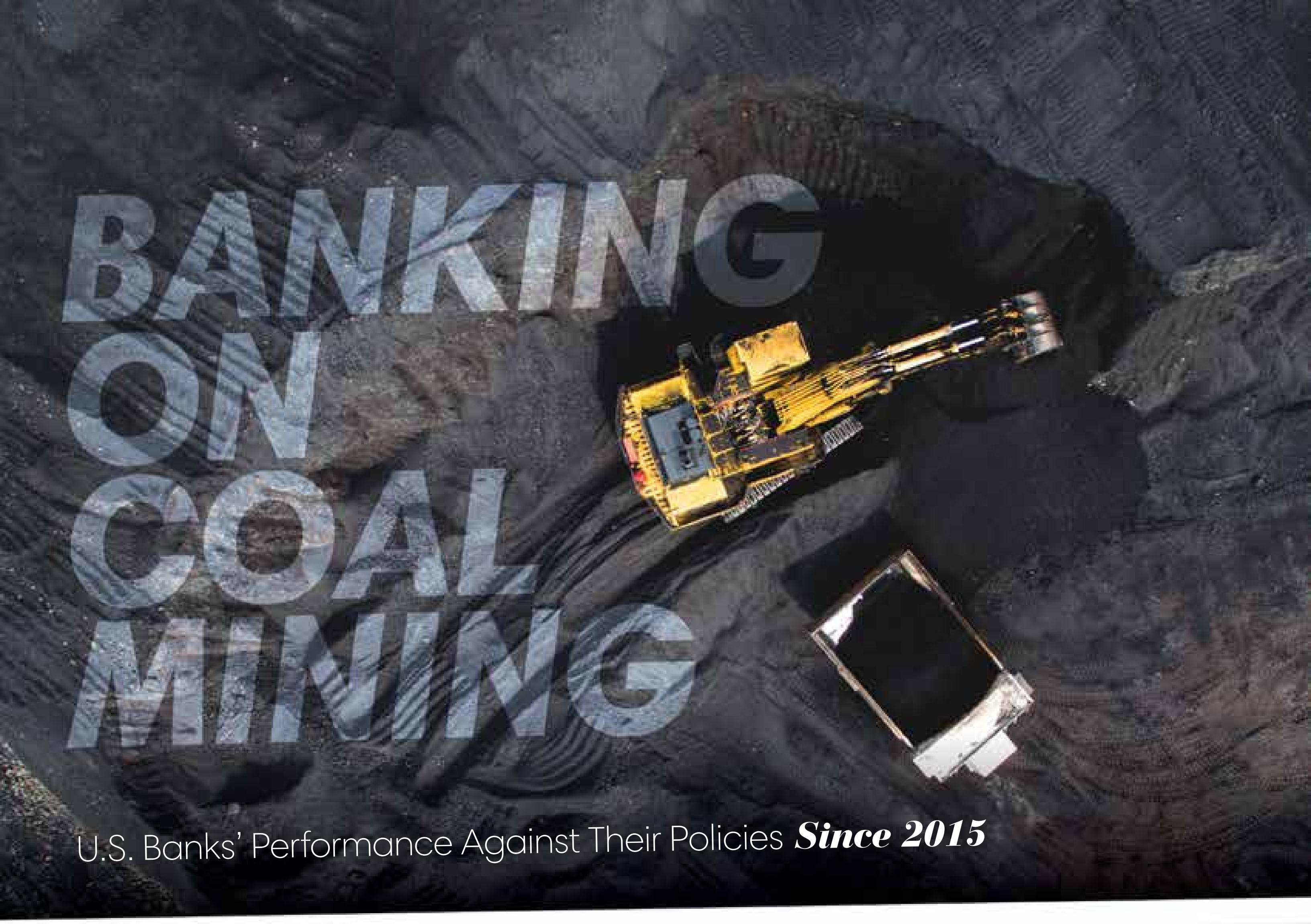
BANKING ON COAL MINING

U.S. Banks' Performance Against Their Policies ***Since 2015***

RAINFOREST ACTION NETWORK



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RAINFOREST ACTION NETWORK

Rainforest Action Network (RAN) preserves forests, protects the climate and upholds human rights by challenging corporate power and systemic injustice through frontline partnerships and strategic campaigns.

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Summary

Between May 2015 and March 2016, the six biggest U.S. banks (**Bank of America, Citigroup, Goldman Sachs, JPMorgan Chase, Morgan Stanley** and **Wells Fargo**[1]) adopted new policies restricting their financing to the coal mining industry. These policies constituted the U.S. banking industry's main policy response to the Paris climate conference. For all of these banks except Goldman Sachs, those policies included commitments to reduce credit exposure to coal mining companies.

This report approximates the big six U.S. banks' credit exposure to 50 top coal mining companies since the banks adopted their policies in 2015-16. These 50 coal mining companies together represent 64% of global annual coal production. Three banks committed to reduce exposure only to pure-play coal mining companies (**Bank of America, Citi,** and **JPMorgan Chase**), and the report's approximation reflects that in those cases. The report also calculates overall financing (lending and underwriting) to 50 top coal mining companies since 2015. Findings include:

- As of June 30, 2018, the five banks with credit exposure reduction commitments have reduced exposure between 48% (**Wells Fargo**) and 87% (**Citi**) since their respective date of policy adoption.
- **Goldman Sachs** does not have an exposure reduction commitment. This report approximates that the bank has increased exposure 50% from the November 2015 date when it put in place a more narrow coal-related policy, to June 30, 2018.
- Approximate baseline absolute credit exposure varies widely, from **Citi**, whose starting exposure to 28 top pure play coal mining companies was $2.565 billion in October 2015, to **Goldman Sachs**, whose starting exposure to 50 top coal mining companies was $213 million in November 2015.
- 2016 was a year of progress on loans issued and debt and equity underwritten to coal mining companies — with banks decreasing financing between 92% (**Bank of America**) and 18% (**Citi**) compared to 2015. However, 2017 was a year of backsliding, with banks increasing this financing between 16% (**Citi**) and an incredible 3,014% (**JPMorgan Chase**) compared to 2016.
- This backsliding on financing in 2017, while banks appear to be broadly in compliance with their coal mining policies, demonstrates the loopholes in those policies.

All of these banks support the Paris Climate Agreement. Continued financing of coal is incompatible with the agreement's goal of holding global warming well below 2 degrees Celsius, with the aim of limiting warming to 1.5 degrees. The report therefore concludes that:

- Banks should strengthen their policies to commit to reducing overall financing, and not just credit exposure, year on year, with an explicit phase-out date.

Background

Coal mining devastates the health of nearby communities. Every step of the coal lifecycle — not just combustion — is clearly associated with detrimental cardiovascular, pulmonary, and/or neurological health effects.[2] In particular, the mining and washing of coal can contaminate drinking water with heavy metals or polymers, with contamination continuing even beyond the abandonment of a mine.[3] The effects on waterways are especially concerning in Appalachia, where the practice of mountaintop removal (MTR) mining has destroyed hundreds of mountain summits and buried hundreds of miles of streams.[4]

A particularly urgent reason to phase out funding for coal is climate change. Of the many human activities that cause climate change, the world's largest contributor is coal combustion, representing 45% of all energy-related carbon dioxide emissions in 2015.[5] A rapid phase-out of coal-fired power is needed in the coming decades in order to meet the goals of the Paris Agreement.[6] The Intergovernmental Panel on Climate Change's data show that the vast majority of fossil fuel reserves must stay in the ground if the world is to limit global warming to 2 degrees Celsius, let alone 1.5 degrees Celsius.

Between 2015 and 2016, five of the six biggest U.S. banks responded to these clear risks with commitments to reduce lending exposure to coal mining companies — commitments that did not cover all forms of financing, and lacked public reporting on implementation. These coal policies were the main substantive indication of support by U.S. banks for the Paris Climate Agreement in 2015. Ahead of the climate conference in Paris, **Bank of America** led the way with an exposure reduction policy in May, with **Citi** following suit in October. Then in December 2015, the month of the Paris climate summit, **Wells Fargo** and **Morgan Stanley** announced similar commitments. **JPMorgan Chase** was the last to commit in March, three months after Paris.[7]

Goldman Sachs instituted a narrower policy than its peers. In its November 2015 update of its Environmental Policy Framework, instead of a public exposure reduction commitment, the bank announced a policy only restricting financing for some mountaintop removal mining projects and some companies.[8]

The big six U.S. banks also have a range of commitments restricting financing for MTR mining, greenfield mining projects, and/or coal-fired power projects. Further information on the mining policies can be found at the end of this report.

These banks have so far not reported on their performance against these coal mining policies. In the absence of such documentation, this report approximates the big six U.S. banks' credit exposure to top coal mining companies, and calculates overall financing to those companies since 2015. A list of companies, and details on this methodology, can be found at the end of this report.

PHOTO: PAUL CORBIT BROWN

Stock and Flow: Measuring Capital for Coal Mining

This report measures bank support for coal mining in two distinct but related ways:

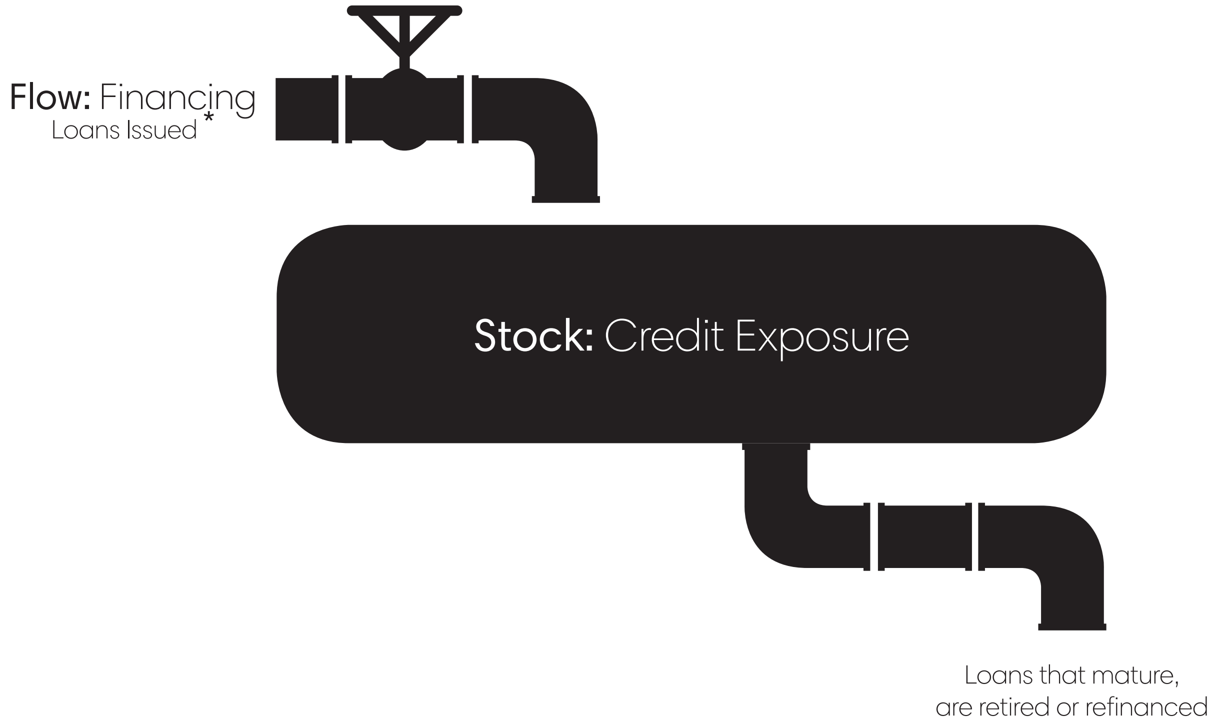
Flow: *Financing*

Banks issuing loans or underwriting debt or equity provide a flow of capital into the coal mining industry. Like turning on a spigot of water into a bathtub, all financing contributes to this flow: loans made, and bond or share issuances underwritten. This flow is measured over an interval of time: in this report, financing is summed in half- and full-year increments. The key date is the date the loan was issued or bond or share was underwritten, no matter how long the security is active. Transactions included in measuring financing in this report include all loans issued (revolving credit, A-term loans, and B-term loans), bonds underwritten, and debt underwritten.

