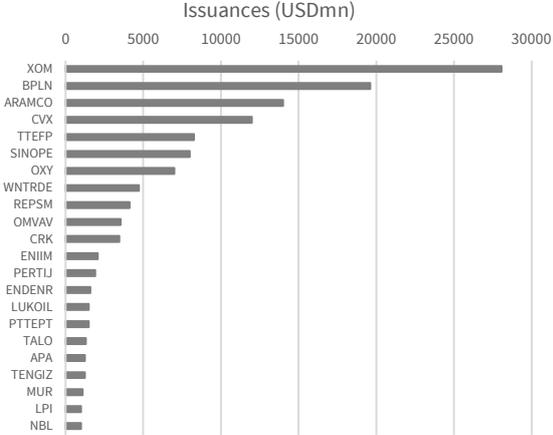
“Ce n’est pas juste!”

Is this fair? The fossil league selection algorithm has been designed to be both robust and transparent. Naturally, one can have a discussion on the weightings, normalization, data selection, etc. Indeed, we would invite such discussions, especially from any banks currently at risk but with the request that the transparency goes two ways. In other words, any objections around the algorithm should highlight data and alternative methodologies and clearly outline which banks would/should be excluded from trading instead of those that the AFII methodology selects.

The data gives the opportunity to drill down exactly into what deals which bank was involved in. Given that SocGen has performed highly in terms of fossil league table placements in our analysis, we take a look at exactly what deals the bank has been involved in to get to the top spot: see Figure 10 (right) where we aggregate deal volume by ticker. For example, during the period under study, SocGen was a lead on a total of almost USD30bn of Exxon bond issuances. The international fossil engagement of the bank is strong: the “domestic” issuer Total only comes in fifth with a mere USD8.2bn of deal volume. We do think this provides a supportive fundamental narrative to the aggregated data earlier in this section.

Figure 10. (Right) League table for “Integrated oils” + “Exploration and production” BICS sectors, 2019-2021. (Left) Individual USD+1bn deals that SocGen syndicated in the sectors, 2019-2021. Source: AFII, Bloomberg.

Bank	Fossil fee share of total	No. fossil deals	Fossil deals prorated USDbn	League rank: fossil	League rank: all	Rank change
SocGen	11.0%	126	10.45	10	16	6
MUFG	9.7%	139	13.80	9	13	4
Credit Agricole	8.3%	94	8.90	11	18	7
Citi	8.2%	205	29.96	2	3	1
HSBC	7.2%	120	16.01	6	11	5
JP Morgan	6.6%	208	32.65	1	1	0
BofA	6.4%	182	27.11	3	2	-1
SMBC	6.2%	106	6.95	16	14	-2
BNP	6.0%	119	14.71	8	7	-1
RBC	6.0%	100	7.42	13	12	-1
Goldman Sachs	4.8%	146	16.85	4	5	1
Wells Fargo	4.4%	113	7.36	14	10	-4
Mizuho	4.3%	117	7.27	15	9	-6
Barclays	4.2%	129	16.70	5	6	1
Credit Suisse	3.7%	77	4.54	22	15	-7
Morgan Stanley	3.4%	107	15.57	7	4	-3
UBS	2.6%	20	1.34	45	45	0
Deutsche Bank	1.8%	54	5.55	19	8	-11



## Final remarks

Asset owners, managers and bond issuers have extremely potent counterparty exclusion tools at their disposal to achieve climate alignment among their key suppliers. The opportunity to make additional positive climate impact through the way one conducts business and not only through portfolio exposures seems too great to miss. We invite readers to consult us on how to create structures to apply The Box.

A natural critique of the procedure is that it might alleviate marginal pressure for the banks that are low on the relative fossil ranking: they could do a few fossil deals more and still will not be at risk. Such risks need to be recognized and the The Box procedure should be complemented with indicators on how counterparties develop over time as well: what gets measured, gets managed.

Finally, our analysis on what banks have relatively high fossil concentrations in their fee business might seem confrontational vis-à-vis the banks that are named as highly fossil fee focused. However, it is our experience that a few of the banks at risk also have ambitious individuals working within the banks to make them change course. The Box is intended to support such efforts by making it clear that there is a downside to fossil fee generation business.

## Appendix: AFII fee estimation algorithm

We use a number of fee relevant factors to estimate an indicator of the potential fee extraction from a particular bond deal. Note that this is a general number comparable across bonds and issuers:

- $A$  = Size issued
- $n$  = Number of joint leads<sup>18</sup>
- $R$  = Rating: low rating => higher fee [linear scale: from AAA = 1 to CC+/NR = 4]<sup>19</sup>
- $C$  = Coal flag: coal issuer => higher fee [non-coal issuer = 1, coal issuer = 2]<sup>20</sup>
- $M$  = Maturity: long(er) bond => higher fee [ $<10\text{yr} = 1$ ;  $>10\text{yr} = 2$ ]<sup>21</sup>

We then apply the following formula

$$\text{Fee proxy metric} = (A/n) * R * C * M$$

As an example of how this works, the proxy fee indicator calculation for the ARAMCO USD2.25 11/30 bond (rated A, 10+yr maturity):

$$(USD2,000mn / 15 leads) * (1.63 * 1 * 2) = 433.58$$

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<sup>18</sup> The metric proposed here assumes an equal-for-all fee distribution across the syndicate. That will in practice not be the case, however, we believe there is a "law-of-large" numbers effect here, equalizing this over many deals.

<sup>19</sup> This means that a high-rated deal is assumed to generate less fees than a low-rated deal, ceteris paribus.

<sup>20</sup> We believe there is currently already being a premium put into the fee structure for coal companies.

<sup>21</sup> Longer tenors/transactions tend to generate higher fees for the banks, if nothing else but for the higher risk that the bank syndicate assumes when they take new issue bonds on balance sheet for stabilization purposes.

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