



EBA REPORT ON THE APPLICATION OF THE INFRASTRUCTURE SUPPORTING FACTOR

AS OF DECEMBER 2021

EBA/REP/2022/29

3 NOVEMBER 2022



EBA

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Abbreviations

CET1	Common equity tier 1
COREP	Common Reporting Framework
CRR	Capital requirements regulation
ECAI	External credit assessment institution
EEA	European Economic Area
EU	European Union
GFC	Global Financial Crisis
ISF	Infrastructure supporting factor
IRB	Internal Ratings Based approach
LGD	Loss given default
NCA	National competent authority
PD	Probability of default
PF	Project Finance
PP	Percentage points
RWA	Risk weighted assets
SA	Standardised Approach
SLE	Specialised Lending Exposures
s.t.	Subject to

Executive summary

This report analyses the lending trends and riskiness of infrastructure loans which have benefitted from a capital reduction due to the introduction of the so-called Infrastructure Supporting Factor (ISF) according to Article 501a of the CRR. The legislation introduced the ISF in the CRR2 in the form of a 25% reduction in own fund requirements for specific exposures in corporate or specialised lending categories - with the aim to encourage private and public investments in infrastructure projects. These exposures should be to entities which were created specifically to finance or operate physical structures or facilities, systems and networks that provide or support essential public services. The exposures also need to comply with a set of criteria to reduce their risk profile and enhance the predictability of cash flows. Based on COREP data, in December 2021 the ISF was applied by 91 banks out of 2388 banks at highest level of consolidation in the EEA. The overall impact of the supporting factor has resulted in a capital relief on average of 0.06 pp on banks CET1 ratios.

The mandate in Article 501a CRR requests an analysis of lending trends and riskiness of the ISF. While data on infrastructure lending is scarce overall, this report identifies these trends from the information received from a sample of banks that participated in a dedicated EBA survey.¹ This analysis is complemented by data collected by the ECB and several external sources that aggregate information on infrastructure/ project finance lending from banks. EBA COREP supervisory data is not used since it does not segregate the infrastructure lending exposures, as these are reported in an aggregated way under specialised lending exposures, which is a wider category. The ISF has been in place since the beginning of June 2020. However, most of the available data end in either 2020 or in 2021. Hence, while lending trends can be identified, it is premature to draw any firm quantitative conclusions on the impact of the infrastructure supporting factor, both as regards the volume or riskiness of lending that is subject to ISF.

Against this background, to fulfil the mandate in Article 501a of the CRR to the extent possible, the EBA launched a voluntary survey among banks to collect information on the application of the ISF. Both qualitative data on the application of the supporting factor and quantitative data on the lending trends and riskiness of lending were collected in the survey.

Altogether 61 banks that provide infrastructure lending responded to the qualitative part of the survey. Those 61 banks are located in 16 EU countries with total assets amounting to 18.5 trillion EUR. This accounts for approximately 57% of the total assets of the EU banking sector. The voluntary nature of the survey gives rise to a sample selection bias, a data quality concern that should be kept in mind when interpreting the results of the survey.

¹ In order to encourage participation, EBA organized an industry roundtable on 21 April 2022, where representatives from more than 60 banks and banking associations participated. The representatives from banks were mostly supportive of the upcoming work and survey, and voiced some of their preliminary concerns related to the ISF.

- The qualitative survey results² indicated that among banks providing infrastructure lending that participated in the survey, two thirds use the ISF, of which approximately one third indicated that they have changed their lending policies to consider the ISF, ranging from direct introduction of the ISF criteria in the project finance lending policy to a more indirect consideration of the lower capital requirements as a factor affecting the cost of capital and profitability of the exposures. A third of the banks in the sample reported not having conducted any assessment to check whether infrastructure loans qualify for the ISF, highlighting the overall complexity of application of the article and the likely limited materiality for the bank.
- The individual criteria for the application of the ISF were mostly assessed as acceptable or somewhat clear and easy to verify by the banks applying the ISF. Criteria referring to the ESG assessments, predictability of cashflows and refinancing risk were more often poorly rated by banks, as were seen lacking clear definitions and guidelines. Regarding ESG in particular, should the ISF be maintained, the environmental criteria could potentially be strengthened, which is being explored as part of the public consultation questions of the EBA on the environmental risks in the prudential framework.

The quantitative part was filled in on a best effort basis and covering varying time ranges. As a result, the data is starting from 2014 or 2015 for a sample of banks between 11 and 13 banks, depending on the variable, which amounts to only 10 to 17% of the total assets of the EU banking sector.

- The quantitative results indicate that, infrastructure lending increased in 2020 and 2021. Based on a sample of 13 banks which reported lending stocks during 2014-2021 and 11 banks which reported flows over 2015-2021, in 2021 infrastructure lending experienced an increase in inflows compared to 2020, while infrastructure lending subject to ISF also increased, but at a lower rate. It is not possible to pinpoint with certainty what is the main cause of the increase, due to other potential factors (e.g. government support in specific infrastructure areas following the COVID-19 pandemic) and very few datapoints after the introduction of the ISF.
- In terms of riskiness, the ISF have lower risk as measured by default rates and defaulted exposures, but information on loss rates, an important aspect of riskiness, is not sufficient to conclude about riskiness overall. Based on a sample of 14 banks which reported default rates and share of defaulted exposures in 2014-2021, both measures are lower for loans subject to the ISF than for other infrastructure lending. However, due to small number of banks providing data, these figures do not consider the final loss for banks, considering all safeguards (guarantees, collateral etc), which is an important aspect of riskiness.

² The voluntary nature of the survey gives rise to a sample selection bias, a data quality concern that should be kept in mind when interpreting the results of the qualitative survey.

- Finally, from a broader prudential point of view, it can be noted that the recent Basel III reform is reflected in the new Article 122a in the Commission CRR3 proposal on ‘high-quality infrastructure’ under the SA, which includes a preferential treatment of 80% RW under SA for High Quality Project Finance (HQPF). While the CRR3 proposal has introduced a safeguard so that the preferential treatments set out in Article 122a and in Article 501a cannot be both applied at the same time, maintaining the application of the ISF results in setting out two different treatments in the recognition of the low risk of the qualifying infrastructure exposures. Currently, the IRB approach is mostly used to calculate credit risk requirements for Specialised Lending Exposures (including Supervisory Slotting Criteria). By design, the IRB is the most risk sensitive approach and therefore seems to support the removal of the supporting factor whilst ensuring full alignment with the Basel III framework and that banks have a more risk-sensitive approach available in the future.³

Despite some findings based on the quantitative data and the qualitative survey, the data is not sufficient to conclude on the impact of ISF on lending or the consistency of the riskiness of the affected loans with the own funds requirements. At the same time, in line with previous EBA recommendations in EBA Reply to the Commission Call for Advice on the impact and implementation of the finalised Basel III reforms (the ‘*EBA Policy Advice*’)⁴, owing to the latest Basel III changes as well as the CRR3 proposal that ensure an increased risk sensitivity of the SA, and preserves the IRB risk-sensitivity of the IRB, the continued application of the ISF could be questioned from broader prudential perspective.

Lack of sufficient quantitative data is one of the main obstacles to conclude on the impact of the ISF and to provide an evidence-based policy recommendation. A repeated exercise assessing the impact of the ISF may be justified only once more data is available. In particular, changes to the reporting framework would be necessary to ensure that the banks report the data related to infrastructure lending, as well as on loans subject to the ISF under both SA, and IRB approaches. A repeated exercise could be conducted 3 years after such reporting is applied to provide more reliable data on the riskiness of the loans.⁵

³ The Specialised Lending exposures would be subject to LGD input floors under the IRBA as per Basel III, for which the CRR3 proposal introduces transitory measures on their application until December 2028.

⁴ [Policy Advice on Basel III reforms - Credit Risk.pdf \(europa.eu\)](#)

⁵ It is important to note that more reporting on infrastructure lending data will add more time datapoints to the series, but would not improve significantly the quality of the data used for the assessment of the impact of the ISF on lending, as this would only be possible if more and better data is available before and after the introduction of the policy, i.e. in the years before and after 2020.

1. Introduction

This introduction provides a short overview of the legal background for this report and the approach taken by the EBA, given the various data limitations.

1.1 Legal background

The Infrastructure Supporting Factor (ISF) was introduced in the CRR2 in 2019 with the aim to encourage private and public investments in infrastructure projects, as investments in infrastructure are “essential to strengthen Europe's competitiveness and to stimulate job creation”.⁶ Article 501a of the CRR2 introduces a 25% reduction of the own fund requirements for specific exposures to corporate or specialised lending exposure classes. This reduction applies starting from 27 June 2020. The exposures should be to entities which were created specifically to finance or operate physical structures or facilities, systems and networks that provide or support essential public services and should also meet several conditions listed in Article 501a point (1). The exposures also need to comply with a set of criteria aiming at reducing their risk profile and enhancing predictability of cash flows.

According to point (4) of Article 501a of the CRR, the European Commission is required to report on the impact of the own funds requirements on lending to infrastructure project entities and to submit that report to the European Parliament and to the Council⁷, together with a legislative proposal, where appropriate. For this purpose, EBA is required to report to the European Commission on the following:

- a) an analysis of the evolution of the trends and conditions in markets for infrastructure lending and project finance⁸;
- b) an analysis of the effective riskiness over a full economic cycle of entities which were created specifically to finance or operate physical structures or facilities, systems and networks that provide or support essential public services;

⁶ “The recovery and future growth of the Union economy depends largely on the availability of capital for strategic investments of European significance in infrastructure, in particular broadband and energy networks, as well as transport infrastructure including electromobility infrastructure, particularly in industrial centres; education, research and innovation; and renewable energy and energy efficiency.”

⁷ The original deadline for this report is 28 June 2022, which was moved forward due to COVID-19 pandemic.

⁸ The paragraph points out that the analysis should be done over the period referred to in paragraph 4. However, paragraph 4 does not specify a period, but it can be understood that the period of interest is the period before and after the introduction of the Infrastructure supporting factor.

- c) the consistency of own funds requirements with the outcomes of the analysis under points (a) and (b)⁹.

1.2 Scope

In line with the CRR mandate, this report focuses on infrastructure lending, and infrastructure lending that qualifies for the ISF. Currently there is no definition of infrastructure lending commonly accepted within the EU. In the CRR, Article 501a on the ISF refers to exposure “to an entity which was created specifically to finance or operate physical structures or facilities, systems and networks”. This definition is not referred to anywhere else in the CRR and is also not used for reporting purposes. At this point in time, the definition has not been implemented in COREP and hence no data with respect to this definition is available.

Instead, the closest definition of “infrastructure lending” are the exposures under Project Finance, which is defined in the Commission Delegated Regulation on assigning risk weights to specialised lending exposures in respect of which an institution is not able to estimate PDs or the institutions’ PD estimates do not meet certain requirements (‘RTS on slotting approach’)¹⁰, as exposures where the purpose is “to finance the development or acquisition of large, complex and expensive installations, including in particular power plants, chemical processing plants, mines, transportation infrastructure, environment, and telecommunications infrastructure, and the income to be generated by the assets is the money generated by the contracts for the output of the installation obtained from one or several parties which are not under management control of the sponsor”. This definition is largely based on the Basel definition of Project Finance.¹¹ Under the current CRR, this classification is applicable only to IRB exposures, but will in the future be extended also to the SA.¹²

⁹ The mandate under Article 501a (5) is drafted in the same manner as a previous mandate under Article 501 of the CRR on the SME Supporting Factor, which was delivered by the EBA to the Commission in March 2016 in the form of a report. To provide the requested analysis on the SME report, the EBA established a Task Force with representatives from most NCAs, with separate workstreams working on each of the three points under assessment (trends and conditions, riskiness and consistency of own funds requirements with the outcomes of the analysis in the first two points). To conduct the analysis, extensive work was conducted on data from harmonised EU databases on SMEs, together with data provided on a bilateral basis by NCAs, studies with underlying data from French and German credit registries, and EBA COREP supervisory data. The depth and length of information related to SMEs is richer than in the case of infrastructure data, where data are scarcer.

¹⁰ [COMMISSION DELEGATED REGULATION \(EU\) 2021/598 of 14 December 2020 supplementing Regulation \(EU\) No 575/2013 of the European Parliament and of the Council with regard to regulatory technical standards for assigning risk weights to specialised lending exposures subject to the supervisory slotting approach](#)

¹¹ Project finance is a method of funding in which the lender looks primarily to the revenues generated by a single project, both as the source of repayment and as security for the exposure. This type of financing is usually for large, complex and expensive installations that might include, for example, power plants, chemical processing plants, mines, transportation infrastructure, environment, and telecommunications infrastructure. Project finance may take the form of financing of the construction of a new capital installation, or refinancing of an existing installation, with or without improvements. In such transactions, the lender is usually paid solely or almost exclusively out of the money generated by the contracts for the facility’s output, such as the electricity sold by a power plant. The borrower is usually an SPE that is not permitted to perform any function other than developing, owning, and operating the installation. The consequence is that repayment depends primarily on the project’s cash flow and on the collateral value of the project’s assets. In contrast, if repayment of the exposure depends primarily on a well-established, diversified, credit-worthy, contractually obligated end user for repayment, it is considered a secured exposure to that end-user. (CRE 30.9 and 30.10 of the Basel III framework)

¹² Under the new Basel standards and CRR3 proposal, the specialised lending and its sub-exposure classes of project, object and commodity finance are also added to the SA.

1.3 Data limitations and analysis approach

There is very limited data on infrastructure projects that would allow to conduct the analysis required in the mandate of Article 501a. For example, to analyse the evolution of lending trends and conditions, a time series of data on infrastructure lending should ideally be available both before and after the introduction of the ISF. However, EBA COREP supervisory data does not segregate the infrastructure lending exposures, as these are reported in an aggregated way under specialised lending exposures, which is a wider category. In addition, in order to analyse the impact of the Introduction of the ISF on lending or conditions of lending, one would also need sufficient datapoints after the introduction of the policy. While the policy was implemented in June 2020, COREP reporting started one year later. As a result, for the moment there are only two datapoints collected from COREP, starting June 2021. For the analysis on the effective riskiness of infrastructure lending, a long series of data would be needed, specifically for entities that finance infrastructures, over at least a full economic cycle, i.e. starting at least before the Great Financial Crisis (GFC).