Stock: *Credit Exposure*

The coal mining policies made by five big U.S. banks did not commit to reduce the flow of capital into coal mining, but rather to reduce the stock of their credit exposure. New loans issued are like water flowing into a bathtub from the faucet. When the loans expire or otherwise become inactive, they drain out of the bathtub. The banks with exposure reduction commitments pledged that the water level in their bathtubs — the coal loans on their books — will slowly go down over time. This stock is measured at a specific point in time: in this report, credit exposure is measured at the end of a given quarter. Thus, the key dates for measuring credit exposure include both the issuance date and the date at which the transaction becomes inactive. Transactions included in measuring credit exposure are revolving lines of credit and A-term loans. B-term loans, another type of term loan, are not included under the assumption that the banks typically do not hold these loans, but rather sell them to institutional investors.[9]

For more detail, see the methodology section at the end of this report.

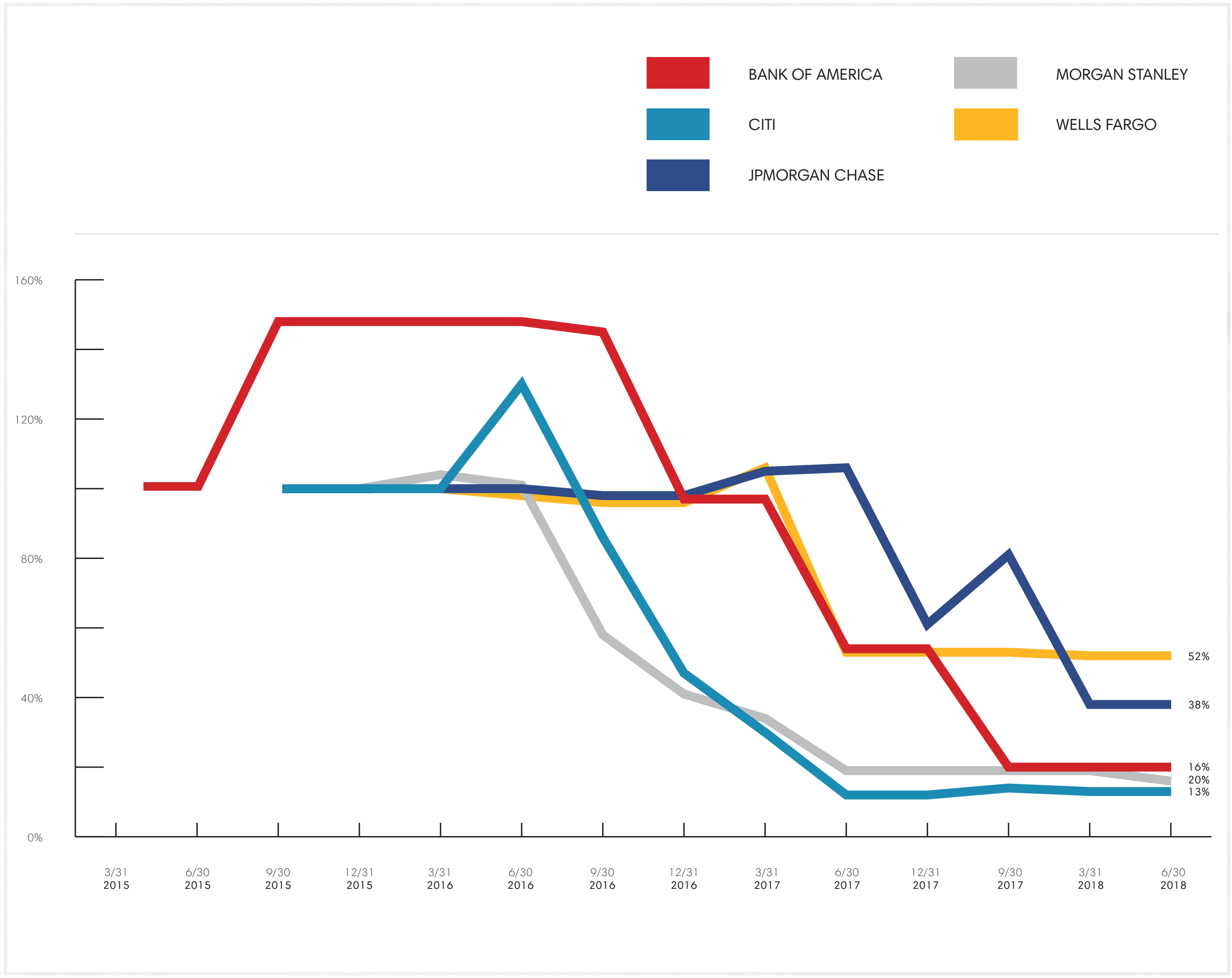


* This graphic represents only a portion of overall financing, which also includes:

- B-term loans (in addition to A-term loans and revolving lines of credit)
- Debt and equity issuance

Findings

U.S. Banks' Performance Against Their Coal Mining Credit Exposure Reduction Commitments



Credit exposure is measured at date of policy announcement and the end of each subsequent quarter. For **Morgan Stanley** and **Wells Fargo**, this graph indicates credit exposure to all 50 top coal mining companies included in this analysis. For **Bank of America, Citi,** and **JPMorgan Chase**, exposure is measured only to the pure-play coal mining companies in that list (28 of the 50).

PHOTO: ©BLAIRPHOTOEVV

WELLS FARGO

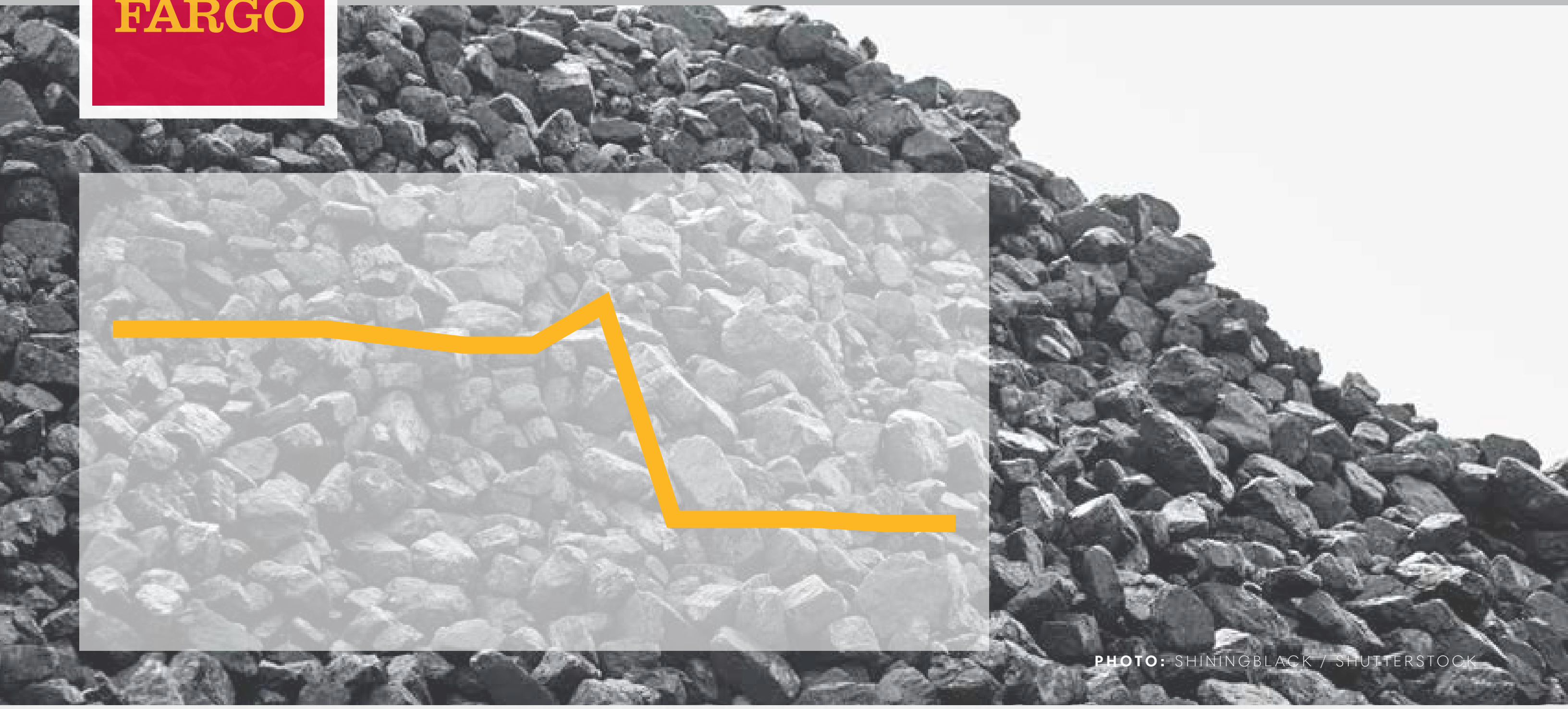


PHOTO: SHININGBLACK / SHUTTERSTOCK

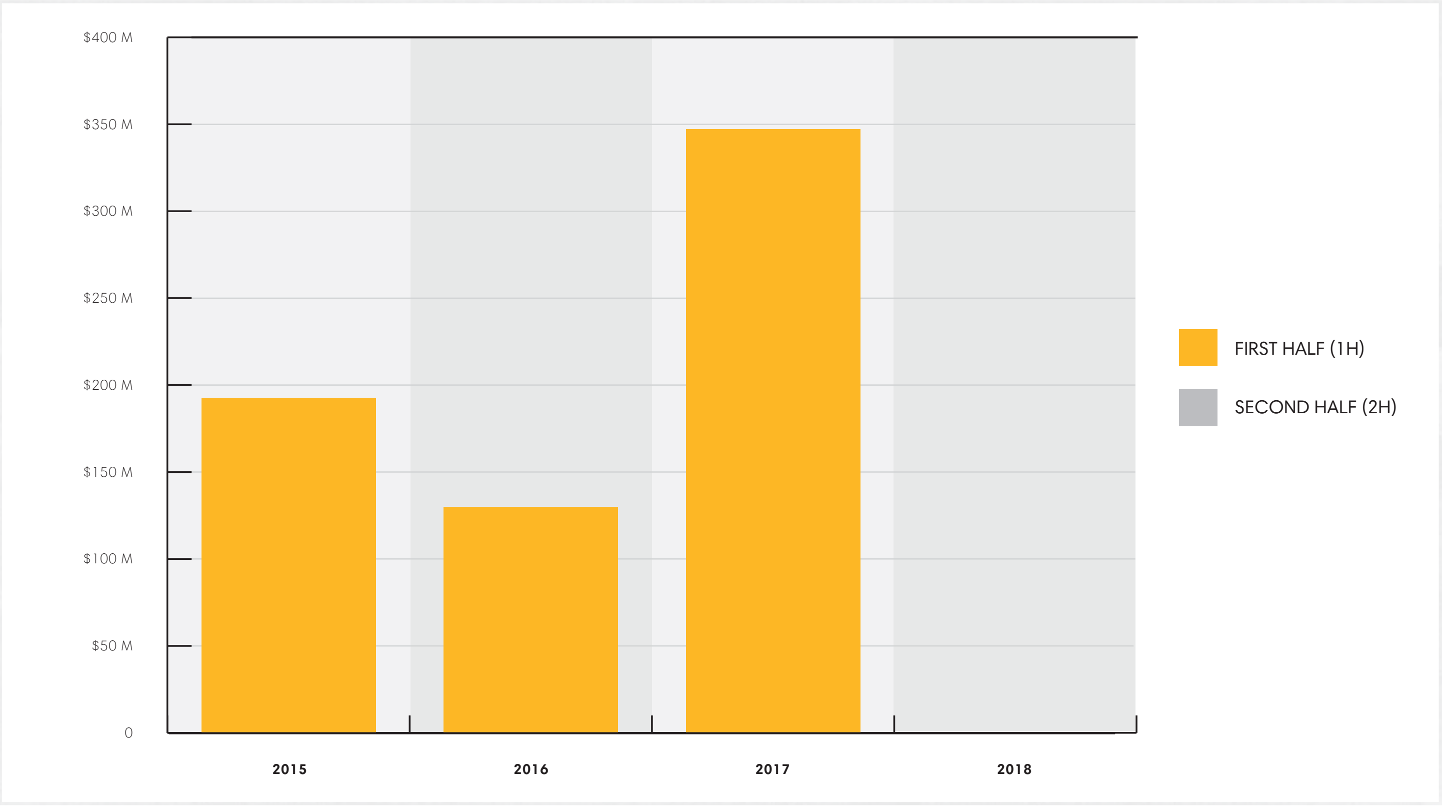
Table 1: Wells Fargo's Coal Mining Credit Exposure

DATE	CREDIT EXPOSURE TO 50 TOP COAL MINING COMPANIES	CREDIT EXPOSURE AS PERCENTAGE OF EXPOSURE ON POLICY PUBLICATION DATE
DEC. 1, 2015: **Policy Publication Date**	$868 M	100%
DEC. 31, 2015	$868 M	100%
MAR. 31, 2016	$868 M	100%
JUNE 30, 2016	$848 M	98%
SEP. 30, 2016	$837 M	96%
DEC. 31, 2016	$837 M	96%
MAR. 31, 2017	$917 M	106%
JUNE 30, 2017	$464 M	53%
SEP. 30, 2017	$464 M	53%
DEC. 31, 2017	$464 M	53%
MAR. 31, 2018	$449 M	52%
JUNE 30, 2018	$449 M	52%

Table 2: Wells Fargo's Total Financing to 50 Top Coal Mining Companies

YEAR	FINANCING	HALF YEAR	FINANCING
2015	$193 M	1H2015	$193 M
		2H2015	-
2016	$130 M	1H2016	$130 M
		2H2016	-
2017	$347 M	1H2017	$347 M
		2H2017	-
1H2018	-		
TOTAL	$670 M		

Wells Fargo's Total Financing to 50 Top Coal Mining Companies



JPMorgan Chase & Co.

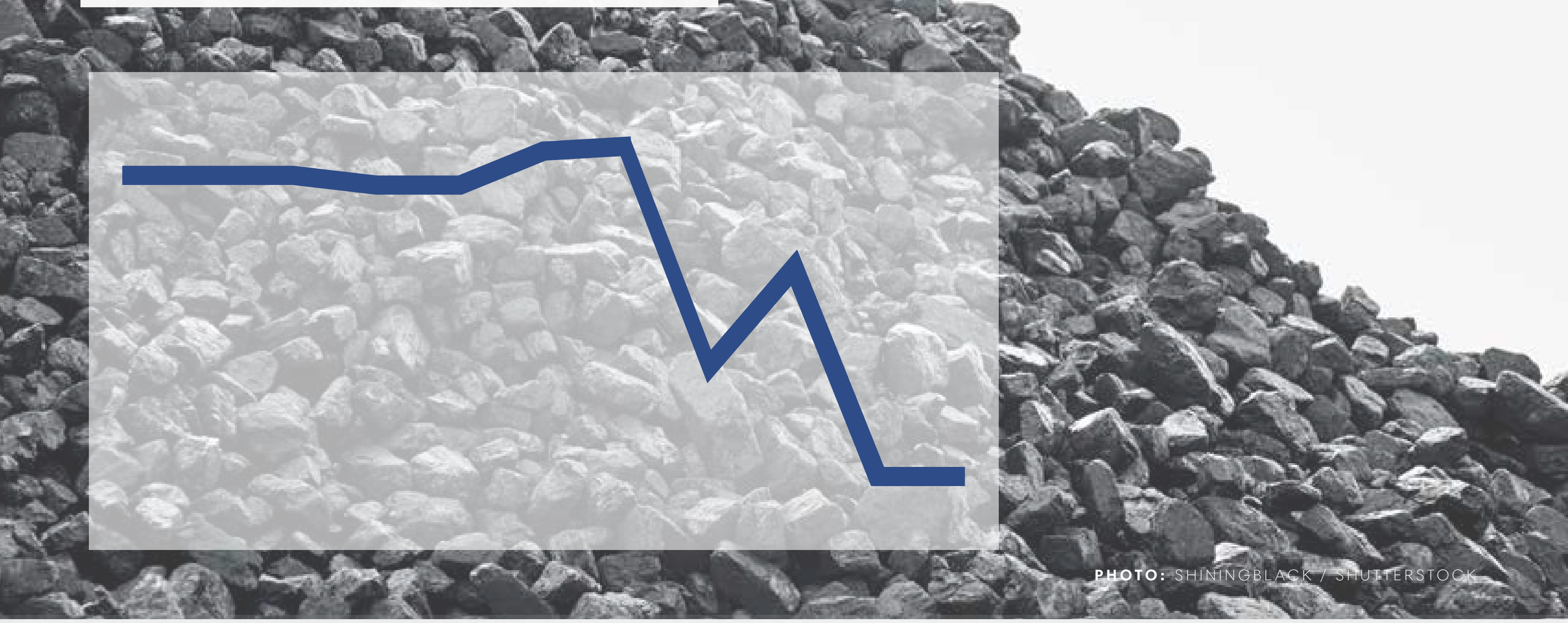


PHOTO: SHININGBLACK / SHUTTERSTOCK

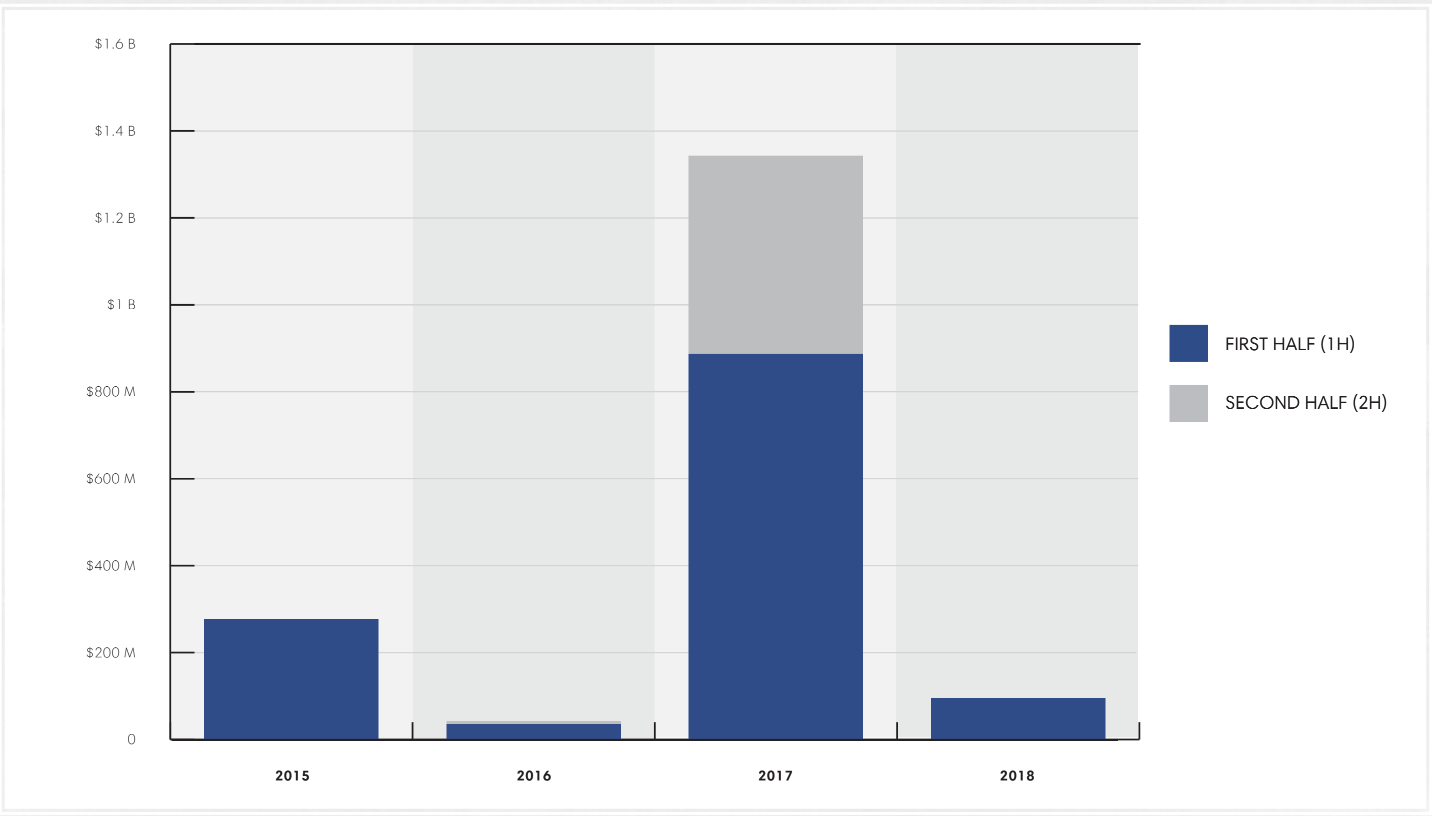
Table 3: JPMorgan Chase's Coal Mining Credit Exposure

DATE	CREDIT EXPOSURE TO 28 TOP PURE-PLAY COAL MINING COMPANIES	CREDIT EXPOSURE AS PERCENTAGE OF EXPOSURE ON POLICY PUBLICATION DATE
MAR. 7, 2016: Policy Publication Date	$706 M	100%
MAR. 31, 2016	$706 M	100%
JUNE 30, 2016	$706 M	100%
SEP. 30, 2016	$695 M	98%
DEC. 31, 2016	$695 M	98%
MAR. 31, 2017	$744 M	105%
JUNE 30, 2017	$747 M	106%
SEP. 30, 2017	$431 M	61%
DEC. 31, 2017	$575 M	81%
MAR. 31, 2018	$268 M	38%
JUNE 30, 2018	$268 M	38%

Table 4: JPMorgan Chase's Total Financing to 50 Top Coal Mining Companies

YEAR	FINANCING	HALF YEAR	FINANCING
2015	$277 M	1H2015	$277 M
		2H2015	-
2016	$43 M	1H2016	$35 M
		2H2016	$8 M
2017	$1.343 B	1H2017	$888 M
		2H2017	$455 M
1H2018	$95 M		
TOTAL	**$1.758 B**		