To address these data gaps, EBA launched a voluntary survey among institutions in the attempt to collect more quantitative and qualitative information on the application of the ISF. The qualitative survey provides useful information on how the ISF is applied in practice. For the quantitative information, banks were asked to provide, on a best effort basis, lending time series, both in terms of volume (stocks and flows) and riskiness (default rates, defaulted exposures, and loss rates).

This report draws on the results of this data collection and complements it with additional information from COREP as well as external studies.

Due to lack of sufficient data, the assessment of the impact of the ISF on infrastructure lending is restricted. Limited representativeness of the information received hampers significantly the efforts of a wide ranged and complete analysis. For the same reason, the assessment is not able to draw conclusions on the consistency of riskiness of infrastructure exposures with the own-funds requirements with or without the ISF.

1.4 Data collection

To fulfil the mandate in Article 501a of the CRR to the extent possible, the EBA launched a voluntary survey and data collection among banks to collect information on the application of the ISF. The survey was divided into two parts, the first one being qualitative and the second one quantitative (data collection). The qualitative part ranged from broad generic questions on infrastructure lending to more specific ones on how Art 501(a) impacted the lending activities of the bank. The banks were also given the opportunity to assess both the clarity and easiness of application of the criteria of the Art 501(a), an assessment that could be further detailed through optional comments.

The quantitative part dealt with time-series data on lending and riskiness. The span of the requested time-series ranged from 2014 to 2021 for lending and from 2008 to 2021 for riskiness:

- For lending stock and flows, data was requested starting from 2014, in line with the first year when COREP was reported. Both those categories were provided for total corporates, infrastructure project loans and infrastructure project loans subject to the ISF. As the ISF could not be applied prior to 2020, banks could only provide data on infrastructure loans subject to the ISF for years 2020 and 2021.
- For riskiness data, data was requested starting from 2008 to ensure the coverage of the Great Financial Crisis. The part on riskiness focused on the following metrics: number of loans, default rates, share of defaulted exposures and loss rate. Consistent with the part on lending, those metrics were provided for total corporates, infrastructure project loans and infrastructure project loans subject to the ISF. Similar to lending, banks could only provide data on infrastructure loans subject to the ISF for years 2020 and 2021.

This survey was designed in Q1 2022 and sent out on April 5th, 2022, by the EBA to the largest banks in the European Union (EU) via their respective national competent authorities (NCAs) for a voluntary completion to be returned by June 3rd, 2022. Institutions were asked to provide information at the highest level of consolidation at the EEA level. Smaller banks were also free to participate and submit data.

Qualitative data was collected for a total of 61 banks¹³. As shown in Table 1, the total assets of those 61 banks located in 16 EU countries amount to 18.5 trillion EUR, which accounts for approximately 57% of the total assets of the EU banking sector.¹⁴ The sample is characterized by a non-uniform distribution of total assets across countries.

Table 1: Survey sample (qualitative data), number and total assets

Country	Number of responses	Total asset (EUR billion)	Share of total assets in the sample
AT	3	387.4	2.10%
BE	1	-	-
CY	1	-	-
CZ	3*	206.4	1.12%
DE	8	960.1	5.20%
EL	3	214.1	1.16%
ES	10	3,002.0	16.25%
FI	2	-	-
FR	8	8,135.8	44.03%
IE	2	-	-
IT	6	2,303.3	12.47%

¹³ The survey was submitted by 67 banks, of which five declared that they did not provide any infrastructure lending and were subsequently discarded from the sample, while one bank filled in the qualitative part of the survey with very little information.

¹⁴ According to ECB CBD (SDW: <https://sdw.ecb.europa.eu/browse.do?node=9691533>), the total assets of the banking sector in the EU in 2021, including the Domestic banking groups and stand-alone banks, foreign (non-EU) controlled subsidiaries and foreign (non-EU) controlled branches represented EUR 32.4 trillion.

Country	Number of responses	Total asset (EUR billion)	Share of total assets in the sample
LU	1	-	-
NL	5	1,469.4	7.95%
PL	4	164.8	0.89%
SE	2	-	-
SI	2	-	-
TOTAL	61	18,476.3	100%

Source: EBA survey on the application of ISF, 2022, data as of end 2021

Note: total assets and share in the total assets of the EU banking sector for countries where less than 3 banks participated is not disclosed in the table for confidentiality reasons. The 3 banks from CZ are all subsidiaries of other banks that also participated in the survey. They are therefore not counted in the total assets, but their responses in the qualitative part are considered.

Quantitative data on lending and riskiness was provided by banks on a best effort basis. For example, out of 61 banks only 14 banks provided data on stocks of corporate and infrastructure lending starting 2014. In case of riskiness, only 3 banks provided data from 2008 - the beginning of the requested time series. To increase the sample, shorter time series are used in the analysis, particularly in the riskiness section, which means that the analysis does not refer to a full economic cycle as demanded in the Article 501a mandate (Table 2). Due to the small sample, the loss rate data is not included in the analysis.¹⁵

Table 2: Data collection sample (quantitative data), number and share if total assets

	Starting year of the time series	Number of banks providing data	Share in total assets of the EU banking sector	Of which: number of banks with exposures s.t. ISF	Share in total assets of the EU banking sector
Lending stocks	2014	13	17.0%	8	14.0%
Lending flows	2015	11	10.2%	7	6.7%
Default rates	2015	14	14.7%	6	6.2%
Share of defaulted exposures	2015	14	14.6%	8	9.0%

Source: EBA survey on the application of ISF, 2022, data as of end 2021

Note: The aggregate for default rates depends on availability of data on obligors. The aggregate on share of defaulted exposures depends on availability of data on stocks. The sample for stocks and flows, exclude banks that started applying ISF in 2021.

1.5 Structure of the report

¹⁵ For loss rates, a sub-sample of 6 banks provided data on defaulted exposures and loss rates for the period 2015-2021. Of these, only 1 bank had also defaulted exposures subject to the ISF. Other sources for losses were considered. Global Credit Data Consortium has a dataset on Observed LGD in this regard that collects data on Project Finance and Corporate LGDs from a number of EU banks. However, the recovery processes for defaulted loans tends to last more than two years; as a result, the dataset had very few datapoints for the years 2020 and 2021, the years most relevant for the application of the ISF, and was therefore not included in the analysis.

The rest of the report is structured in the following three parts:

- The first part looks at the application of the ISF based on the qualitative data from the survey, and its impact on the banks' RWA and capital ratios (section 2);
- The second and third parts analyse the quantitative data from the data collection and other available data sources on the infrastructure lending and riskiness (section 3 and 4);
- The third part provides some policy discussion on the relevance of the ISF in the context of recent Basel reforms (section 5).

2. Application of Infrastructure Supporting Factor

This chapter looks at the capital impact of the application of the Infrastructure Supporting Factor (ISF) and describes the qualitative results of the survey on the application of the supporting factor among banks.

2.1 Impact of the ISF on capital ratios (evidence from COREP)

The ISF applied from 27 June 2020, and its application started to be recorded in COREP from June 2021.¹⁶ The overall impact of the ISF on the risk weighted assets (RWA) and on the common equity tier 1 (CET1) capital ratio is shown in Table 3. In December 2021, the ISF was applied by 90 banks out of 2 389 banks at highest level of consolidation in the EEA. The total amount of RWA adjustment was EUR 21.8 billion, of which 94% was concentrated in large banks.

The overall impact on CET1 ratio is an average increase of 0.15 percentage points (pp), which results from a reduction in the RWAs (Table 3).¹⁷ When weighted by the total risk exposure amount (the denominator of the CET1 ratio), the impact is 0.06pp, which shows that larger banks have smaller impact. Indeed, the impact differs across institutions with the increase of the CET1 ratio of smaller banks generally higher (0.17pp weighted average) than that of larger banks (0.06pp weighted average).

Table 3: Impact of ISF on RWA and CET 1 capital ratios (end 2021)

Group of banks	Number of banks in the sample	of which: banks with exposures s.t. ISF	Total adjustments to RWA (billion EUR)	Impact on CET1, average (pp change)	Impact on CET1, weighted average (pp change)
All banks consolidated at EEA level	2 389	90	21.84	0.15	0.06
<i>Of which:</i>					
Large banks (EBA sample)	121	43	20.49	0.16	0.06
Small banks	2 268	47	1.35	0.15	0.17

Source: COREP, as of 31 December 2021

Note: 'CET1 Impact average' is calculated as the simple average of change in CET1 across the sample of banks that reported exposures subject to ISF; 'CET1 Impact weighted average' is calculated as the average (where the weight is

¹⁶ Its application was moved forward from the original application date of 28 June 2021, along with other measures that are part of the so-called CRR Quick Fix package, due to the COVID-19 pandemic.

¹⁷ The average has been weighted by the RWA of banks

determined by the Total Risk Exposure Amount) of change in CET1 across the sample of banks that reported exposures subject to ISF.

2.2 Survey results on the application of the ISF

This section presents the qualitative results of the survey, received from 61 banks that reported providing infrastructure lending irrespective of the application of Article 501a of the CRR on the ISF. The voluntary nature of the survey means that only banks that lend to infrastructure project and especially those that apply the ISF have more interest in participating in the survey. This gives rise to a sample selection bias, a data quality concern that should be kept in mind when interpreting the results of the survey.

As part of the survey, banks were asked to state if they were specialised in infrastructure lending. Although no specific definition of “specialisation” had been provided, out of the sample of 61 banks that provide infrastructure project loans 25 defined their lending activity as specialised in infrastructure lending, representing roughly 41% of the banks in the sample and more than 69% of the total assets in the sample.

The results are further presented as an aggregate as well as separately for each of the two groups of banks: specialised and non-specialised.

Box 1. Specialised vs non-specialised banks

Although no specific definition of “specialization” had been provided, two basic measures of specialisation can be discussed:

- The share of infrastructure lending over the total amount of corporate loans could reflect how specialised a bank as regards infrastructure lending.
- The share of infrastructure lending subject to ISF as a share of all infrastructure lending could reflect the efficiency of assessment of loans to qualify for Article 501a, and therefore the commitment of funds and human capital for such an assessment.

According to the survey, out of 25 banks that described themselves as specialised in infrastructure lending, 19 reported either a high share of infrastructure project loans subject to the ISF (“Material share (20-49%)”, “Important share (50-79%)” or “Almost all (80-100%)”). By contrast the non-specialised banks have mostly reported not applying ISF at all (20 out of 36 banks).

Most of the specialised banks that apply Article 501a of the CRR consider the difficulty of assessing the article’s criteria as either “acceptable” or “somewhat easy to verify”. By contrast, the non-specialised banks have assessed the application on the ISF mostly as “acceptable to verify” or “difficult to verify” (13 respondents out of 16 non-specialised banks that apply the article).

In terms of quantitative data provided, on average, specialised banks have only slightly higher share of infrastructure lending of total corporate lending compared to non-specialised banks (6.5% and 5.1% respectively in 2021).¹⁸

2.2.1 Changes in lending policy

Most banks responding to the survey (49 out of 61, or 80%) did not change their lending policies as a result of the introduction of the ISF in the Article 501(a) of the CRR, of which two were in the process or planning to do so in the future. Six of these banks also classified themselves as specialised banks.

Twelve banks out of 61 (20%) responded having changed their lending policy partly or completely. The desired changes in policy ranged from a direct introduction of the ISF criteria in the Project Finance lending policy to a more indirect consideration of the ISF as a factor affecting the cost of capital and profitability of the exposures. Four banks pointed out that the ISF allowed them to improve lending conditions, for example by providing a better price to the borrowers, while not changing the lending policy per se, i.e. decisions about providing a loan based on its risk remained unchanged.

Table 4: Have you changed the lending policy?

Response	Number of banks	Of which: Specialised	Of which: Non-specialised
Yes	12	6	6
No	49	19	30
Total	61	25	36

Source: EBA survey on the application of ISF, 2022, data as of end 2021

2.2.2 Application of the ISF

Out of 61 banks that participated in the survey and that reported providing infrastructure lending, 22 banks (36%) reported not conducting any assessment of the loans to check whether they qualify for the ISF and therefore do not apply this possible capital reduction measure. Most of these banks are not specialised (20 out of 22).

The main justifications for not doing the assessment were that some criteria are difficult to assess (15 banks), and that the article is generally difficult/ too complex to assess (12 banks). Eight banks stated insignificant capital relief, with additional clarification from one bank stating that most infrastructure project loans are state guaranteed in their jurisdiction, which reduces the amount of

¹⁸The averages are weighted (i.e. total infrastructure lending as a share of total corporate lending) based on 19 out of 25 specialised banks reported lending data in 2021, and 18 out of 36 non-specialised banks reported lending data in 2021.

exposures that would qualify for the supporting factor. Another nine banks highlighted that they do not have sufficient information to conduct the assessment.¹⁹

Table 5: Do you assess if infrastructure loans qualify for Article 501a?

Response	Number of banks	Of which: Specialised	Of which: Non-specialised
Yes	39	23	16
No	22	2	20
Total	61	25	36

Source: EBA survey on the application of ISF, 2022, data as of end 2021

Thirty-nine banks out of 61 banks that participated in the survey (64%) assess if a loan qualifies for the ISF²⁰. Out of those 39 that use the factor, eleven have a material share of loans subject to ISF in total infrastructure loans (20-49%) and 18 have a share above 50% (Table 6). Among those that replied assessing if a loan qualifies for the ISF, most banks find the burden of verification of the criteria in Article 501a of the CRR acceptable (15 out of 39 banks), with the remaining banks equally finding it somewhat easy to verify or difficult to verify (Table 7).

When split by the specialisation of the bank in infrastructure lending, the survey reveals that 92% of the specialised banks claim that they assess the criteria in Art.501(a) in their infrastructure lending process (23 out of 25), as opposed to 44% of the non-specialised banks (16 out of 36). Specialised banks more frequently assess the criteria of Article 501a easier to verify, and have higher shares of infrastructure loans subject to the supporting factor compared to the non-specialised banks in the sample.

Table 6: What is the amount of the infrastructure project loans s.t. ISF, as a share of total infrastructure project loans?

Response	Number of banks	Of which: Specialised	Of which: Non-specialised
Total	61	25	36
<i>Of which:</i> Banks applying Article 501a on ISF	39	23	16
<i>Of which:</i>			
Non-material share (0-4%)	7	4	3
Small share (5-19%)	3	0	3
Material share (20-49%)	11	10	1
Important share (50-79%)	12	7	5

¹⁹ Banks could provide more than one reason, so the answers do not add up to 22.

²⁰ This does not mean that they have loans that are subject to the infrastructure supporting factor, but only that they assess their loans against the criteria of the article. Three banks reported not applying the Article 501a of the CRR, but proceeded to report positive amounts of loans that are subject to the infrastructure supporting factor. These 3 banks were counted as applying Article 501a.

Response	Number of banks	Of which: Specialised	Of which: Non-specialised
Almost all (80-100%)	6	2	4

Source: EBA survey on the application of ISF, 2022, data as of end 2021

Table 7: How difficult do you find the verification of the criteria in Article 501a?

Response	Number of banks	Of which: Specialised	Of which: Non-specialised
Total	61	25	36
<i>Of which:</i> Banks applying Article 501a on ISF	39	23	16
<i>Of which:</i>			
Not possible to verify	1	1	0
Difficult to verify	11	5	6
Acceptable	15	8	7
Somewhat easy to verify	11	8	3
Very easy to verify	1	1	0

Source: EBA survey on the application of ISF, 2022, data as of end 2021

2.2.3 Incentives for lending and better lending conditions

Among the 39 banks that apply the Article 501a of the CRR, 27 think that the ISF incentivizes institutions' lending towards infrastructure and 28 banks think that it improves the availability and the conditions for infrastructure project loans.²¹ The increase in lending is explained by respondents mostly through the reduced capital consumption, as well as more competitive pricing that allow banks to finance more projects. The improvements are seen only in lending conditions, since the risk profile stays the same, and therefore the decision to lend is not affected by the supporting factor

Although agreeing that the ISF may have improved lending conditions, two banks remained cautious and stated that it is probably too soon to attribute an improvement in lending conditions to the application of the ISF. Several banks mentioned that the supporting factor may have incentivized better conditions to "green" loans, while other banks acknowledged the increase in sustainable investments, but doubted the link with the ISF.

Among banks that thought there were no improvements in neither lending not conditions, three bank explained that the qualifying criteria were too restrictive to allow for a proper improvement of lending conditions.

Table 8: Do you think the ISF has incentivized lending or has improved the availability and the

²¹ One bank did not respond to the questions related to incentives for lending and better loan conditions

conditions for infrastructure projects loans?

Question	Total responses	Yes	No
Do you think the ISF has incentivized your institution's lending towards infrastructure?	39	27	12
Do you think the ISF has improved the availability and the conditions for infrastructure projects loans (e.g. interest rates)?	39	28	11

Source: EBA survey on the application of ISF, 2022, data as of end 2021

Note: These two questions were mandatory only for banks applying Article 501a (i.e. 39 banks).

2.2.4 Adequacy of current risk frameworks

The survey included two questions asking the banks if they think that the current external credit ratings approach applied to the standardised approach (SA) rated exposures on the one hand, and the current IRB risk parameter modelling (PD, LGD) or slotting approach on the other hand, are adequate to accurately assess the riskiness of infrastructure loans.²² If the frameworks are assessed to be accurate, any additional capital discount would generate a deviation from the risk assessment.

For the SA, ten banks (out of 14 that responded Yes/No) thought the current approach using external credit ratings is not appropriate, while four banks thought it is.²³ The reasons provided for the inadequacy of the framework are the following:

- For non-rated exposures, the features of the loan are very specific and do not meet the general criteria to be well calibrated with a standardized method. In their opinion, risk weights are too high on average and especially for the best-quality projects.
- In case of rated exposures, the available ratings are often not appropriate to assess the real risk value (for example FIBEN ratings), as they are designed to assess the enterprise risk. Some banks use external ratings that apply a dedicated methodology for rating special purpose vehicles of such project finance loans (such as ICAP ratings).

On the IRB side, 10 out of 23 banks thought the framework is not appropriate (out of 23 that responded Yes/ No), while 13 thought it is. The reasons for the perceived inadequacy of the framework were the following:

- Banks argued that the CRR2 current review including the IRB Repair exercise and the review of the internal models is driven by a more quantitative approach that relies heavily on historical backward-looking observations of credit defaults rather than on expert judgement. However,

²² These two questions were mandatory only for banks applying Article 501a of the CRR (i.e. 39 banks) and one of these banks did not respond to the question. We cannot distinguish between SA and IRB banks. 'Not applicable' is aimed to reflect banks for which the approach in questions is not applicable, however 12 banks reported 'Not applicable' for both SA and IRB question, while 9 banks responded Yes/ No to both approaches

²³ 'Not applicable' is aimed to reflect banks for which the approach in questions is not applicable, however 12 banks reported 'Not applicable' for both SA and IRB question, while 9 banks responded 'Yes' / 'No' to both approaches.

the project finance exposures tend to be very specific, and their risk would not be well captured by statistical methods that work for portfolios with many generic exposures. Moreover, in their opinion, there is insufficient data available to calibrate LGD models under A-IRB approach. In a similar fashion, banks have argued that the new Guidelines on PD and LGD modelling have been drafted mostly for high default portfolios rather than low default portfolios, such as could be infrastructure financing.

- Some banks believe that with IRB repair package, risk sensitivity of models has been reduced, as IRB models are now subject to multiple capital add-ons. The upcoming implementation of CRR3 will rise the PD input floors and introduce new LGD input floors as well as the output floor.

Table 9: Do you think that current frameworks do not allow for an appropriate measurement of the risk level of qualifying infrastructure projects?

Question	Total responses	Yes	No	Not applicable
Do you think that in the current ratings applied to SA rated exposures do not allow for an appropriate measurement of the risk level of qualifying infrastructure projects?	38	10	4	24
Do you think that in the current IRB risk parameter modelling (PD, LGD) or slotting approach do not allow for an appropriate measurement of the risk level of qualifying infrastructure projects?	38	10	13	15

Source: EBA survey on the application of ISF, 2022, data as of end 2021

Note: These two questions were mandatory only for banks applying Article 501a (i.e. 39 banks). One of these banks did not respond to these questions. 'Not applicable' is aimed to reflect banks for which the approach in questions is not applicable, however 12 banks reported 'Not applicable' for both SA and IRB question, while 9 banks responded 'Yes' / 'No' to both approaches.

2.2.5 Article 501a assessment

The banks were asked to rate the clarity and easiness of verification of the criteria listed in Art 501a. The article includes 21 criteria. The banks were asked to rate each criterion on a scale from 1 to 5 with the scores having the following meanings:

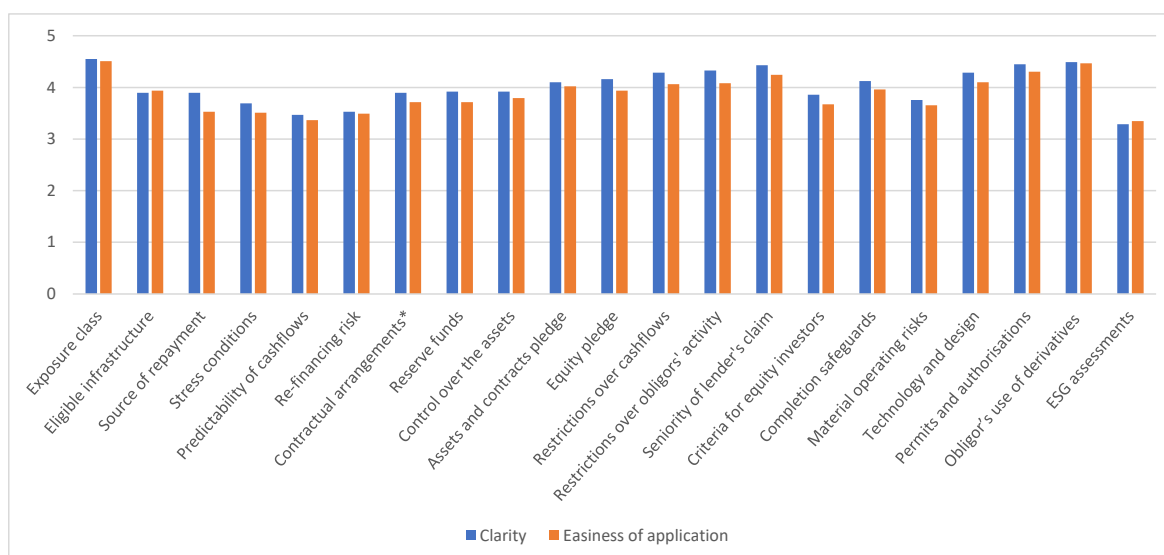
- 1 - Not clear at all/ Not possible to verify
- 2 - Very unclear/ Difficult to verify
- 3 – Acceptable/ Acceptable

4 - Somewhat clear/ Somewhat easy to verify

5 - Very clear/ Very easy to verify

Forty-nine banks responded to this section, of which 39 also reported applying Article 501a. All responses are included in this section. On average, all criteria were rated above 3, which means that they are generally perceived clear and easy to verify. Nevertheless, in specific cases, some of the criteria were marked with a lower score by specific banks. These cases are explained in more detail below.

Figure 1: Average score allocated to criteria in Article 501a CRR



Source: EBA survey on the application of ISF, 2022, data as of end 2021

Note: *Contractual arrangements to protect lending institution

Criteria referring to the ESG assessments, predictability of cashflows and refinancing risk were more often poorly rated by banks:

Criterion in Art501a(1)(o) on the need to have ESG assessments received the lowest rating with an average score of 3.3 for both clarity and easiness of application. Fourteen banks out of 49 rated it as 1 or 2 on clarity and 13 banks rated it as 1 or 2 on easiness of verification, raising concerns regarding this criterion. The criterion places an obligation on the borrower to conduct the ESG assessment and to ensure the existence of such assessment (see section 5 Policy Discussion). However, based on the comments received it is apparent that some banks thought that the obligation applies to them. Furthermore, many banks were asking for guidance on how the criterion should be applied. For example, banks were unsure if a positive outcome of the assessments are expected in order to qualify and whether the qualification for the supporting factor should depend on the project contributing to at least one or all six of the objectives listed. More generally speaking, banks were requesting a clear methodology for such assessments, narrowing of the definition of the objectives and provision of *“further clarification on the nature of the assessment”*. A few other

related remarks focused more specifically on the necessity to provide banks with a list of sectors *“that contribute to the aforementioned environmental objectives”*. As a solution to this issue, some banks suggest using or report having used the EU Taxonomy as guidance since the objectives listed in Art501a(1)(o) are seen to be too broad.

Criterion in Article 501a (1)(e) on the predictability of cashflows generated by the obligor was rated 3.5 and 3.4 respectively. Eleven banks out of 49 rated it as 1 or 2 on clarity and 10 banks rated it as 1 or 2 on easiness of verification, raising concerns regarding this criterion. Several comments pointed out the lack of definitions and guidelines, regarding the terms “predictable” and “substantial”. More general comments indicate that the overall wording may be too ambiguous.

Finally, **criterion in Art501a (1)(f) on refinancing risk** was identified as less clear (3.5) and less easy to verify (3.5). Seven banks out of 49 rated it as 1 or 2 on clarity and six banks rated it as 1 or 2 on easiness of verification, raising concerns regarding this criterion. Two banks commented that the definition of “re-financing risk” is not clear, as it may refer either to the liquidity risk of the institutions or re-financing risk of the debtor / infrastructure project. In particular, it is not clear when the risk is considered low, and the CRR does not provide a definition for refinancing risk.

2.3 Conclusion

The qualitative survey results indicated that among banks providing infrastructure lending that participated in the survey, two thirds use the ISF (39 out of 61), of which approximately one third (12 out of 39) changed their lending policies. The changes in policies ranged from a direct introduction of the supporting factor criteria in the project finance lending policy to a more indirect consideration of the lower capital requirements as a factor affecting the cost of capital and profitability of the exposures. ISF allowed banks in the sample to improve lending conditions, for example by providing a better price to the borrowers. While conditions improved, risk policies, i.e. decisions about providing a loan based on its risk, remained unchanged.

Out of 61 banks that provide infrastructure lending in the EU, 22 banks (two thirds) reported not having conducted any assessment to check whether infrastructure loans qualify for the ISF. These banks explained that some criteria are difficult to assess, that the article is in general too complex to apply or that the capital savings are insignificant. Thirty-nine banks out of 61 assess if a loan qualifies for the ISF. Specialised banks more frequently consider the criteria of Article 501a easier to verify and they also have higher shares of infrastructure loans subject to the ISF compared to the non-specialised banks in the sample. When assessing each criterion individually, on the scale from 1 to 5 on average all criteria of Article 501a were rated 3 or above for clarity and easiness of application.

Among the 39 banks that apply Article 501a, a majority think that the ISF incentivizes institutions to lend to infrastructure projects and improves the conditions for infrastructure project loans. Impact on lending is seen as indirect, through reduced capital consumption and more competitive pricing. As regards the adequacy of the current standardised approach and IRB frameworks to appropriately capture the riskiness of the infrastructure lending exposures, SA was more likely to

be assessed by the participating banks as not adequate due to high risk-weights, and IRB as more appropriate.

3. Infrastructure lending

The mandate in Article 501 requests an analysis of infrastructure lending trends in the context of the introduction of the ISF. While data on infrastructure lending is scarce overall, this chapter looks at the trends based on the data received from a small sample of banks as part of the EBA survey, as well as data from the ECB and several external sources that aggregate information on infrastructure/ project finance lending from banks. Given that the infrastructure supporting factor (ISF) applied only starting June 2021, and since most available data ends in 2020 or 2021, no robust conclusions can be drawn on the impact of the ISF on the volume of lending.