JPMorgan Chase's Total Financing to 50 Top Coal Mining Companies



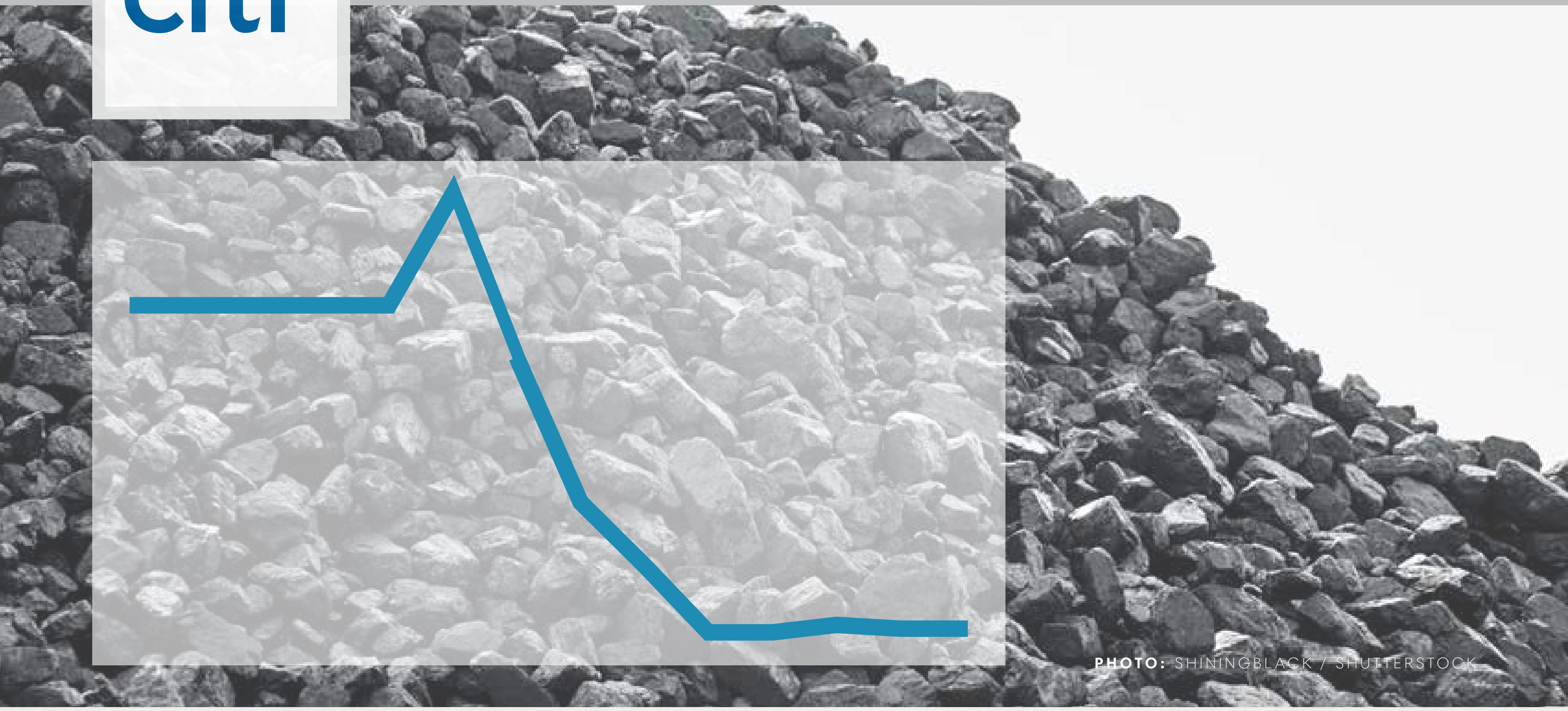


PHOTO: SHININGBLACK / SHUTTERSTOCK

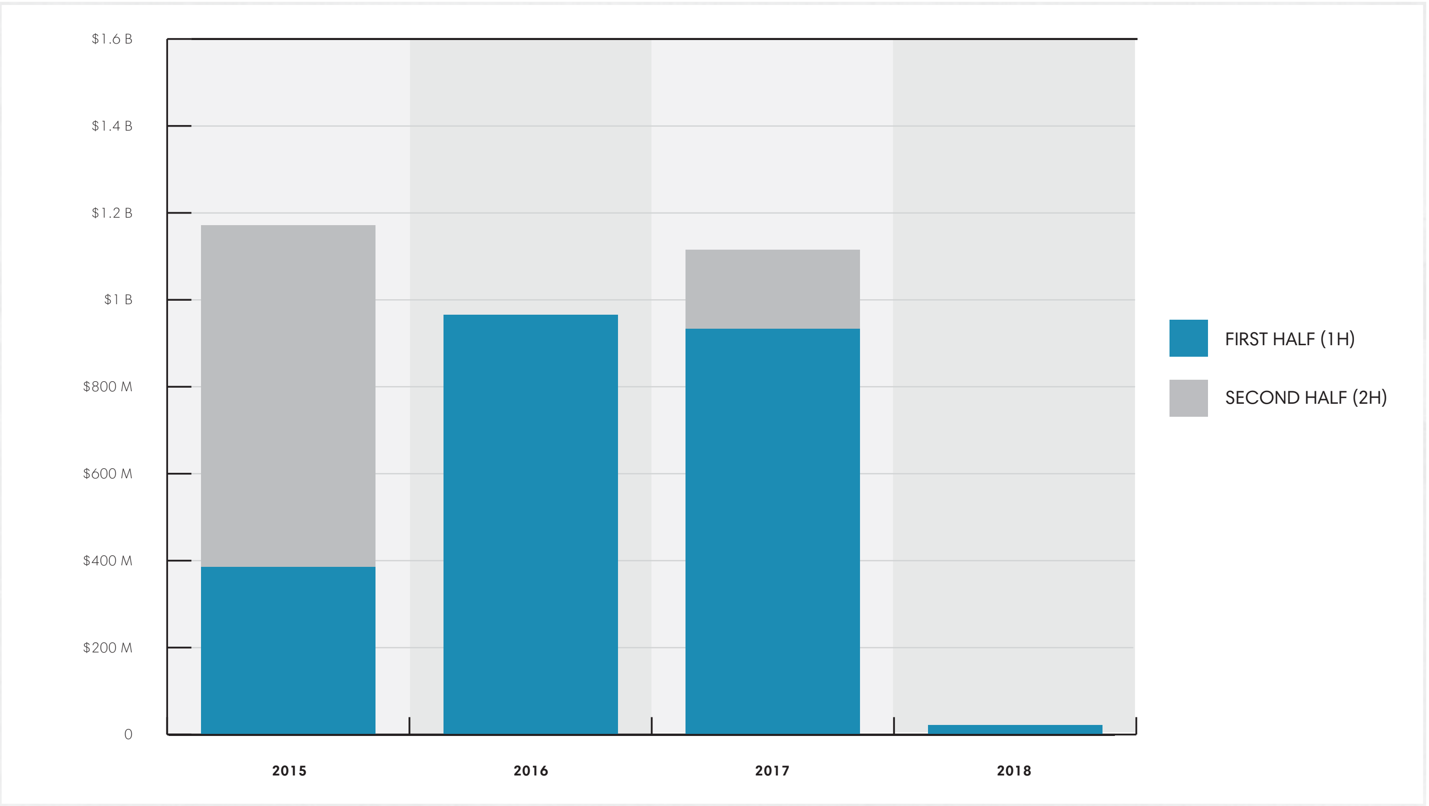
Table 5: Citi's Coal Mining Credit Exposure

DATE	CREDIT EXPOSURE TO 28 TOP PURE-PLAY COAL MINING COMPANIES	CREDIT EXPOSURE AS PERCENTAGE OF EXPOSURE ON POLICY PUBLICATION DATE
OCT. 5, 2015: **Policy Publication Date**	$2.565 B	100%
DEC. 31, 2015	$2.565 B	100%
MAR. 31, 2016	$2.565 B	100%
JUNE 30, 2016	$3.345 B	130%
SEP. 30, 2016	$2.216 B	86%
DEC. 31, 2016	$1.216 B	47%
MAR. 31, 2017	$775 M	30%
JUNE 30, 2017	$298 M	12%
SEP. 30, 2017	$298 M	12%
DEC. 31, 2017	$355 M	14%
MAR. 31, 2018	$340 M	13%
JUNE 30, 2018	$340 M	13%

Table 6: Citi's Total Financing to 50 Top Coal Mining Companies

YEAR	FINANCING	HALF YEAR	FINANCING
2015	$1.171 B	1H2015	$385 M
		2H2015	$786 M
2016	$965 M	1H2016	$965 M
		2H2016	-
2017	$1.115 B	1H2017	$933 M
		2H2017	$182 M
1H2018	$22 M		
TOTAL	**$3.273 B**		

Citi's Total Financing to 50 Top Coal Mining Companies



Bank of America

PHOTO: SHININGBLACK / SHUTTERSTOCK

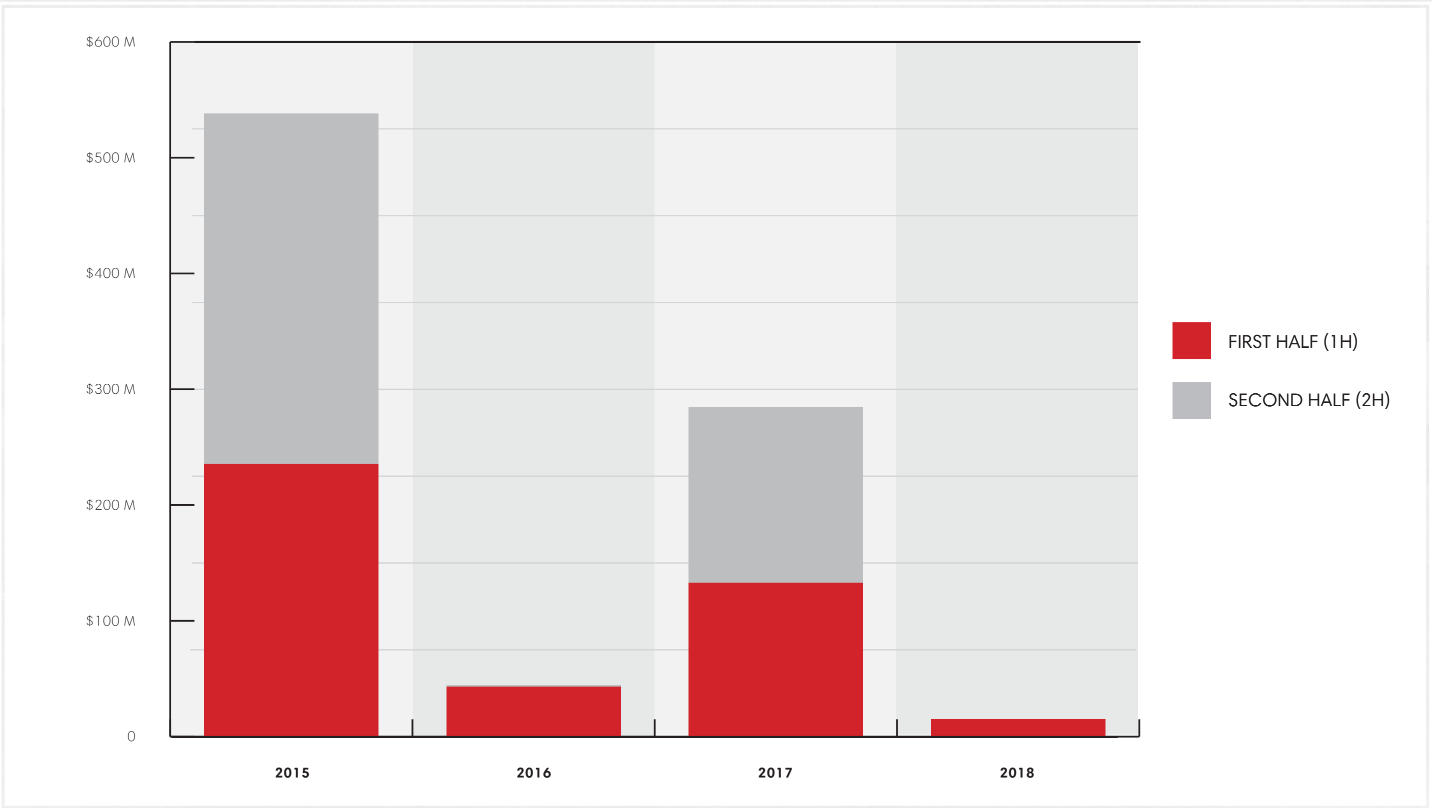
Table 7: Bank of America's Coal Mining Credit Exposure

DATE	CREDIT EXPOSURE TO 28 TOP PURE-PLAY COAL MINING COMPANIES	CREDIT EXPOSURE AS PERCENTAGE OF EXPOSURE ON POLICY PUBLICATION DATE
MAY 7, 2015: Policy Publication Date	$417 M	100%
JUNE 30, 2015	$417 M	100%
SEP. 30, 2015	$617 M	148%
DEC. 31, 2015	$617 M	148%
MAR. 31, 2016	$617 M	148%
JUNE 30, 2016	$617 M	148%
SEP. 30, 2016	$606 M	145%
DEC. 31, 2016	$406 M	97%
MAR. 31, 2017	$406 M	97%
JUNE 30, 2017	$225 M	54%
SEP. 30, 2017	$225 M	54%
DEC. 31, 2017	$82 M	20%
MAR. 31, 2018	$82 M	20%
JUNE 30, 2018	$82 M	20%

Table 8: Bank of America's Total Financing to 50 Top Coal Mining Companies

YEAR	FINANCING	HALF YEAR	FINANCING
2015	$538 M	1H2015	$235 M
		2H2015	$303 M
2016	$44 M	1H2016	$43 M
		2H2016	$1 M
2017	$284 M	1H2017	$133 M
		2H2017	$152 M
1H2018	$15 M		
TOTAL	**$882 M**		