3.1 Market developments

3.1.1 Types of financing

Governments used to be the main source of funding for infrastructure facilities. This was mainly justified by the “public good” nature of these investments (OECD, 2015). Higher public deficits combined with the difficulties of the public sector in supporting and monitoring efficient spending have led to a reduction in the level of public funds allocated to infrastructure projects in many countries²⁴ and “budgetary pressures” have thus led to a shrinkage of public funds available to infrastructure.²⁵ Between 1970 and 2002, the share of government infrastructure investment as a share of total government spending shrunk from 9.5% to below 6% in France and from 11.5% to slightly above 3% in Germany. At the EU level, there has been a “substantial downward trend in public investment (...) from 1970-2003”²⁶. *The supply-and-demand-gap has been aggravated further as the demographic expansion has increased the demand for infrastructure. The outcome has been cooperation with the private sector with a view to ensuring continued increase in domestic economic productivity*²⁷.

Banks have acquired a central role in financing infrastructure projects, benefiting from their ability to assess risks accurately and to raise adequate funding to match the long-term profiles of infrastructure assets (McKinsey, 2017)²⁸. The 2021 GIHub Infrastructure Monitor reported that in 2020, 63% of the total value of private investment in infrastructure originated from banks at the global level (Table 10**Error! Reference source not found.**). Private financing has become relevant for infrastructure projects as the loan contracts could be tailored to reflect the individual financial

²⁴ EBA, “EBA report on European Secured Notes”, 2018

²⁵ Preqin, “Preqin Investor Outlook Alternative Assets H1 2017”, 2017.

²⁶ Weber, Staub-Bisang, Alfen, “Infrastructure as an Asset Class, Investment strategy, sustainability, project finance and PPP”, 2016, Second edition, Wiley Finance Series.

²⁷ *Ibid.*

²⁸ McKinsey Global Institute, “Bridging infrastructure gaps, has the world made progress?”, 2017

characteristics of an infrastructure project²⁹. Thanks to the use of senior or syndicated loans, banks have become the main financiers of infrastructure projects.

Table 10: Private financing in infrastructure projects by financing entity (% of total value) (2020)

	SHARE
Public	6.4%
Private, <i>of which:</i>	93.60%
Banks	63.00%
Institutional Investors, <i>of which:</i>	8.50%
Insurance company	0.70%
Pension funds	0.30%
Asset Manager	2.60%
ECA	3.50%
Infrastructure fund	1.40%
Sovereign wealth fund	0.1%
Private (other)	22.2%
Total	100%

Source: GI Hub Infrastructure Monitor 2021

Note: The data source did not specify the share of infrastructure investment provided by private equity funds, which is likely included in the category *Private (other)*.

An increasing share of infrastructure financing is also sourced from debt capital markets – although mostly in developed countries -- but loan financing still represents 87% of private infrastructure investment. On debt capital markets, green bonds represent 35% of the invested amount. Equity capital accounts for 21% of total private investments in infrastructure projects³⁰.

Despite the dominant role played by banks, since 2008 institutional investors (i.e. pension funds, insurance companies, export credit agencies, private equity funds and sovereign wealth funds³¹) have gradually taken a more prominent role in the market for infrastructure investment.³² According to the Preqin investor outlook: alternative assets, H1 2017, “Infrastructure continues to hold substantial appeal for large institutional investors attempting to manage long-term liabilities in a low-interest rate environment”. The authors report that the number of institutional investors in the infrastructure asset class rose by 116% between 2013 and 2017, most of them staying well below their target allocation to infrastructure on that period. Institutional investors have been

²⁹ Weber, Staub-Bisang, Alfen, “Infrastructure as an Asset Class, Investment strategy, sustainability, project finance and PPP”, 2016, Second edition, Wiley Finance Series.

³⁰ Global Infrastructure Hub, “Infrastructure Monitor Report 2021”, December 2021

³¹ In the absence of a strictly defined list of institutions considered as *institutional investors*, the choice was made to include private equity funds and sovereign wealth funds as institutional investors.

³² Pwc, “Global Infrastructure Trends”, 2020

mainly motivated by the long maturity of project loans and the relatively higher alternative returns in the low risk-free rate environment.³³

3.1.2 World infrastructure lending trends

According to the FSB report (2018), after an intermittent slowdown during the global financial crisis (GFC), the total volume of infrastructure finance globally provided by the financial sector has continued to grow. This trend includes both corporate infrastructure lending (i.e. infrastructure lending with recourse to the borrowing entity), as well as project finance (i.e. infrastructure finance that captures those infrastructure projects where creditors have no recourse to the borrowing entity), both from private and public sources. The pick-up in infrastructure finance was particularly marked in North America and in Europe. Bank lending has followed a flat trend, after a drop around the crisis, while market-based finance has increased mostly in the area of corporate infrastructure lending.

According to GI Hub, globally private investment in infrastructures reached approximately USD 137 billion in 2020. Compared to 2019, the volume of lending has decreased by 6.5% due to the impact of COVID-19 pandemic. The pandemic affected some of the sectors that require Infrastructure investments, however the consequences have been less dramatic than on some other sectors. The decrease in financing to areas affected by lockdowns and restrictions (such as transport and energy sectors) was almost entirely offset by growth in the areas that were driven by online activities (such as social networks and telecommunications sectors).

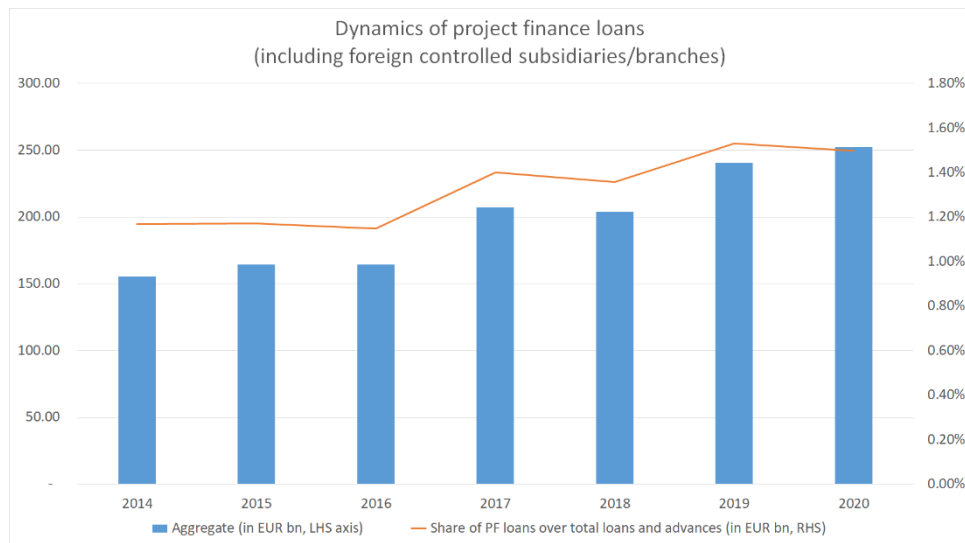
Based on the analysis carried out by the Financial Stability Board (2019), Basel reforms have had almost no impact on banks' infrastructure lending behaviour. Banks with higher Basel metrics (risk-based capital, leverage ratio, NSFR, liquidity) are similarly involved in infrastructure lending as banks with lower regulatory constraints. It was also found that there is no clear difference in terms of infrastructure lending volumes between G-SII and non-G-SII banks. However, the average maturity of financing from G-SIIs has decreased since the announcement of the Basel reforms in 2010. The Basel reforms did not have any statistically significant impact on the maturity trends for infrastructure syndicated loans compared to other syndicated loans. The same conclusion can be drawn regarding the spreads on syndicated loans. The FSB analysis confirms that market-based finance is playing an increasing role in financing infrastructure projects while banks have retained a stable market share. However, this substitution effect cannot be related to the Basel reforms.

3.2 Lending trends in the EU

³³ Institutional funding of infrastructure is driven by the following forces (Pwc – Global Infrastructure Trends): a) The long maturity that characterizes infrastructure investment is in-line with institutional investors' strategies. Thus, these instruments quickly appeared as a reliable funding source for pension funds and sovereign wealth funds. b) In an environment of low risk-free rates, it has become more interesting to invest in illiquid assets such as infrastructure. c) The 'public-good' nature of infrastructure investments, that was mentioned above in relation to Governments' involvement in infrastructure finance, is also beneficial to institutional investors. Indeed, these investments 'can be of interest to pension funds and insurance companies in particular'.

In the EU, project finance lending, which can be used as a proxy for infrastructure lending, represented EUR 252.3 billion in 2020, according to the ECB.³⁴ The amount of project finance has steadily increased over the years both in absolute terms and as a share of total loans and advances.³⁵

Figure 2: Project finance loans (EU billions)



Source: ECB SDW

Table 11: Project finance loans and advances

	Metric	2014	2015	2016	2017	2018	2019	2020
Total loans and advances	Total (EUR billion)	13302	14047	14306	14795	15006	15718	16843
	Yearly growth rate		5.6%	1.8%	3.4%	1.4%	4.7%	7.2%
Amount of project finance loans	Total (EUR billion)	155.5	164.4	164.3	207.3	203.8	240.4	252.3
	Yearly growth rate		5.7%	-0.1%	26.2%	-1.7%	18.0%	5.0%
	Share of total advances and loans	1.2%	1.2%	1.1%	1.4%	1.4%	1.5%	1.5%

Source: European Central Bank (ECB) Statistical Data Warehouse (SDW), Consolidated Banking Data

³⁴ In the European Central Bank (ECB) statistical data warehouse using the Consolidated Banking Data (CBD) database, data was unavailable for the following countries: Germany, Greece, Hungary, Luxembourg, Slovenia and Sweden did not report.

³⁵ Assuming a relatively stable outstanding amount of terminating loans, a change in the outstanding amount of loans remaining on the balance sheet of banks from one year to another can therefore be associated with a change in the lending trend.

Note: carrying amount for loans and advances in project finance in domestic banking groups and stand-alone banks, foreign (EU and non-EU) controlled subsidiaries and foreign (EU and non-EU) controlled branches. Data was unavailable for the following countries: Germany, Greece, Hungary, Luxembourg, Slovenia, and Sweden.

To complete the information with more specific infrastructure lending data, in its survey, EBA asked banks to provide information on infrastructure lending stocks and flows over the period of 2014 to 2021 on a best effort basis.³⁶ In addition, banks were asked to report data on loans subject to the ISF, which would include only two datapoints, starting 2020. For comparison purposes, banks were asked to also provide data on lending for corporates.

Quantitative data on lending was provided on a best effort basis. The information on lending stocks was provided more consistently than on the flows. Out of 62 banks that participated in the survey and that provide infrastructure lending, 26 did not provide any data on stocks, 41 banks provided data for at least 2 years (2020 and 2021). Out of these, 14 banks provided the full requested time series on stocks from 2014 to 2021. The remaining banks provided information for parts of the time range.

3.2.1 Lending stocks

For stocks of loans, a sub-sample of 13 banks was used that consistently provide data on stocks for the period 2014-2021.³⁷ These institutions represent 27.5% of the total assets of the overall sample of banks providing infrastructure lending that responded to the survey³⁸, and 17% of the total assets of the EU banking sector.

The stocks of both infrastructure and corporate lending are increasing over time (Figure 3). The yearly growth rate in stock of infrastructure lending went down in 2018 and steadily increased after that peaking in 2021.³⁹ The share of infrastructure lending of total corporate lending remains relatively constant over the period, around 7.2%, with a slightly bigger increase to 8.6% in 2021 when the annual growth rate of infrastructure lending more than doubled.

Banks provided data also on the amount of infrastructure loans subject to the ISF. In 2020 they represented 42.6% of the overall infrastructure loans, and in 2021 46.7%.

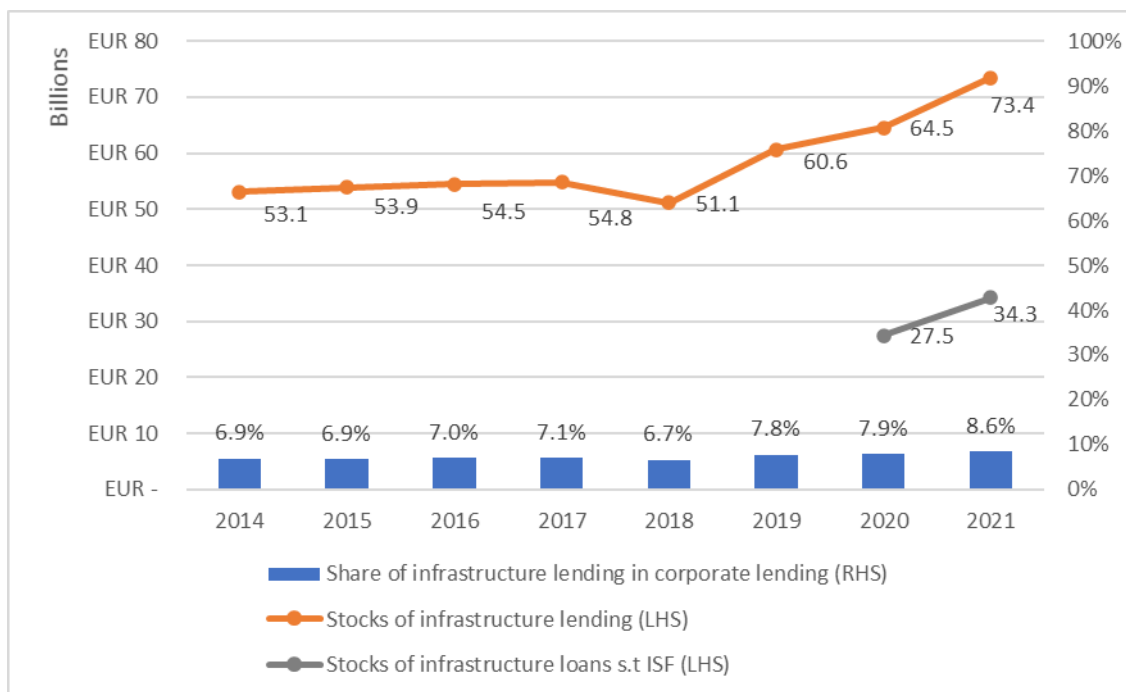
³⁶ Generally, flows are a more relevant measure to assess lending trends, as stocks hide information related to matured exposures. However, stocks may be more readily available due COREP reporting. Assuming a relatively stable outstanding amount of terminating loans, a change in the stocks of loans from one year to another can be associated with a change in the lending trend.