Bank of America's Total Financing to 50 Top Coal Mining Companies



Morgan Stanley

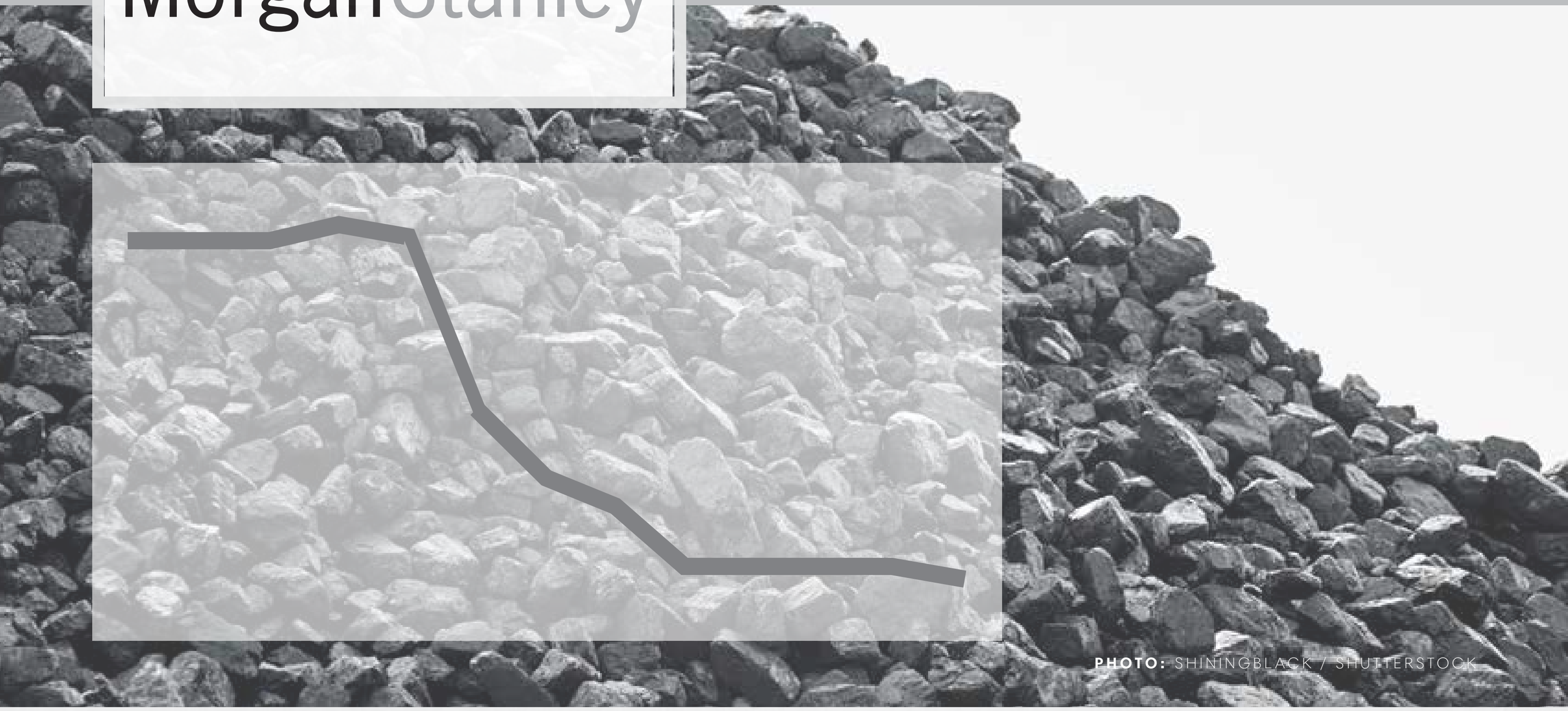


PHOTO: SHININGBLACK / SHUTTERSTOCK

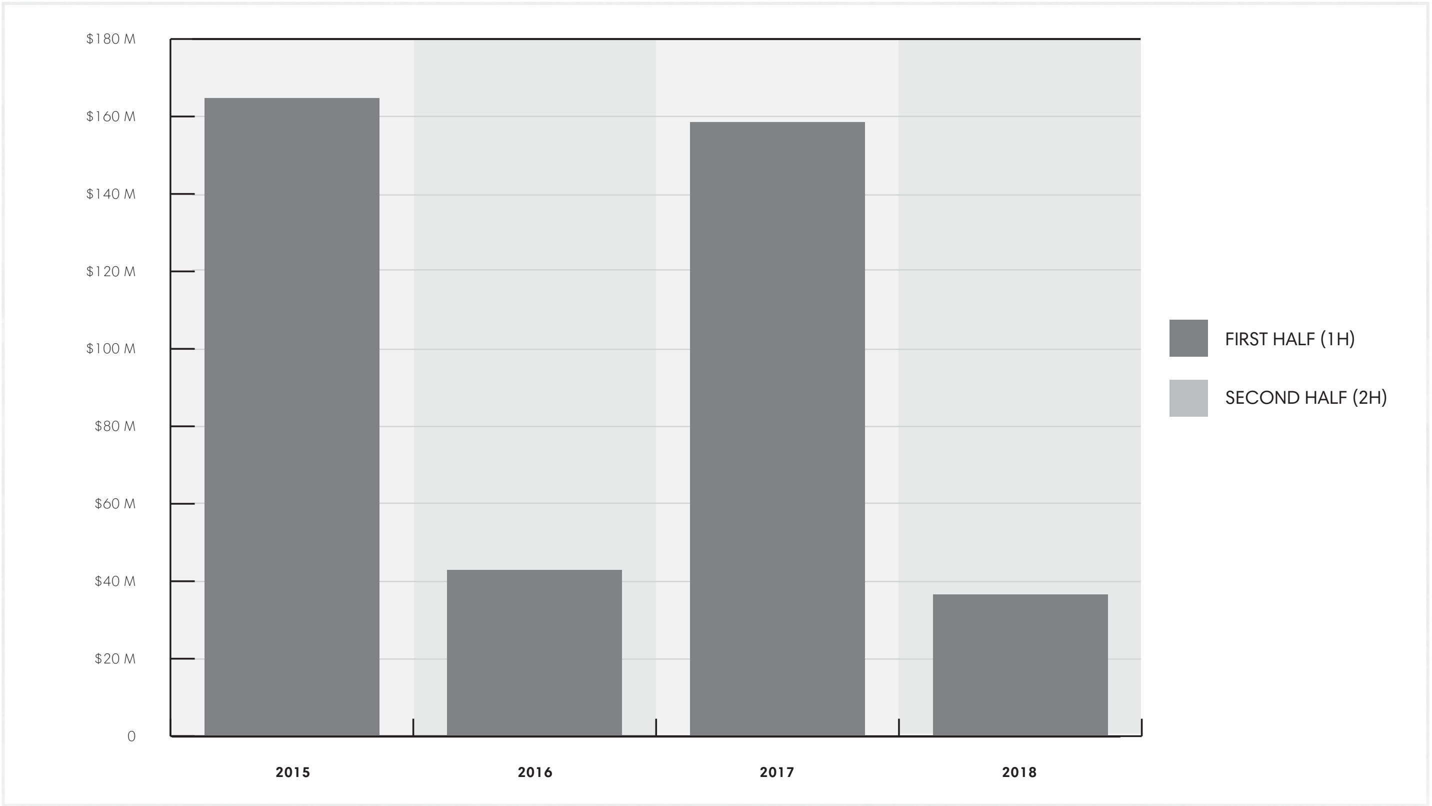
Table 9: Morgan Stanley's Coal Mining Credit Exposure

DATE	CREDIT EXPOSURE TO 50 TOP COAL MINING COMPANIES	CREDIT EXPOSURE AS PERCENTAGE OF EXPOSURE ON POLICY PUBLICATION DATE
DEC. 1, 2015: **Policy Publication Date**	$1.176 B	100%
DEC. 31, 2015	$1.176 B	100%
MAR. 31, 2016	$1.219 B	104%
JUNE 30, 2016	$1.188 B	101%
SEP. 30, 2016	$677 M	58%
DEC. 31, 2016	$477 M	41%
MAR. 31, 2017	$405 M	34%
JUNE 30, 2017	$223 M	19%
SEP. 30, 2017	$223 M	19%
DEC. 31, 2017	$223 M	19%
MAR. 31, 2018	$220 M	19%
JUNE 30, 2018	$186 M	16%

Table 10: Morgan Stanley's Total Financing to 50 Top Coal Mining Companies

YEAR	FINANCING	HALF YEAR	FINANCING
2015	$165 M	1H2015	$165 M
		2H2015	-
2016	$43 M	1H2016	$43 M
		2H2016	-
2017	$159 M	1H2017	$159 M
		2H2017	-
1H2018	$37 M		
TOTAL	**$403 M**		

Morgan Stanley's Total Financing to 50 Top Coal Mining Companies



In November 2015, Goldman Sachs instituted a narrower policy than its peer banks, restricting financing for some MTR projects and some companies, rather than a broader public coal mining exposure reduction commitment. An approximation of its credit exposure is nonetheless included here for comparison.

Goldman Sachs's Coal Mining Credit Exposure From Nov. 2015

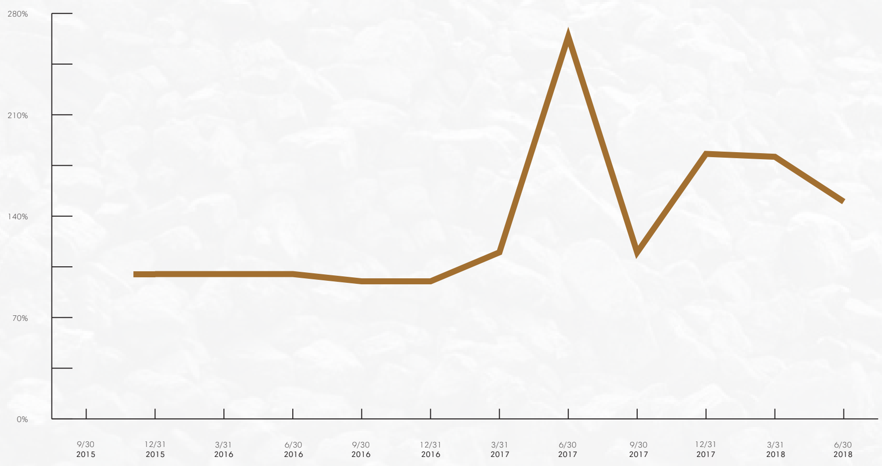


PHOTO: SHININGBLACK / SHUTTERSTOCK

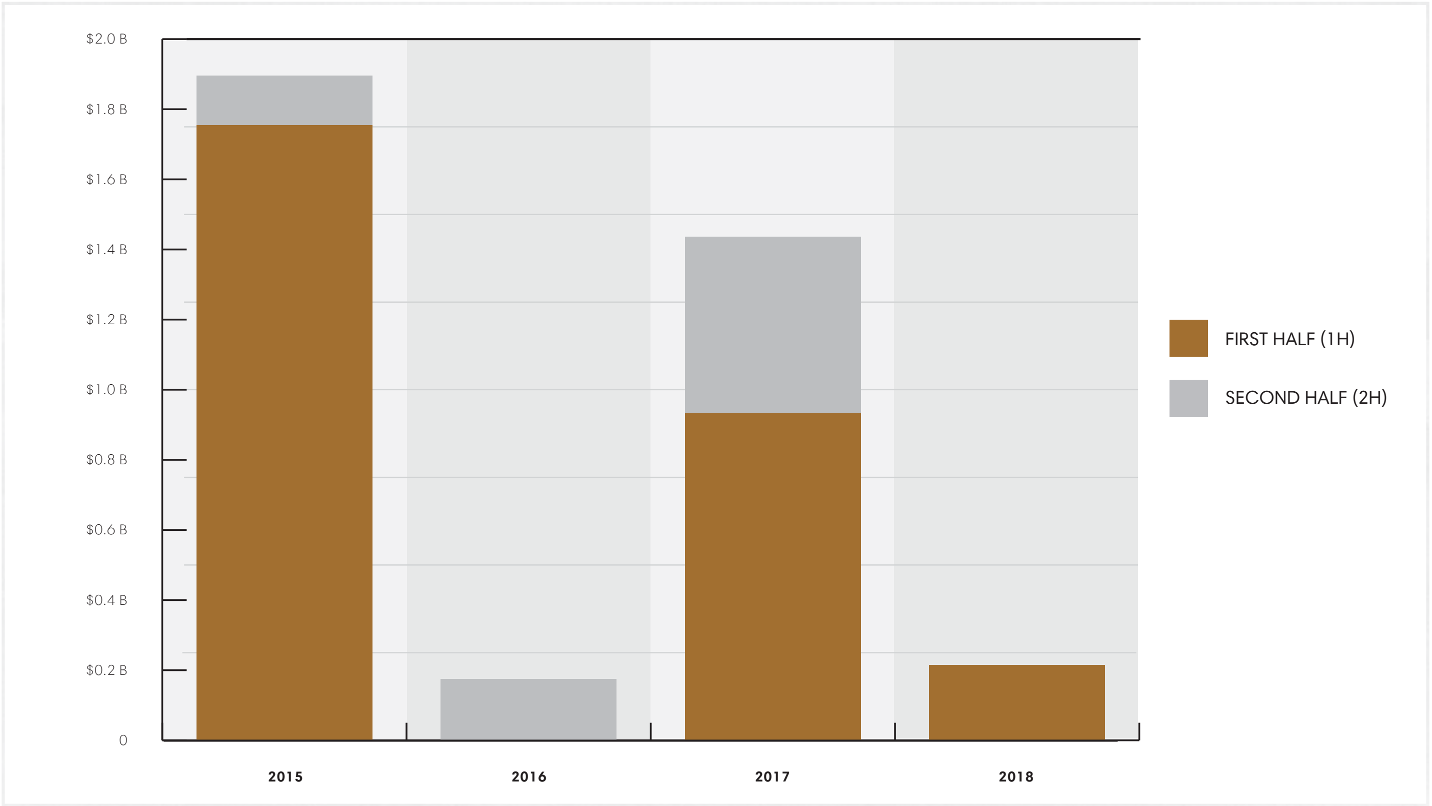
Table 11: Goldman Sachs's Coal Mining Credit Exposure

DATE	CREDIT EXPOSURE TO 50 TOP COAL MINING COMPANIES	CREDIT EXPOSURE AS PERCENTAGE OF EXPOSURE ON POLICY PUBLICATION DATE
NOV. 2, 2015: Policy Publication Date	$213 M	100%
DEC. 31, 2015	$213 M	100%
MAR. 31, 2016	$213 M	100%
JUNE 30, 2016	$213 M	100%
SEP. 30, 2016	$201 M	95%
DEC. 31, 2016	$201 M	95%
MAR. 31, 2017	$244 M	115%
JUNE 30, 2017	$561 M	264%
SEP. 30, 2017	$244 M	115%
DEC. 31, 2017	$389 M	183%
MAR. 31, 2018	$386 M	181%
JUNE 30, 2018	$318 M	150%

Table 12: Goldman Sachs's Total Financing to 50 Top Coal Mining Companies

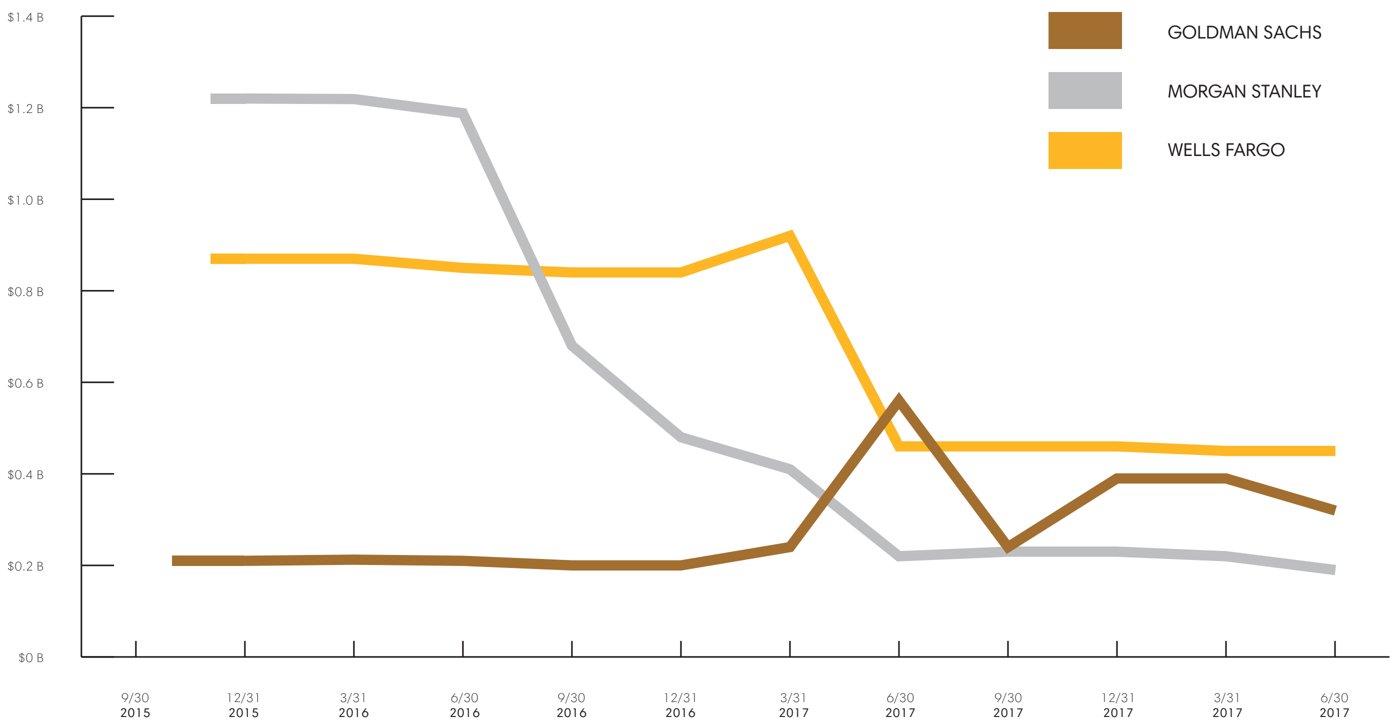
YEAR	FINANCING	HALF YEAR	FINANCING
2015	$1.896 B	1H2015	$1.756 B
		2H2015	$140 M
2016	$175 M	1H2016	-
		2H2016	$175 M
2017	$1.437 B	1H2017	$934 M
		2H2017	$503 M
1H2018	$215 M		
TOTAL	$3.723 B		

Goldman Sachs's Total Financing to 50 Top Coal Mining Companies



Overall Coal Mining Credit Exposure and Financing

Absolute Credit Exposure to 50 Top Coal Mining Companies



Absolute Credit Exposure to 28 Top Pure Play Coal Mining Companies

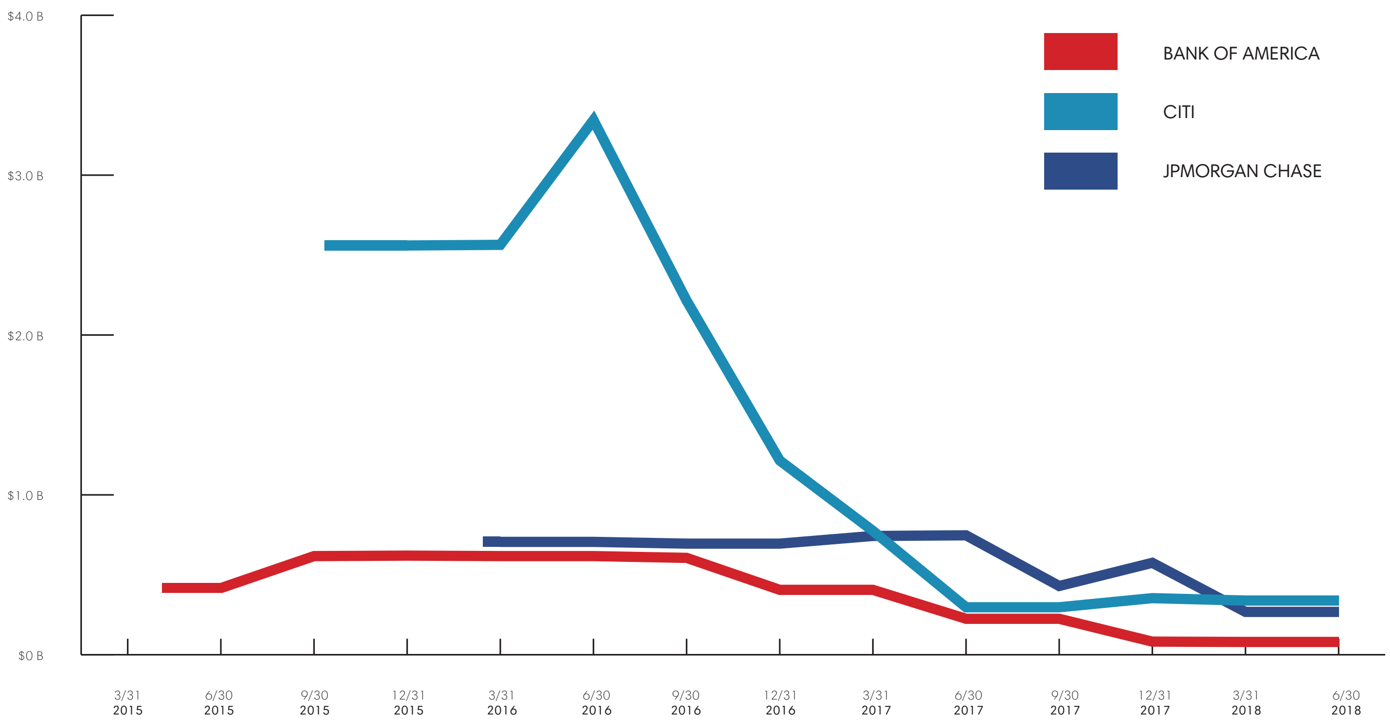
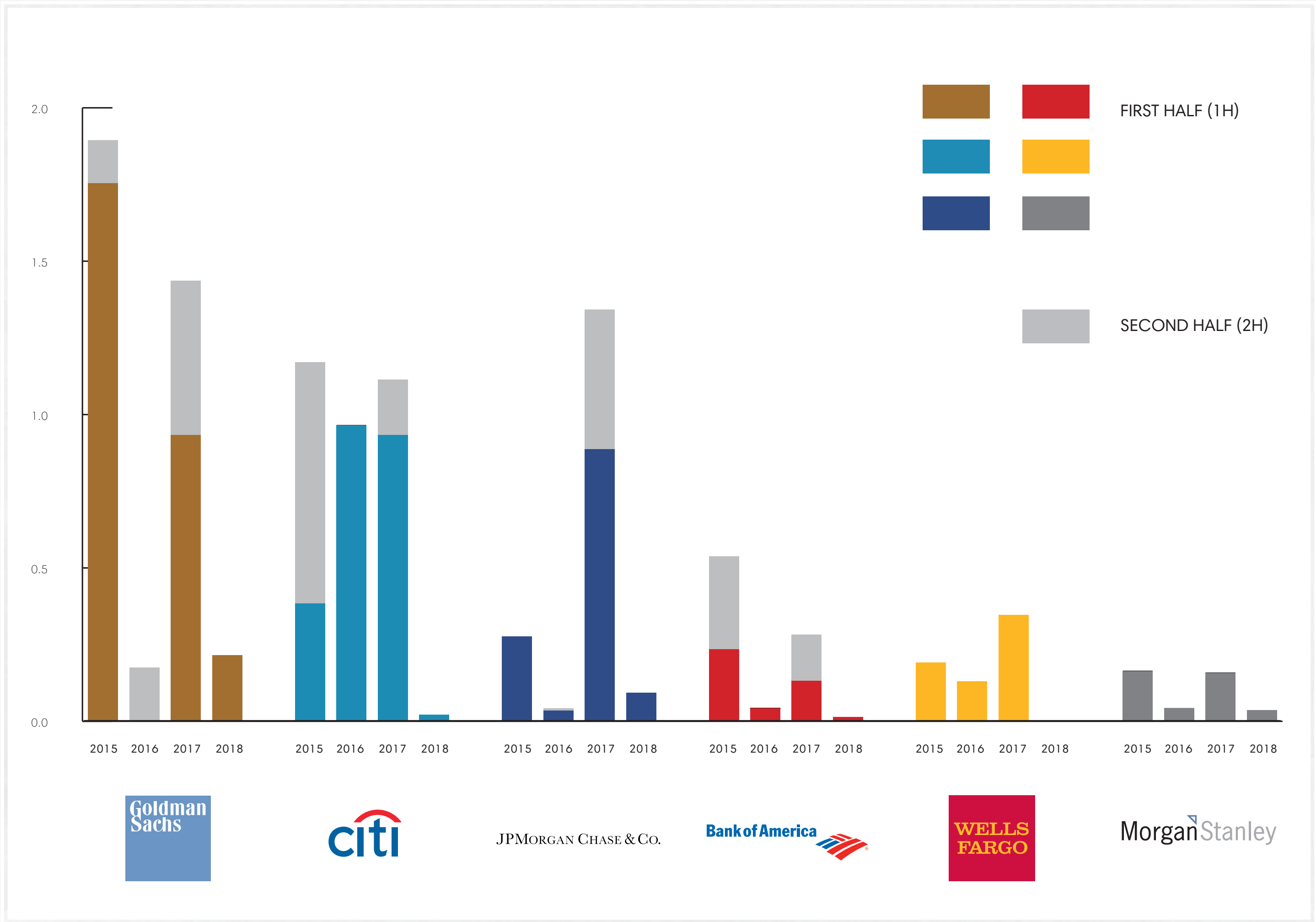


Table 13: Total Coal Mining Financing League Table

BANK	2015	2016	2017	1H2018	TOTAL
GOLDMAN SACHS	$1.896 B	$175 M	$1.437 B	$215 M	$3.723B
CITI	$1.171 B	$965 M	$1.115 B	$22 M	$3.273 B
JPMORGAN CHASE	$277 M	$43 M	$1.343 B	$95 M	$1.758 B
BANK OF AMERICA	$538 M	$44 M	$284 M	$15 M	$882 M
WELLS FARGO	$193 M	$130 M	$347 M	--	$670 M
MORGAN STANLEY	$165 M	$43 M	$159 M	$37 M	$404 M
TOTAL	**$4.240 B**	**$1.401 B**	**$4.685 B**	**$383 M**	**$10.709 B**



Analysis

The coal mining policies established by the six biggest U.S. banks in 2015-16 were an important step in those banks aligning their policies and practices with a 1.5 degree world. But with more than two full years of data in hand, we can now assess the impact of these policies, and conclude that they need strengthening.