³⁷ The sample from 2014 excludes one bank that reported zero loans subject to ISF in 2020, and positive amounts in 2021. In addition, at least three banks clarified that they started applying the ISF only in 2021, however none of these banks provided data from 2014 and hence were not included in this sample.

³⁸ i.e. banks that responded “Yes” to the question if they provide infrastructure lending.

³⁹ Assuming a relatively stable outstanding amount of terminating loans, a change in the stocks of loans from one year to another can be associated with a change in the lending trend

Figure 3: Lending stocks based on a sample of 13 banks over 2014-2021



Source: EBA survey on the application of ISF, 2022

Note: RHS refers to the right-hand side vertical axis, LHS refers to the left-hand side vertical axis

3.2.2 Lending flows

Compared to stocks, lending flows are a more direct measure of lending trends. This information was provided by 11 banks for the period 2015-2021 and is shown in Table 12 below.⁴⁰ These institutions represent 16.6% of the total assets of the overall sample of banks providing infrastructure lending that responded to the survey⁴¹, and 10.2% of the total assets of the EU banking sector.

Based on this sample, the flows of infrastructure lending increased steadily at an annualized rate of 14% per year between 2015 to 2021. The flows decreased only in 2020, before posting a sharp recovery of 40% in 2021.

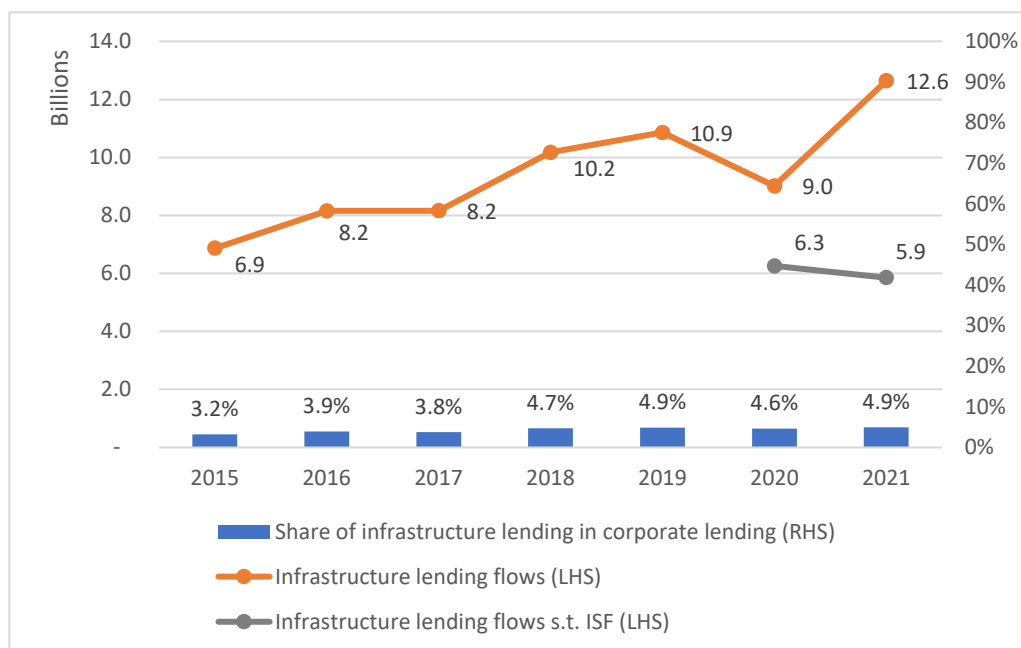
The flow of infrastructure loans subject to ISF decreased from 2020 to 2021 and accounted for 72% of infrastructure lending in 2020 and 46% in 2021. This trend does not match with the increase in the overall infrastructure loans, which may indicate that other factors than ISF let to higher infrastructure lending. There are several potential reasons for the increase in the inflows in infrastructure lending, including government support in specific infrastructure areas following the COVID-19 pandemic (such as telecom, healthcare, information technologies), higher demand for

⁴⁰ The sample from 2015 excludes one bank that they started applying the ISF only in 2021.

⁴¹ i.e. banks that responded "Yes" to the question if they provide infrastructure lending.

ESG-oriented infrastructure projects that are long term and perceived as countercyclical⁴². It is not possible to pinpoint with certainty what is the main cause of the increase, due to limited data.

Table 12: Lending flows for a sample of 11 banks over 2015-2021



Source: EBA survey on the application of ISF, 2022

Note: RHS refers to the right-hand side vertical axis, LHS refers to the left-hand side vertical axis

3.3 Conclusion

According to the FSB report (2018), after an intermittent slowdown during the global financial crisis, the total volume of infrastructure finance globally provided by the financial sector has continued to grow. Bank lending has followed a flat trend, after a drop around the crisis, while non-bank financial institutions have grown their market share meaningfully. These trends are also confirmed by the EBA data collection. Based on a sample of 13 banks which reported lending stocks during 2014-2021 and 11 banks which reported flows over 2015-2021, infrastructure lending by banks has experienced a relatively steady growth in both in terms of flows and stocks from 2015 to 2020, while keeping a stable share in the overall corporate lending. In 2021 infrastructure lending experienced an increase in inflows, while infrastructure lending subject to ISF increased at a lower rate. It is not possible to pinpoint with certainty what is the main cause of the increase, due to other potential factors (e.g. government support in specific infrastructure areas following the COVID-19 pandemic) and very few datapoints after the introduction of the ISF.

⁴² World Bank Group (2020), [Infrastructure financing in times of COVID-19: A driver of recovery](#).

4. Riskiness of infrastructure finance

The mandate in Article 501 requests an analysis of riskiness arising from the use of Infrastructure Supporting Factor (ISF). While data on infrastructure lending is scarce overall, this chapter looks at the trends based on data received from a small sample of banks which took part of the EBA survey, as well as external sources that aggregate information on infrastructure/ project finance lending from banks. Given that the ISF applied only starting June 2021, and since most data available ends in 2020 or 2021, no robust conclusions can be drawn on whether the own funds requirements are consistent with the riskiness of the exposures.

4.1 Particularities of infrastructure lending

Despite being incorporated in the wider Corporate exposure class, and having some common features with it, infrastructure lending (or project finance) shows some particularities that distinguishes it from other Corporates. This warrants a specific prudential treatment which takes into account the risk drivers that are specific to this subclass.

The main feature that distinguishes project finance from other corporates is that the repayment depends primarily on the project's cash-flow and on the collateral value of the project's assets. In contrast, for the lending to general corporates the repayment depends primarily on the evolution of the creditworthiness of the borrower. Consequently, project finance exposures possess unique loss distribution and risk characteristics that need to be reflected in the capital requirements associated with these loans.⁴³ At the same time however, the historical loan performance data for specialised lending exposures, including project finance, is scarce which makes it difficult to derive reliable estimates of the key risk factors.⁴⁴

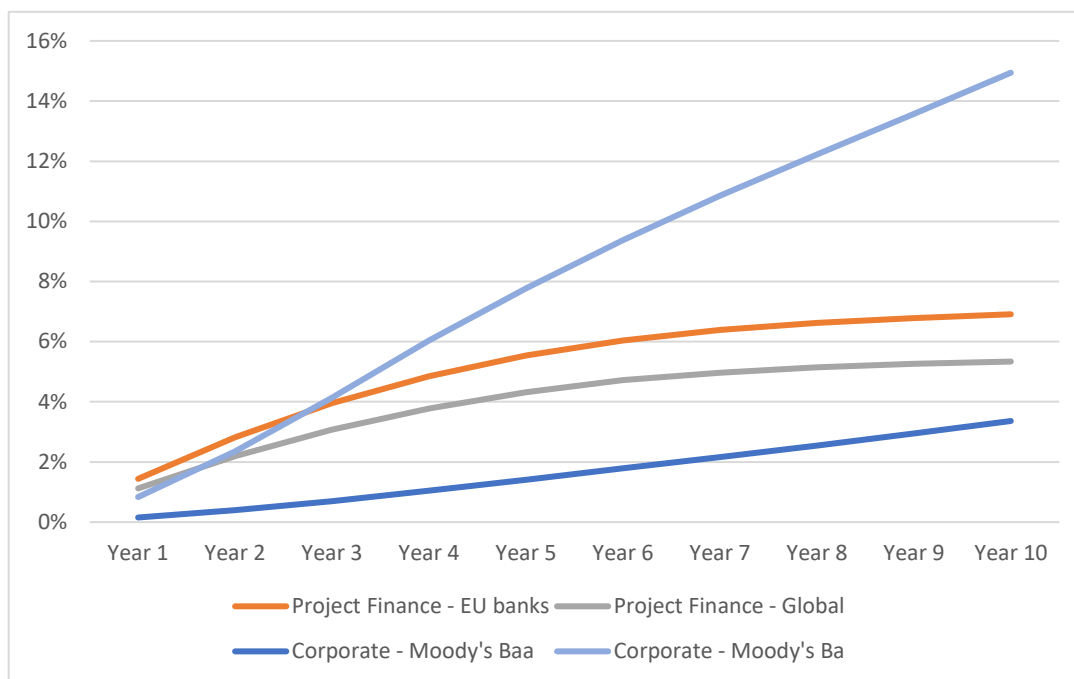
Another feature of project finance loans is that their risk profile is characterised by comparably high default rates during the initial years of the project development and construction, and fairly robust and regular cash flows during the later project stages when the projects are fully in operation (FSB, 2019). This feature can be seen in Figure 4, where the cumulative default rates of infrastructure projects are presented for EU banks and for the global sample of the Moody's Analytics Data Alliance Project Finance Data Consortium. The cumulative default rates increase at a higher pace in the first years of the project and flatten toward later years of the project. By comparison, the cumulative default rates of corporate bonds, loan and deposit issuers rated by Moody's in Ba and Baa show a steadier increase over the years.

Figure 4 Cumulative default rate (Basel definition of default) for infrastructure projects and

⁴³ BCBS, "Working Paper on the Internal Ratings-Based Approach to Specialised Lending Exposures October 2001", 2001, accessed at: https://www.bis.org/publ/bcbs_wp9.pdf

⁴⁴ This problem has been partially addressed with private sector initiatives that pool data on infrastructure or project finance lending

corporates



Source: Moody's Analytics Data Alliance Project Finance Data Consortium

Note: Cumulative default rates are calculated as weighted average of monthly marginal default rates of cohorts of infrastructure projects for the years 1990 to 2020. A static pool cohort is formed based on the number of active projects on 1 January of each year, and the default/survival status of the members of the cohort was tracked from 1990 to 2020.

Historically there were no common industry standard for a rigorous, empirical, and risk-sensitive approach to economic capital estimation of specialised lending exposures. Owing to the two above-mentioned characteristics – unique risk profile and scarcity of data – the Basel rules introduced the slotting approach as an alternative and qualitative approach for assessment of risks in specialised lending exposures. This approach allows the institution to perform its own risk assessment by scoring the exposures across a list of factors, such as financial strength or political and legal environment. In this way, the exposures are slotted into risk categories for which the regulation prescribes the risk weights and the expected losses (in other words, the institution performs the risk differentiation but not the risk quantification).

4.2 Riskiness evidence from COREP

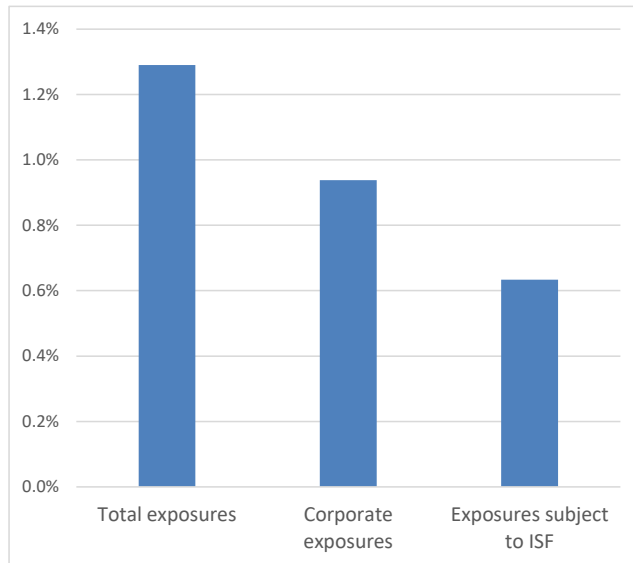
COREP provides some information on the infrastructure exposures compared to the larger corporate exposure class as well as the exposures that are subject to ISF. Since this information was collected in COREP only in 2021, the data is shown for the end of 2021 only. Despite the expectation of lower riskiness for exposures subject to the ISF, the evidence is overall mixed.

Under the standardised approach (SA), the share of expected losses⁴⁵ in the original exposures are higher for corporate exposures (0.94%) compared to exposures subject to the ISF (0.71%) (Figure

⁴⁵ Expected losses are calculated using 'Value adjustments and provisions associated with the original exposure'

5). When looking at the distribution of the two types of exposures by risk-weight bucket, almost 85% of each are allocated to the 100% risk-weight. A share of 8.4% of exposures subject to ISF are allocated to the 150%, compared to 2.1% of the Corporates exposure class (Figure 6). This latter result is driven by one bank.