Banks with coal mining exposure reduction commitments are following those policies, to varying extents

After an initial period of increasing exposure to top coal mining companies after policy adoption, every bank with an exposure-reduction policy now appears to be following the letter of that policy, with varying degrees of reduction. Each of these banks has seen exposure peak, with **Bank of America** the earliest (at the end of 3Q15, at 148% of their exposure level at policy adoption) and **Wells Fargo** the latest (at the end of 1Q17, at 106%), and since then either hold steady or decline in each subsequent quarter. The only notable exception to that trend was **JPMorgan Chase**, which saw an initial peak at the end of 2Q17, at 106%, a drop to 61% at the end of 3Q17, and then a second peak, at 81%, at the end of 4Q17. And **Goldman Sachs**, the only one of these banks without an exposure reduction commitment, and operating from the smallest absolute baseline, has seen a different trajectory, with a peak at 264% at the end of 2Q17, a large reduction in the next quarter, and then a significant increase in the following quarter before declining slightly to close 2Q18 at 150%.

But the banks' policy commitments have significant loopholes

» **Of 50 top coal miners, pure-play companies represent just half of production**

Of the five banks with exposure-reduction commitments, **Bank of America, Citi** and **JPMorgan Chase** limit that commitment to pure-play coal companies. Of the top 50 coal mining companies considered in this report, 28 are pure-play companies and have a combined output of 53% of the 50 companies. Extrapolating this breakdown of output between pure-play and diversified miners to the additional 36% of global production not covered in this report suggests that roughly half of coal production may be outside the scope of these "pure-play" policies.

» **Underwriting and B-term loans have been a larger source of support than all other loans**

Policies on credit exposure restrict many, but not all, loans. In particular, they effectively place little restriction on B-term loans, which come off banks' books quickly. And they place no restrictions on underwriting of debt and equity. Overall, and for most individual banks, underwriting and B-term loans have been a larger source of support for coal mining than all other loans since 2015.

PHOTO: RASTA777 / SHUTTERSTOCK

Table 14: Breakdown of Lending and Underwriting for Top 50 Coal Mining Companies

BANK	LENDING (EXCEPT FOR B-TERM LOANS), 2015 - 1H2018	UNDERWRITING AND B-TERM LOANS, 2015-1H2018	TOTAL FINANCING, 2015-1H2018	UNDERWRITING AND B-TERM LOANS AS % OF TOTAL FINANCING
GOLDMAN SACHS	$600 M	$3.123 B	$3.723 B	84%
CITI	$2.241 B	$1.032 B	$3.273 B	32%
JPMORGAN CHASE	$686 M	$1.072 B	$1.758 B	61%
BANK OF AMERICA	$383 M	$499 M	$882 M	57%
WELLS FARGO	$494 M	$176 M	$670 M	26%
MORGAN STANLEY	$155 M	$248 M	$403 M	62%
TOTAL	$4.484 B	$6.895 B	$10.709 B	57%

Overall coal mining financing saw a huge spike in 2017

Still, broadly, the banks with exposure reduction commitments appear to be complying with their policies by slowly reducing the stock of their credit exposure. But tracking the flow of overall financing tells a very different story. After a year of progress in 2016, in which every one of the six big banks reduced financing to coal mining, by between 92% (**Bank of America**) and 18% (**Citi**), 2017 was a year of backsliding across the board:

Table 15: Total Coal Mining Financing by Year

BANK	2015 FINANCING	2016 FINANCING	2015-2016 CHANGE ($)	2015-2016 CHANGE (%)	2017 FINANCING	2016-2017 CHANGE ($)	2016-2017 CHANGE (%)
JPMORGAN CHASE	$277 M	$43 M	-$234 M	-84%	$1.343 B	+$1.300 B	+3,014%
GOLDMAN SACHS	$1.896 B	$175 M	-$1.721 B	-91%	$1.437 B	+$1.262 B	+721%
BANK OF AMERICA	$538 M	$44 M	-$494 M	-92%	$284 M	+$240 M	+542%
MORGAN STANLEY	$165 M	$43 M	-$122 M	-74%	$159 M	+$116 M	+270%
WELLS FARGO	$193 M	$130 M	-$63 M	-32%	$347 M	+$217 M	+167%
CITI	$1.171 B	$965 M	-$206 M	-18%	$1.115 B	+$150 M	+16%
TOTAL	$4.240 B	$1.401 B	-$2.839 B	-67%	$4.685 B	+$3.284 B	+234%

That remarkable increase in financing from 2016 to 2017, at the same time that banks have broadly complied with their exposure reduction policies, demonstrates just how big the loopholes are in policies of this type. Even **JPMorgan Chase**, which saw an astonishing increase in coal mining financing of more than 3,000% year on year, reduced its lending exposure by nearly $120 million from the end of 2016 to the end of 2017.

Support for expansion of coal mining

Potential emissions from all coal, oil and gas reserves currently in production would take the world beyond 2 degrees Celsius of warming. Potential emissions from just the oil and gas currently in production take us beyond 1.5 degrees of warming.[10] Support for projects and companies that are expanding fossil fuel extraction is therefore incompatible with the goals of the Paris Agreement, and ending that support is an urgent priority.[11] Ending support for expansion of coal mining must be a particular focus; as President Anote Tong wrote in August 2015, "Kiribati, as a nation faced with a very uncertain future, is calling for a global moratorium on new coal mines. It would be one positive step towards our collective global action against climate change ..."[12]

Of the 50 companies in the scope of this report, 22 are currently expanding coal mining.[13] Since the start of 2015, **Citi** has issued the most financing to those companies. **Wells Fargo** has issued the highest proportion of its coal mining financing to those companies.

Table 16: Finance for Companies Expanding Coal Mining

BANK	FINANCE FOR COMPANIES EXPANDING COAL MINING	TOTAL COAL MINING FINANCE	PROPORTION OF FINANCE GOING TO EXPANSION COMPANIES
CITI	$534 M	$3.273 B	16%
JPMORGAN CHASE	$495 M	$1.758 B	28%
WELLS FARGO	$257 M	$670 M	38%
BANK OF AMERICA	$223 M	$882 M	25%
GOLDMAN SACHS	$184 M	$3.723 B	5%
MORGAN STANLEY	$150 M	$403 M	37%
TOTAL	**$1.843 B**	**$10.709 B**	**17%**

Good news? Banks appear on track for major drop in coal mining financing in 2018

1H2018 figures show that all six banks have sharply reduced coal mining financing from 1H2017.

Table 17: Financing in 1H2018 Compared to 1H2017

BANK	1H2017 FINANCING	1H2018 FINANCING	1H2017-1H2018 CHANGE ($)	1H2017-1H2018 CHANGE (%)
GOLDMAN SACHS	$934 M	$215 M	-$719 M	-77%
CITI	$933 M	$22 M	-$912 M	-98%
JPMORGAN CHASE	$888 M	$95 M	-$793 M	-89%
WELLS FARGO	$347 M	--	-$347 M	-100%
MORGAN STANLEY	$159 M	$37 M	-$122 M	-77%
BANK OF AMERICA	$133 M	$15 M	-$118 M	-89%
TOTAL	$3.394 B	$383 M	-$3.010 B	-89%

To ensure that decline continues, banks should establish explicit future-facing policies committing to decreasing overall financing rapidly toward zero.

Conclusion

For banks to step away from coal mining, with all of the climate, public health, human rights and environmental impacts that it involves, solely reducing credit exposure is the wrong objective. Instead, banks should aim at year-on-year reductions of their overall financing, including all types of loans and underwriting services for all coal mining companies, with a declared zero date.

Rigorous assessment of the credit exposure approach to high-carbon sectors is especially timely, as banks are beginning to implement the recommendations of the Task Force on Climate-Related Financial Disclosures. An early methodological pilot has focused entirely on banks' loan portfolios.[14] But as an examination of coal mining shows, underwriting and B-term loans account for more overall financing than on-the-books lending. All coal mining financing both drives the climate crisis, and stands at risk in the transition to a zero-carbon economy. Any methodology that does not account for this is significantly incomplete.

U.S. banks have used their coal mining policies as centerpieces of their future-facing approach to climate and the environment.[15] To truly play that role, the policies must be strengthened.

Positive Practices

Exclusion

The biggest U.S. banks have mostly taken a "reduction" approach to coal mining policies, committing to reduce credit exposure to some set of coal mining companies over time. By contrast, some European banks have taken an "exclusion" approach, simply prohibiting lending and underwriting to a list of coal mining companies.

For example, in May, **Royal Bank of Scotland (RBS)** announced a policy excluding financing for coal producers which derive more than 40% of their revenue from coal mining.[16] **BCPE/Natixis** does the same, with a 50% exclusion threshold; **Crédit Agricole** excludes companies above 50% that are "not implementing a significant diversification plan."[17] **BNP Paribas** excludes companies that "are significantly involved in thermal coal extraction and do not have a diversification strategy." The latter three banks each reported on implementation of their policy in their last annual report. All of these banks also prohibit financing for new coal mines.

RBS, Natixis and **Crédit Agricole** apply similar policies to energy clients: RBS excludes companies with greater than 40% of electricity generation capacity from coal; **Natixis** and **Crédit Agricole** exclude companies more than 50% of whose business comes from coal power.[18] **ABN Amro** excludes all energy utility companies for which greater than 50% of their electricity generation capacity comes from coal, and also those that are increasing their coal-fired electricity generation capacity, ruling out support for any company building new coal-fired power plants.[19]

Reporting

The Dutch bank **ING** has demonstrated the most fine-grained reporting on its coal mining commitment. In its 2017 annual report, **ING** reports on its progress as follows:[20]

Thermal Coal Category

LENDING O/S IN EUR MILLION	DEC 2017	DEC 2016	% CHANGE
MINING (INCLUDING COAL TERMINALS)	316	455	-31%
POWER GENERATION, COAL-FIRED POWER PLANTS	452	551	-18%

Recommendations

The big six U.S. banks should:

- Report on implementation of their coal mining policies.
- Prohibit project finance for new or expanded coal mines, and end support for companies planning expansion of coal mining.
- Commit to phasing out all forms of financial support for coal mining, with a public, Paris-compliant zero date.
    - Prioritize ending support for significant coal producers — companies with greater than 30% of revenue from coal, and/or greater than 20 million tons produced per year.
- Extend these financing restrictions to coal power as well as coal mining, in order to end support for infrastructure that drives coal mining.

These recommendations should be implemented as part of a broader effort to align bank policies and practices with a world in which climate change is limited to 1.5 degrees Celsius and human and Indigenous rights are fully respected.

PHOTO: CRISTAN RITCHIE / SHUTTERSTOCK

APPENDIX 1: *Coal Mining Case Studies*

Peabody Energy

Peabody Energy, the world's largest private coal company, emerged from bankruptcy in April 2017 with its debt slashed to $2 billion from $8 billion[21] — savings financed by shedding environmental and worker obligations such as retiree pensions and health benefits[22] — but without a plan to adapt to a low-carbon future.[23] U.S. banks have continued to finance the coal giant during and after the bankruptcy process — in fact, among coal mining companies, Peabody was the #1 recipient of financing from the six biggest U.S. banks in both 2016 and 2017 — without requiring that the company adopt a business plan that steadily reduces its dependence upon thermal coal mining and the growth of coal power.

Thermal coal accounted for the majority of Peabody's coal sales in 2016 and 2017.[24] Instead of aligning with what is needed for a 1.5 degrees Celsius future, Peabody executives are counting on huge coal power plant construction in Asia to keep its 23 mines operating and expanding.[25] But in its recent 10-K annual report, Peabody points out that: "We compete with producers of other low cost fuels used for electricity generation, such as natural gas and renewables."[26] Signs are increasing that countries like India, Indonesia, and Vietnam are backing off from their old coal-heavy development plans, especially with wind and solar now becoming cheaper than coal, as well as their commitments to cut greenhouse gas emissions and improve urban air quality.

Instead of adapting to what is necessary for a stable climate, Peabody is digging in its heels. **JPMorgan Chase** and **Goldman Sachs** are the U.S. banks that have supported Peabody post-bankruptcy. In funding such a coal company without a transition or diversification plan, these banks are hindering the goals of the Paris Agreement, and exposing themselves to substantial financial risk.

PHOTO: ECOFLIGHT

Alliance Resource Partners

Next to Peabody, the #2 recipient of financing from the big six U.S. banks in 2017 was Alliance Resource Partners, L.P. Alliance mines coal in the Illinois Basin and Appalachia; even more than bigger players like Peabody, Alliance is especially focused on mining thermal coal for U.S. power plants. What is most striking is that in the midst of a marked long-term decline in the nation's coal power production the company is actively planning to expand its mining operations in the U.S. — and with the financial support of U.S. banks like **JPMorgan Chase, Citi,** and **Wells Fargo**.

Alliance's recent 10-K annual report describes a central facet of the company's business strategy: "expanding our operations by adding and developing mines and coal reserves in existing, adjacent or neighboring properties." This appears to include projects like a last-ditch expansion effort to keep open a mining complex in Pike County, Kentucky, which would otherwise likely shut down in early 2020. Instead of putting resources toward implementing a just transition plan for workers, Alliance executives are delaying the inevitable by expanding to new coal reserves.[27]

Any expansion into new coal reserves flies in the face of climate science. The potential emissions from just the world's *currently operating* fossil fuel fields and mines would take the earth beyond 2 degrees Celsius of warming,[28] and thus expansion plans like those from Alliance are incompatible with a stable climate. Banks must not finance coal companies that have no exit plan, let alone those headed in the opposite direction.

PHOTO: ABUTYRIN / SHUTTERSTOCK

APPENDIX 2: *Methodology*

This report analyzes credit exposure and overall financing to 50 top coal mining companies: the 30 top global coal mining companies, and the next 20 top coal mining companies operating in the United States, by annual coal production, according to the Global Coal Exit List.[29] Financial transaction data is sourced from Bloomberg Finance L.P. and includes corporate lending and underwriting transactions. We include transactions in which one or more of the six biggest U.S. banks — **Bank of America, Citi, Goldman Sachs, JPMorgan Chase, Morgan Stanley** and **Wells Fargo** — play a leading role, as per Bloomberg's league credit methodology.[30]

Each transaction is weighted based on the proportion of the borrower or issuer's coal assets as a percentage of the company's total assets.[31] In applying the adjusters to the transaction data, if a bank is credited for loaning $1,000,000 to a diversified mining company, and 20 percent of that company's assets are in coal mining, then the bank will be credited with a $200,000 loan to coal mining. But if a bank is credited for loaning $1,000,000 to that company's coal-mining-only subsidiary, the full $1,000,000 will be counted.

The primary metric tracked is an approximation of credit exposure to coal mining as a percentage of a given bank's exposure on the date it published its coal policy. For the three banks whose policies imply that their credit exposure reduction commitment applies to pure play coal companies only (**Bank of America, Citi** and **JPMorgan Chase**), we only include in the credit exposure analysis the 28 pure play companies, as starred in the table below.

In order to calculate credit exposure, we assess each bank's leading involvement in lines of credit and A-term loans to the coal mining companies, using the dates a loan was signed and when it became inactive (due to refinancing, maturation, replacement by an amended version, etc.) in order

to assess whether a loan was active on the date of publication of the bank's coal mining policy, and then again at the end of each subsequent quarter. While a loan is active, the entire value of the bank's portion of the loan is counted toward credit exposure, due to the lack of comprehensive transparency about how much of a given loan might be outstanding at a certain time. B-term loans are not included in the credit exposure under the assumption that the banks typically do not hold these loans, but rather sell them to institutional investors. This analysis assumes that A-term loans are typically held by the banks, and thus counts them toward credit exposure.

None of these six U.S. banks have reported on these credit exposure reduction commitments. This methodology attempts to approximate credit exposure based on available data, however the authors acknowledge that the banks' own methodology for internal tracking of credit exposure may be different. All of the banks analyzed in this report had the opportunity to comment on the draft methodology and findings. As noted in the recommendations section, the authors urge U.S. banks to issue their own reporting on coal mining credit exposure.

For financing overall, we aggregate bank involvement in corporate lending and underwriting (debt and equity issuance) per half and full year. In addition to the lines of credit and A-term loans included in the credit exposure analysis, the financing data also includes the underwriting of debt and equity issuances, as well as B-term loans. The financing totals include transactions supporting all 50 companies on the list below.

All amounts are expressed in U.S. dollars unless otherwise indicated.

PHOTO: MARK AGNOR / SHUTTERSTOCK

APPENDIX 3: *50 Top Coal Mining Companies*

RANK	BANK	ANNUAL COAL PRODUCTION (MILLION METRIC TONS)	COAL MINING EXPANSION PLANS?
1	COAL INDIA *	538.8	YES
2	SHENHUA GROUP *	433.3	YES
3	DATONG COAL MINE GROUP	171.6	YES
4	CHINA NATIONAL COAL GROUP *	167.0	YES
5	PEABODY ENERGY *	159.3	
6	SHANDONG ENERGY GROUP	133.7	
7	SHAANXI COAL AND CHEMICAL INDUSTRY GROUP *	126.0	
8	GLENCORE	124.9	
9	YANKUANG GROUP	109.0	YES
10	SUEK *	105.4	YES
11	SHANXI COKING COAL GROUP	105.4	YES
12	JIZHONG ENERGY GROUP	101.8	YES
13	HENAN ENERGY AND CHEMICAL INDUSTRY GROUP	101.6	YES
14	ANGLO AMERICAN	94.8	YES
15	ARCH COAL *	93.3	YES
16	KAILUAN GROUP	91.7	YES
17	RWE	90.5	
18	BUMI RESOURCES *	86.5	
19	CHINA HUANENG GROUP	83.3	YES
20	ENERGETICKÝ A PRŮMYSLOVÝ HOLDING (EPH)	82.0	
21	BHP BILLITON	77.0	
22	YANGQUAN COAL INDUSTRY GROUP	76.0	YES
23	SHANXI LU'AN MINING INDUSTRY GROUP	74.3	YES
24	STATE POWER INVESTMENT CORPORATION	73.7	
25	SHANXI JINCHENG ANTHRACITE MINING GROUP	70.4	

RANK	BANK	ANNUAL COAL PRODUCTION (MILLION METRIC TONS)	COAL MINING EXPANSION PLANS?
26	JINNENG GROUP	70.4	YES
27	HUAINAN MINING INDUSTRY GROUP	70.0	YES
28	SINGARENI COLLIERIES COMPANY LIMITED *	61.3	YES
29	MURRAY ENERGY *	59.0	
30	CHINA GUODIAN	58.7	
31	CLOUD PEAK ENERGY *	53.0	
32	WESTMORELAND COAL *	47.5	
33	ALLIANCE HOLDINGS *	35.2	YES
34	NATURAL RESOURCE PARTNERS *	30.2	
35	NACCO INDUSTRIES	29.5	
36	DRUMMOND COMPANY *	28.0	YES
37	KIEWIT MINING GROUP	27.5	
38	CONSOL ENERGY *	22.4	
39	FORESIGHT ENERGY *	20.1	
40	ERP COMPLIANT FUELS *	14.5	
41	ALPHA NATURAL RESOURCES *	13.0	
42	BOWIE RESOURCE PARTNERS *	13.0	
43	CONTURA ENERGY *	11.2 [32]	
44	JAMES RIVER COAL COMPANY *	9.7	
45	CORONADO COAL *	9.0	
46	ARMSTRONG ENERGY *	8.4	
47	BOOTH ENERGY *	7.0	
48	PRAIRIE STATE GENERATING *	7.0	
49	RHINO RESOURCE PARTNERS *	6.7	
50	BLACKHAWK MINING *	NOT REPORTED	

* Asterisked companies are considered pure-play coal companies in this analysis, with coal share of revenue over 50% according to the Global Coal Exit List.[33]

Data downloaded from urgewald's Global Coal Exit List in April 2018.[34] These companies represent approximately 64% of the world's annual coal production.

APPENDIX 4: *Bank Coal Mining Policies*

Coal mining policy grade criteria: partial listing[35]

B- : Partial reduction and/or exclusion of coal mining sector without reporting:

Commits to reduce one or more forms of financing for coal producers, and/or commits to exclude some coal producers.

C- : Partial prohibition of coal mine financing, or mountaintop removal (MTR) phase-out:

Commits to phase out all financing for producers of MTR coal, or sets a minimum efficiency threshold for new coal mine financing, or commits to phase out one or more types of financing for some, but not all MTR producers, or commits to partially prohibit new coal mine financing.

Bank of America

"Going forward, Bank of America will continue to reduce our credit exposure to coal extraction companies. This commitment applies globally, to companies focused on coal extraction and to divisions of diversified mining companies that are focused on coal."[36] (May 7, 2015)

***Coal mining grade:* B-**

Rationale: Bank of America's coal policy commits the bank to reduce lending exposure to coal mining companies. It does not include all forms of financing, and does not commit to reporting on progress.

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"Going forward, we commit to continue this trend of reducing our global credit exposure to coal mining companies. This commitment applies globally to coal mining companies, including those that use mountaintop removal (MTR) methods, and to coal-focused subsidiaries of diversified mining companies."[37] (October 5, 2015)

***Coal mining grade:* B-**

Rationale: Citi's coal policy commits the bank to reduce lending exposure to coal mining companies. It does not include all forms of financing, and does not commit to reporting on progress.

PHOTO: SHAUN JEFFERS / SHUTTERSTOCK

Goldman Sachs

"For transactions involving coal mining globally, we apply enhanced due diligence… For financings directly supporting new coal mine development, we will be selective in the transactions we undertake and where the sensitivities are too high, we will forgo the opportunity.

For financings where the specified use of proceeds would be directed towards mountaintop removal mining, we will decline participation. For other financings involving U.S. coal companies that have production from MTR mining, we will decline participation unless the company has demonstrated that there will be an absolute and permanent reduction in its MTR coal production over a reasonable timeframe."[38] (November 2, 2015)

Coal mining grade: **C-**

Rationale: Goldman Sachs partially commits to phasing out MTR financing, does not commit to reporting on the policy's implementation, and allows financing to companies that produce MTR coal. For coal mining globally, Goldman Sachs applies enhanced due diligence.

JPMorgan Chase & Co.

"JPMC will not provide project financing or other forms of asset-specific financing where the proceeds will be used to develop a new greenfield coal mine."

"Over the medium term, our credit exposure to companies deriving the majority of their revenues from the extraction and sale of coal will be reduced… JPMC will apply enhanced due diligence to transactions with diversified mining and industrial companies where proceeds will be used to finance new coal production capacity."[39] (March 7, 2016)

Coal mining grade: **B-**

Rationale: JPMorgan Chase's policy prohibits project financing or other asset-specific financing for new greenfield coal mines. It also includes a commitment to reduce credit exposure to pure-play coal mining companies, as well as a commitment to reduce exposure to "companies engaged in mountaintop mining." However, the bank's definition of exposure reduction does not include all forms of financing, and the policy does not specify reporting.

"We have reduced and will continue to reduce our exposure to coal mining globally… Any financing transactions for coal mining companies will require escalation and senior approval." [40] (December 1, 2015)

***Coal mining grade:* B-**
Rationale: Morgan Stanley's coal policy committed the bank to reduce its exposure to coal mining globally, and to report annually on progress. There has been no public reporting to date of which the authors are aware.

"Wells Fargo has and will continue to limit and reduce our credit exposure to the coal mining industry… We will continue to support our existing coal mining customers with capital markets expertise and other products in some circumstances, to help them manage the changing economics."[41] (December 1, 2015)

***Coal mining grade:* B-**
Rationale: Wells Fargo's policy commits the bank to reduce credit exposure to the coal mining industry, but does not cover all types of financing. The bank commits to end both lending and underwriting to MTR projects, as well as producers where a majority of their production comes from the practice.

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