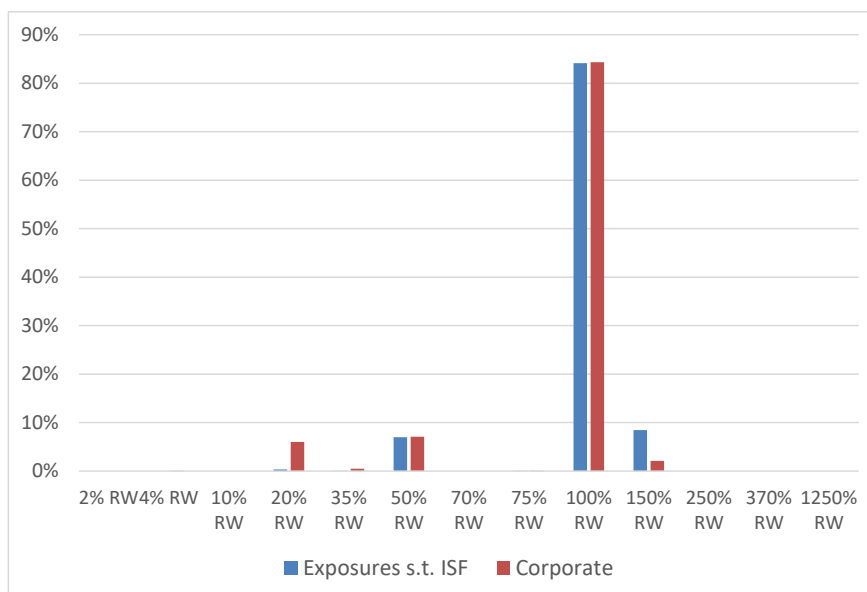
Figure 5 Expected losses by type of exposures, standardised approach



Source: COREP, data as of 31/12/2021

Note: Weighted average, based on 71 banks that reported SA exposures subject to ISF, of which 27 large and 44 small institutions

Figure 6 Distribution of exposures by risk-weight bucket, standardised approach

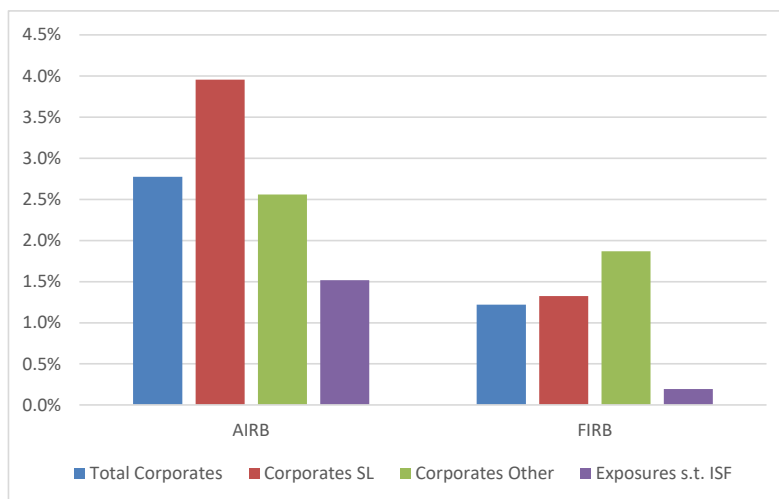


Source: COREP, data as of 31/12/2021

Note: based on 71 banks that reported SA exposures subject to ISF, of which 27 large and 44 small institutions

Looking at the IRB, the assumption of lower riskiness of exposures subject to the ISF holds (Figure 7). The average weighted PD of exposures subject to ISF are generally lower than those of Specialised Lending corporates and Other corporates.

Figure 7 Average PD by exposure class (AIRB and FIRB)



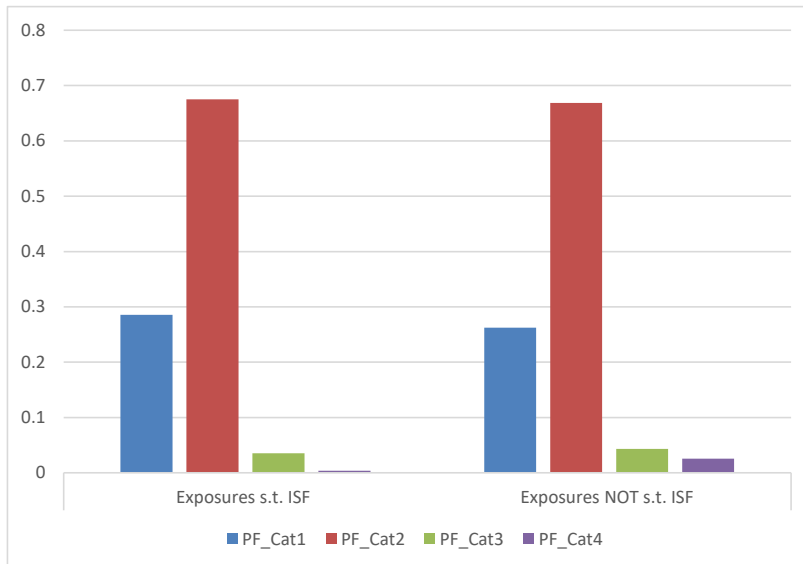
Source: COREP, data as of 31/12/2021

Note: Weighted average, based on 19 banks that reported AIRB exposures subject to ISF, and 14 banks that reported FIRB exposures subject to ISF.

Finally, Figure 8 shows the distribution of exposures across risk categories (from 1 to 4) for the banks that report exposures subject to ISF under slotting approach. Due to COREP data limitations, the exposure values for this table were derived from the adjustments to RWAs due to application of supporting factors (SME SF and ISF combined). The results for a sample of 4 banks show that the proportions of exposures allocated to Categories 1 and 2 are similar for exposures subject to the ISF and those that are not. These results should be interpreted with caution due to small sample of banks and due to the assumption that all adjustments in RWAs were due to the ISF. ⁴⁶

⁴⁶ Overall, 8 banks reported project finance exposures subject to ISF under the Slotting Approach. Three banks had some exposures subject to ISF, in proportion of 19%, 29%, and 88% of RWAs adjustments. The latter bank was excluded due to high share of SME supporting factor exposures. Five banks had only exposures subject to ISF under the Slotting Approach, of which three banks from Spain with exposures under the Slotting Approach being subject only to ISF were excluded due to reporting errors. The data for the remaining two banks could not be shown due to confidentiality concerns, as a the minimum limit of three banks are required.

Figure 8 Distribution of estimated exposure values by risk category, Slotting Approach



Source: COREP, data as of 31/12/2021

Note: Based on 4 banks that reported exposures subject to ISF under Slotting Approach and fulfilled other data quality requirements. Estimates are based on the exposure value data reported in COREP template 08.06. Two out of 4 banks had 29% and 19% of adjustments due to the SME supporting factor (Article 501 of the CRR) under the Slotting Approach, which were assumed to be adjustments due to the ISF for the purpose of this estimation.

4.3 Riskiness trends

In the EBA survey, banks were asked to report the default rates, amounts of defaulted exposures and loss rates for corporate loans, infrastructure project loans and infrastructure project loans subject to the ISF. Similarly to the lending trends, the data provided by the respondents varies in terms of length of time series. For example, out of all respondents, three banks provided the information on obligors and default rates starting 2008, i.e. including the years of the GFC.⁴⁷ The sample sizes used are described in Table 2. Due to the small sample, the loss rate data is not included in the analysis.⁴⁸

4.3.1 Default rates

For default rates, a sub-sample of 14 banks was used that consistently provide data on riskiness for the period 2015-2021. These institutions represent 23.8% of the total assets of the overall sample

⁴⁷ The information on obligors is required to aggregate the default rates.

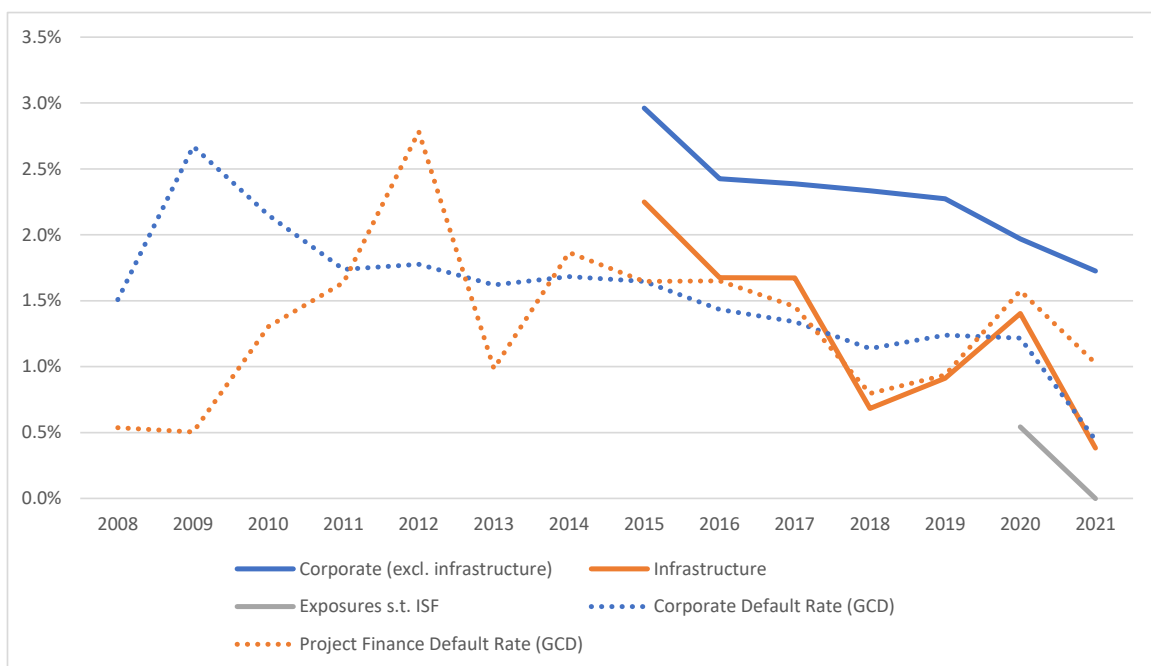
⁴⁸ For loss rates, a sub-sample of 6 banks provided data on defaulted exposures and loss rates for the period 2015-2021. Of these, only 1 bank had also defaulted exposures subject to the ISF. Other sources for losses were considered. Global Credit Data Consortium has a dataset on Observed LGD in this regard that collects data on Project Finance and Corporate LGDs from a number of EU banks. However, the recovery processes for defaulted loans tends to last more than two years; as a result, the dataset had very few datapoints for the years 2020 and 2021, the years most relevant for the application of the ISF and was therefore not included in the analysis.

of banks providing infrastructure lending that responded to the survey, and 14.7% of the total assets of the EU banking sector.⁴⁹

Figure 9 below compares the trends in default rates for corporate loans (excluding infrastructure loans) and for infrastructure loans (in solid blue and orange colours, respectively). The data shows that corporate loans show generally higher default rates compared to infrastructure loans. For infrastructure loans, the trends show higher default rates in 2015 (the first year available for the sample) that decrease slightly in 2016 to increase again in 2017. A subsequent increase in default rates in infrastructure loans only takes place in 2020. The same increase in default rates is not seen in the corporates group.

Out of the 14 banks, 6 also have exposures that are subject to the ISF. For these banks the default rates are mostly zero, except for one bank that recorded a default rate for loans subject to the ISF that is higher than for infrastructure lending. On average however the default rates for loans subject to ISF are lower than the default rates for infrastructure lending. Overall, because of the very small sample and short time series, the data on loans subject to the ISF cannot be seen as conclusive.

Figure 9: Default rates of corporate loans (excl. infrastructure), infrastructure loans and loans subject to the ISF



Source: EBA survey on the application of ISF, 2022, The Global Credit Data Consortium (GCD) PD & Rating database pool 2021

Note: The default rate was calculated as the average of each individual bank's default rate, weighed by the number of obligors reported in the same exercise. The sample from the EBA survey consists of 14 banks, and from GCD consists of 8 banks.

⁴⁹ Please note that the sample is not the same as the one that provided data for stocks and flows, and the shares in the total sample and EU banking sector are therefore different.

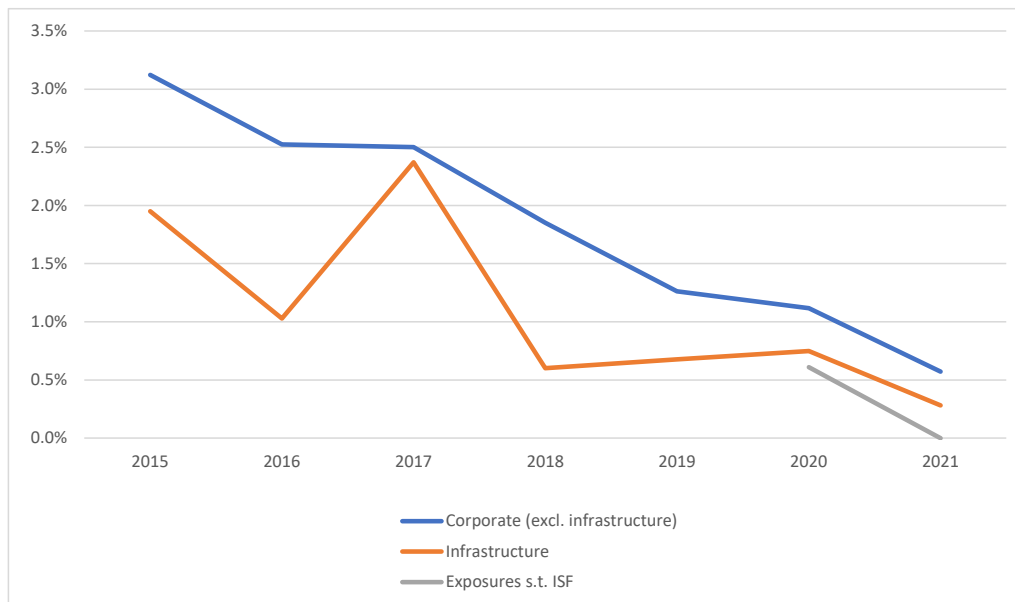
In dotted lines, the same graph shows the default rates for corporates and infrastructure project loans from The Global Credit Data Consortium (GCD)⁵⁰ PD & Rating database pool 2021. The GCD data covers 8 EU lenders and their EU and non-EU obligors from 2008 to 2021. The GCD data shows that the default rates for infrastructure lending are similar to those for corporates. Both GCD data and survey data show a decrease in default rates for all groups.

4.3.2 Share of defaulted exposures

For default exposures, a sub-sample of 14 banks (other than the sample of banks for default rates) was used that consistently provide data on riskiness for the period 2015-2021. These institutions represent 23.7% of the total assets of the overall sample of banks providing infrastructure lending that responded to the survey, and 14.6% of the total assets of the EU banking sector.

Looking at the defaulted exposures, Figure 10 shows the comparison in trends of the shares of defaulted exposures for corporate loans, infrastructure loans and infrastructure loans subject to the ISF. The data shows that overall corporate loans have a slightly higher share of defaulted exposures compared to infrastructure loans. The trends also show an increase in the share of defaulted exposures in infrastructure loans in 2017, and a subsequent smaller increase in default rates for both corporate and infrastructure loans in 2020.

Figure 10: Share of default exposures for corporate loans (excl. infrastructure), infrastructure loans and infrastructure loans subject to ISF (2015-2021)



Source: EBA survey on the application of ISF, 2022

Note: The sample from the EBA survey consists of 14 banks. The share of defaulted exposures was calculated as the average of each individual bank's share of defaulted exposures, weighed by the stocks of loans reported in the same exercise. The share of defaulted exposures for infrastructure loans s.t. ISF consists only of those banks that had reported

⁵⁰ <https://globalcreditdata.org/>

non-zero loans subject to ISF – 8 banks. Out of the 8 banks, only one has reported a non-zero share of defaulted exposures and it is higher than the share of defaulted exposures in infrastructure lending of that banks.

Out of 14 banks, 8 reported exposures subject to ISF. The share of defaulted exposures was positive in 2020 for these loans but dropped to zero for loans subject to the supporting factor in 2021. This result is driven by a single bank in the sample, where the defaulted exposures for loans subject to the ISF was 1.5% compared to 0.9% for infrastructure lending.

4.4 Conclusion

The evidence from the data collection is not conclusive due to the small sample size, especially for data on loans subject to the ISF, and few datapoints after its introduction. In addition, since an important aspect of riskiness is the final loss for banks, considering all safeguards (guarantees, collateral etc), loss data should be analysed in parallel to default rates. Given the insufficient loss data provided in this voluntary data collection, this aspect should be analysed in more detailed in the future.

The limited data sample shows that while infrastructure projects show default rates and share of defaulted exposures lower than general corporates, both riskiness measures are lower for loans subject to the ISF than for other infrastructure lending according to the participating banks. In case of loans subject to the ISF, both the default rate and the share of defaulted exposures is higher than zero in 2021 due to one bank and drops to zero in 2021.

The lower riskiness is confirmed by evidence from COREP, where loans subject to the ISF have lower expected losses under SA, and lower PDs under IRB. The evidence is more mixed regarding the allocation of exposures by RW buckets and the allocation by category under the slotting approach.

5. Policy discussion

Against the background of the data limitations described in the sections above, the consistency of own funds requirements linked to the Infrastructure Supporting Factor (ISF) with respect to the outcome of the analysis of trends, conditions, and riskiness cannot be adequately assessed given the lack of a conclusive assessment on the latter. Hence the policy discussion builds from the EBA Reply to the Commission Call for Advice on the impact and implementation of the finalised Basel III reforms (the ‘EBA Policy Advice’)⁵¹.

The EBA Policy Advice recommended that the ISF was not warranted from prudential perspective, notably on the back of the introduction in the Basel III framework of risk-sensitive specialised lending under the SA, where a preferential risk weight is assigned for high quality project finance exposures. This conclusion was derived after analysing the interaction between the supporting factor and the other parts of the framework, in order to assess whether the supporting factor was introducing some double counting (i.e. double recognition of better creditworthiness of the qualifying infrastructure exposures). While the final Basel III framework is still under negotiation, the European Commission published in October 2021 a first proposal to bring the internationally agreed framework into the EU law.⁵² In this proposal the ISF was retained, maintaining the Basel deviation.

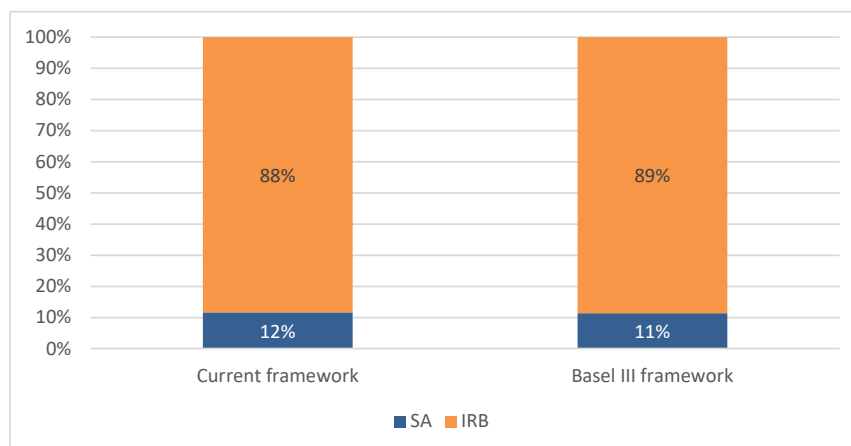
It is noteworthy that currently most of the risk-weighted assets (RWA) of the Specialised Lending Exposures in the EU are calculated according to the IRB approach (including the Supervisory Slotting Criteria approach), as shown in Figure 11, with roughly half of the institutions using the advanced IRB approach (A-IRB). However, under the final Basel III framework, the standardised approach (SA) will apply to or bind all institutions and apply to all asset classes (not only Specialised Lending), either directly for the institutions that do not have an IRB approval, or indirectly for the purposes of the calculation of the output floor introduced in the final Basel III framework and preserved in the draft CRR3.

Figure 11: Share of Specialised Lending Exposures RWA by regulatory approach in the current and

⁵¹ [Policy Advice on Basel III reforms - Credit Risk.pdf \(europa.eu\)](#)

⁵² https://ec.europa.eu/commission/presscorner/detail/en/IP_21_5401

revised framework



Sources: QIS Basel exercise, data as of December 2021.⁵³

5.1 Exposures under the standardised approach

With respect to the exposures that are risk-weighted according to the SA, two cases are distinguished, depending on whether the exposures have been rated by an external credit assessment institution (ECAI) or not. In both cases under the final Basel III framework these exposures are classified as a separate sub-exposure class of the corporate exposure class.

First, in the case of an existence of an eligible credit rating, the credit quality of the project should already be reflected in the credit assessment provided by the nominated ECAI. As such, no additional risk differentiation criteria are necessary. From a pure risk quantification side, the risk weights assigned to the risk categories vary from 20% to 150%, and as such, are broadly consistent with the risk weights observed on average across institutions on Specialised Lending exposures.⁵⁴

Second, for exposures risk-weighted according to the standardised approach and without a rating provided by an ECAI, the final Basel III framework has brought some significant enhancement in terms of risk sensitivity, with three new RW categories introduced for Project Finance (130% RW during the pre-operational phase, and either 100% or 80% RW during the operational phase, depending on whether the exposures qualify as ‘high quality’ project exposure) and a flat RW of 100% for object and commodity finance. The ISF does (to some extent) replicate the new RW categories and applies a capital relief measure on exposures that fulfil criteria similar to “high quality” Project Finance exposures.⁵⁵ However, as noted in the EBA Policy Advice the supporting factor is less risk sensitive than the new risk categories, because it applies the same capital relief irrespective of the phase of a given operation. Moreover,

⁵³ <https://www.eba.europa.eu/risk-analysis-and-data/quantitative-impact-study/basel-iii-monitoring-exercise>

⁵⁴ See page 19 of the [EBA chart pack to the EBA report on the 2021 Credit risk Benchmarking Exercise](#).

⁵⁵ As shown in annex 7.2, the ISF has many criteria in common with the ones used to identify high quality Project Finance exposures.

The European Commission CRR3 proposal introduced a safeguard, to prevent double counting between the application of the ISF and the application of the 80% RW for the high-quality project finance category set out in Basel III. The preferential treatment provided in the new Article 122a for “high quality” project finance exposures is set to only apply to exposures to which institutions do not already apply the ‘ISF’ treatment under Article 501a.

Based on the above, therefore, it can be argued that while the preferential treatments set out in Article 122a and in Article 501a cannot be both applied at the same time, maintaining the application of the ISF results in setting out two different treatments in the recognition of the low risk of the qualifying high quality infrastructure exposures, where the ISF is less risk-sensitive than the provisions in the final Basel framework.

5.2 Exposures under IRB approach

As regards the IRB approach, similarly to rated specialised lending exposures under the SA, the risk sensitivity embedded in the approach already implies a differentiation of the risk-weighting of infrastructure lending exposures.

It is also worth recalling the changes applied to the infrastructure exposures in the recent years:

- First, the EBA has clarified multiple aspects of the framework related to credit risk modelling, in its so-called ‘IRB road map’. One aspect which may impact the risk parameter estimates associated with infrastructure exposures is the margin of conservatism, which is now further clarified in the guidelines on PD and LGD estimation;⁵⁶
- Second, the final Basel III framework has introduced multiple constraints, in particular in the form of input floors. The European Commission proposal for the CRR3 raises the PD input floors to 0,05% (Article 160(1)) and introduced general LGD floors (Article 161(3)). Article 495b is proposed to phase-in the new floors, starting with a 50% discount factor which increases gradually to 100% over a 5-year period until December 2028.

It could therefore be argued that the ISF counterbalances the impacts of these recent changes to maintain the status quo in terms of own fund requirements. However, the recent changes introduced in the framework were introduced to ensure reliable estimates and tackle identified weaknesses in model outcomes.

With respect to the margin of conservatism, a general requirement is already present in the current CRR.⁵⁷ It applies to all types of exposures, with exceptions foreseen neither for Specialised Lending exposures nor for the so-called ‘low default portfolios’. On the contrary, the CRR specifies that ‘The less data an institution has, the more conservative it shall be in its estimation’.⁵⁸ This requirement

⁵⁶ <https://www.eba.europa.eu/sites/default/documents/files/documents/10180/2033363/6b062012-45d6-4655-af04-801d26493ed0/Guidelines%20on%20PD%20and%20LGD%20estimation%20%28EBA-GL-2017-16%29.pdf?retry=1>. See in particular chapter 4.

⁵⁷ Article 179(1)(f) and 180(1)(e) of the CRR

⁵⁸ Article 179(1)(a) and 180(1)(e) of the CRR

is specified in a general manner and does not apply solely to statistical models. The guidelines on PD and LGD estimation did not introduce any new requirements on this aspect, but rather clarified the type of margin of conservatism to be applied (by defining three types of margins of conservatism). In particular, the guidelines did not prescribe any specific methodology or formula to derive the amount of margin of conservatism and did not request to use statistical models. Therefore, any impact from the application of the guidelines on PDs and LGDs derives from a lack of conservatism of previously used risk parameters, and it is therefore fully warranted.

With respect to the impact of the input floor, the EBA conducted some analysis in the context of its EBA Policy Advice. Figure 25 of the EBA Policy Advice shows a limited impact⁵⁹ of the PD input floors, while Figure 31 shows a significant impact of the LGD input floors, with the specialised lending exposures being the most impacted sub-exposure class. Nevertheless, in the same way as for the IRB repair program, the final Basel framework aims at reducing undue variability due to weak modelling practices. It is in particular worth noting that the Basel Committee was first proposing in its consultation paper in 2016 to solely rely on the standardised and slotting approaches to calculate own fund requirements, given the observed high variability of the model outcomes in these portfolios.⁶⁰ Nevertheless, as already expressed in the EBA Policy Advice, should it be considered that the treatment of SLEs needs further refinements, the EBA stands ready to further assist the Commission to develop the most appropriate regulatory requirements. In this context, the proposal from the European Commission mandates the EBA to 'prepare a report on the appropriate calibration of risk parameters applicable to specialised lending exposures under the IRB Approach, and in particular on own estimates of LGD and LGD input floors'.⁶¹ This mandate is a more targeted way to address any possible unintended consequences from the LGD input floors, than a blanket measure in the form of a supporting factor that would also apply to exposures with high LGD risk parameter estimates.

5.3 Observations on environmental criteria linked to the ISF

Among the conditions listed for benefitting from the capital relief associated with the ISF, point (o) of CRR Article 501a establishes that the obligor is to perform an assessment of the contribution of the eligible exposures towards several environmental objectives, as listed below.

- (i) climate change mitigation;
- (ii) climate change adaptation;
- (iii) sustainable use and protection of water and marine resources;
- (iv) transition to a circular economy, waste prevention and recycling;

⁵⁹ To recall, the impact can be observed as the difference between the scenario 'Basel III central scenario' and 'Alternative Scenario (Excl. PD)', i.e. the difference between the blue and the orange bars.

⁶⁰ <https://www.bis.org/bcbs/publ/d362.pdf> , Section 2.1

⁶¹ Article 495b of the CRR3 proposal

(v) pollution prevention and control;

(vi) protection of healthy ecosystems.

The formulation of this condition does not bind the lending institution to verify the assessment made by the obligor and leaves the application of the ISF open regardless of the outcome of the obligor analysis. As noted in the EBA Discussion Paper (DP) on the environmental risks in the prudential framework, consideration could be given to strengthening this criterion by not only requiring an obligor to carry out such an assessment, but by allowing application of the ISF only whenever the exposures contribute to one or more of the listed environmental objectives, while not inflicting significant harm on any of the remaining environmental objectives. The lower transition risk of such projects would therefore be reflected, while projects with higher transition risks would be prevented from being eligible for the supporting factor.

5.4 Policy conclusion

The policy discussion builds from the EBA Policy Advice published in the context of the EBA Reply to the Commission Call for Advice on the impact and implementation of the finalised Basel III reform, on the back of the inconclusive assessment described in the sections above on the outcome of the analysis of trends, conditions, and riskiness in infrastructure lending.

From the prudential point of view, it can be noted that the recent Basel III reform is reflected in the new Article 122a in the Commission CRR3 proposal on 'high-quality infrastructure' under the SA, which includes a preferential treatment of 80% RW under SA for High Quality Project Finance (HQPF). While the CRR3 proposal has introduced a safeguard so that the preferential treatments set out in Article 122a and in Article 501a cannot be both applied at the same time, maintaining the application of the ISF results in setting out two different treatments in the recognition of the low risk of the qualifying infrastructure exposures. Currently, the IRB approach is mostly used to calculate credit risk requirements for Specialised Lending Exposures (including Supervisory Slotting Criteria). By design, the IRB is the most risk sensitive approach and therefore seems to support the removal of the supporting factor whilst ensuring full alignment with the Basel III framework and that banks have a more risk-sensitive approach available in the future.⁶²

Finally, should the ISF be maintained, the environmental criteria could potentially be strengthened, which is being explored as part of the public consultation questions of the EBA on the environmental risks in the prudential framework.

⁶² The Specialised Lending exposures would be subject to LGD input floors under the IRBA as per Basel III, for which the CRR3 proposal introduces transitory measures on their application until December 2028.

6. Conclusion

The mandate in Article 501a CRR requests an analysis of lending trends and riskiness of the ISF. While data on infrastructure lending is scarce overall, this report identifies these trends from the information received from a sample of banks that participated in a dedicated EBA survey.⁶³ The voluntary nature of the survey gives rise to a sample selection bias, a data quality concern that should be kept in mind when interpreting the results of the survey. This analysis is complemented by data collected by the ECB and several external sources that aggregate information on infrastructure/ project finance lending from banks.

However, the collected data is not sufficient to conclude on the impact of ISF on lending or the consistency of the riskiness of the affected loans with the own funds requirements. At the same time, in line with previous EBA recommendations in EBA Reply to the Commission Call for Advice on the impact and implementation of the finalised Basel III reforms (the '*EBA Policy Advice*')⁶⁴, owing to the latest Basel III changes as well as the CRR3 proposal that ensure an increased risk sensitivity of the SA, and preserves the IRB risk-sensitivity of the IRB, the continued application of the ISF could be questioned from broader prudential perspective.

Lack of sufficient quantitative data is one of the main obstacles to conclude on the impact of the ISF and to provide an evidence-based policy recommendation. A repeated exercise assessing the impact of the ISF may be justified only once more data is available. In particular, changes to the reporting framework would be necessary to ensure that the banks report the data related to infrastructure lending, as well as on loans subject to the ISF under both SA, and IRB approaches. A repeated exercise could be conducted 3 years after such reporting is applied to provide more reliable data on the riskiness of the loans and their consistency with own funds requirements.⁶⁵

⁶³ In order to encourage participation, EBA organized an industry roundtable on 21 April 2022, where representatives from more than 60 banks and banking associations participated. The representatives from banks were mostly supportive of the upcoming work and survey, and voiced some of their preliminary concerns related to the ISF.

⁶⁴ [Policy Advice on Basel III reforms - Credit Risk.pdf \(europa.eu\)](#)

⁶⁵ It is important to note that more reporting on infrastructure lending data will add more time datapoints to the series, but would not improve significantly the quality of the data used for the assessment of the impact of the ISF on lending, as this would only be possible if more and better data is available before and after the introduction of the policy, i.e. in the years before and after 2020.

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Annex 1: Text of the Article 501a CRR on Infrastructure Supporting Factor

Article 501a

Adjustment to own funds requirements for credit risk for exposures to entities that operate or finance physical structures or facilities, systems and networks that provide or support essential public services

1. Own funds requirements for credit risk calculated in accordance with Title II of Part III shall be multiplied by a factor of 0,75, provided that the exposure complies with all the following criteria:

(a) the exposure is included either in the corporate exposure class or in the specialised lending exposures class, with the exclusion of exposures in default;

(b) the exposure is to an entity which was created specifically to finance or operate physical structures or facilities, systems and networks that provide or support essential public services;

(c) the source of repayment of the obligation is represented for not less than two thirds of its amount by the income generated by the assets being financed, rather than the independent capacity of a broader commercial enterprise, or by subsidies, grants or funding provided by one or more of the entities listed in points (b)(i) and (b)(ii) of paragraph 2;

(d) the obligor can meet its financial obligations even under severely stressed conditions that are relevant for the risk of the project;

(e) the cash flows that the obligor generates are predictable and cover all future loan repayments during the duration of the loan;

(f) the re-financing risk of the exposure is low or adequately mitigated, taking into account any subsidies, grants or funding provided by one or more of the entities listed in points (b)(i) and (b)(ii) of paragraph 2;

(g) the contractual arrangements provide lenders with a high degree of protection including the following:

(i) where the revenues of the obligor are not funded by payments from a large number of users, the contractual arrangements shall include provisions that effectively protect lenders against losses resulting from the termination of the

project by the party which agrees to purchase the goods or services provided by the obligor;

(ii) the obligor has sufficient reserve funds fully funded in cash or other financial arrangements with highly rated guarantors to cover the contingency funding and working capital requirements over the lifetime of the assets referred to in point (b) of this paragraph;

(iii) the lenders have a substantial degree of control over the assets and the income generated by the obligor;

(iv) the lenders have the benefit of security to the extent permitted by applicable law in assets and contracts critical to the infrastructure business or have alternative mechanisms in place to secure their position;

(v) equity is pledged to lenders such that they are able to take control of the entity upon default;

(vi) the use of net operating cash flows after mandatory payments from the project for purposes other than servicing debt obligations is restricted;

(vii) there are contractual restrictions on the ability of the obligor to perform activities that may be detrimental to lenders, including the restriction that new debt cannot be issued without the consent of existing debt providers;

(h) the obligation is senior to all other claims other than statutory claims and claims from derivatives counterparties;

(i) where the obligor is in the construction phase, the following criteria shall be fulfilled by the equity investor, or where there is more than one equity investor, the following criteria shall be fulfilled by a group of equity investors as a whole:

(i) the equity investors have a history of successfully overseeing infrastructure projects, the financial strength and the relevant expertise;

(ii) the equity investors have a low risk of default, or there is a low risk of material losses for the obligor as a result of their default;

(iii) there are adequate mechanisms in place to align the interest of the equity investors with the interests of lenders;

(j) the obligor has adequate safeguards to ensure completion of the project according to the agreed specification, budget or completion date; including strong completion guarantees or the involvement of an experienced constructor and adequate contract provisions for liquidated damages;

- (k) where operating risks are material, they are properly managed;
- (l) the obligor uses tested technology and design;
- (m) all necessary permits and authorisations have been obtained;
- (n) the obligor uses derivatives only for risk-mitigation purposes;
- (o) the obligor has carried out an assessment whether the assets being financed contribute to the following environmental objectives:
 - (i) climate change mitigation;
 - (ii) climate change adaptation;
 - (iii) sustainable use and protection of water and marine resources;
 - (iv) transition to a circular economy, waste prevention and recycling;
 - (v) pollution prevention and control;
 - (vi) protection of healthy ecosystems.

2. For the purposes of point (e) of paragraph 1, the cash flows generated shall not be considered predictable unless a substantial part of the revenues satisfies the following conditions:

- (a) one of the following criteria is met:
 - (i) the revenues are availability-based;
 - (ii) the revenues are subject to a rate-of-return regulation;
 - (iii) the revenues are subject to a take-or-pay contract;
 - (iv) the level of output or the usage and the price shall independently meet one of the following criteria:
 - it is regulated,
 - it is contractually fixed,
 - it is sufficiently predictable as a result of low demand risk;
- (b) where the revenues of the obligor are not funded by payments from a large number of users, the party which agrees to purchase the goods or services provided by the obligor shall be one of the following:

- (i) a central bank, a central government, a regional government or a local authority, provided that they are assigned a risk weight of 0 % in accordance with Articles 114 and 115 or are assigned an ECAI rating with a credit quality step of at least 3;
- (ii) a public sector entity, provided that it is assigned a risk weight of 20 % or below in accordance with Article 116 or is assigned an ECAI rating with a credit quality step of at least 3;
- (iii) a multilateral development bank referred to in Article 117(2);
- (iv) an international organisation referred to in Article 118;
- (v) a corporate entity which has been assigned an ECAI rating with a credit quality step of at least 3;
- (vi) an entity that is replaceable without a significant change in the level and timing of revenues.

3. Institutions shall report to competent authorities every six months on the total amount of exposures to infrastructure project entities calculated in accordance with paragraph 1 of this Article.

4. The Commission shall, by 28 June 2022 report on the impact of the own funds requirements laid down in this Regulation on lending to infrastructure project entities and shall submit that report to the European Parliament and to the Council, together with a legislative proposal, if appropriate.

5. For the purposes of paragraph 4, EBA shall report on the following to the Commission:

- (a) an analysis of the evolution of the trends and conditions in markets for infrastructure lending and project finance over the period referred to in paragraph 4;
- (b) an analysis of the effective riskiness of entities referred to in point (b) of paragraph 1 over a full economic cycle;
- (c) the consistency of own funds requirements laid down in this Regulation with the outcomes of the analysis under points (a) and (b) of this paragraph

Annex 2: Comparison of criteria for Infrastructure Supporting Factor (Article 501a CRR2) with those for ‘high quality’ project finance and object finance

Links to draft CRR3 proposal on “high quality” category for Project Finance Exposures

As discussed in the EBA reply to the Call for Advice on the Basel III reform³, the ‘high quality’ category within specialised lending project finance exposures was introduced in the final Basel III standards at the EU’s request to enable a preferential treatment like the one proposed by the ISF and based on the same arguments. This category is now included in the new Article 122a of the CRR3 proposal published by the Commission in October 2021⁴.

The preferential treatment can be applied to unrated SA project finance exposures that benefit from a prudent and conservative management of the associated financial risks by complying with a set of criteria capable to lower their risk profile to a standard of “high quality”. The preferential treatment provided in the new Article 122a for “high quality” project finance exposures will only apply to exposures to which institutions do not already apply the ‘infrastructure supporting factor’ treatment under Article 501a.

The determination of what constitutes “high quality” for project finance is specified in point 3(c)(ii) of article 122a, where there seem to be some overlaps with the criteria for the ISF. While the preferential treatments set out in Article 122a and in Article 501a cannot be both applied at the same time, a potential question is the extent of overlap of both measures, albeit this falls outside the strict remit of the 501a mandate. For the time being there are limited data available to substantiate an analysis. Data on high-quality project finance (Basel definition), that would also qualify for ISF are reported in Basel QIS. If reported, and of good quality, it could give us an indication of the magnitude of the overlap. From a purely qualitative point of view, the overlap between the two groups of exposures is hard to assess, as illustrated in Table 13.

Table 13: Comparison of criteria for Infrastructure Supporting Factor (Article 501a CRR2) with those for ‘high quality’ project finance and object finance (Article 122a (3) (a) and (c))

	Infrastructure Supporting Factors	‘High quality’ Object finance	‘High quality’ Project finance
Relevant article and legal text	Article 501a (CRR2) Adjustment to own funds requirements for credit risk for exposures to entities that operate or finance physical structures or facilities, systems and networks that provide or support essential public services	Article 122a (CRR3 proposal) Specialised lending exposures	Article 122a (CRR3 proposal) Specialised lending exposures /
Risk weight	1. Own funds requirements for credit risk calculated in accordance with Title II of Part III shall be multiplied by a factor of 0,75, provided that the exposure complies with all the following criteria:	3. Specialised lending exposures for which a directly applicable credit assessment is not available shall be risk weighted as follows: [...] (i) 80 % where the exposure is deemed to be high quality when taking into account all of the following criteria: [...]	(ii) provided that the adjustment to own funds requirements for credit risk referred to in Article 501a is not applied , 80 % where the project to which the exposure is related is in the operational phase and the exposure meets all of the following criteria:
Definition of eligible exposures	(a) the exposure is included either in the corporate exposure class or in the specialised lending exposures class, with the exclusion of exposures in default; (b) the exposure is to an entity which was created specifically to finance or operate physical structures or facilities, systems and networks that provide or support essential public services;	(a) where the purpose of a specialised lending exposure is to finance the acquisition of physical assets, including ships, aircraft, satellites, railcars, and fleets, and the income to be generated by those assets comes in the form of cash flows generated by the specific physical assets that have been financed and pledged or assigned to the lender by one or several third parties (‘object finance exposures’), institutions shall apply the following risk weights:	(c) where the purpose of a specialised lending exposure is to finance a project for the development or acquisition of large, complex and expensive installations, including power plants, chemical processing plants, mines, transportation infrastructure, environment, and telecommunications infrastructure, and the income to be generated by the project is the money generated by the contracts for the output of the installation obtained from one or several parties which are not under management control of the sponsor (‘project finance exposures’), institutions shall apply the following risk weights:
Source of repayment of the obligation	(c) the source of repayment of the obligation is represented for not less than two thirds of its amount by the income		– the source of repayment of the obligation depends on one main counterparty and that main counterparty is one of the following:

	Infrastructure Supporting Factors	'High quality' Object finance	'High quality' Project finance
	generated by the assets being financed, rather than the independent capacity of a broader commercial enterprise, or by subsidies, grants or funding provided by one or more of the entities listed in points (b)(i) and (b)(ii) of paragraph 2;		<ul style="list-style-type: none"> • a central bank, a central government, a regional government or a local authority, provided that they are assigned a risk weight of 0 % in accordance with Articles 114 and 115, or are assigned an ECAI rating with a credit quality step of at least 3; • a public sector entity, provided that that entity is assigned a risk weight of 20 % or below in accordance with Article 116, or is assigned an ECAI rating with a credit quality step of at least 3; • a corporate entity which has been assigned an ECAI rating with a credit quality step of at least 3.
Obligor meeting financial obligations	(d) the obligor can meet its financial obligations even under severely stressed conditions that are relevant for the risk of the project;	<p>(in green: also in other lines) the obligor can meet its financial obligations even under severely stressed conditions due to the presence of all of the following features:</p> <ul style="list-style-type: none"> adequate exposure-to-value of the exposure; conservative repayment profile of the exposure; commensurate remaining lifetime of the assets upon full pay-out of the exposure or alternatively recourse to a protection provider with high creditworthiness; low refinancing risk of the exposure by the obligor or that risk is adequately mitigated by a commensurate residual asset 	

	Infrastructure Supporting Factors	'High quality' Object finance	'High quality' Project finance
		value or recourse to a protection provider with high creditworthiness; the obligor has contractual restrictions over its activity and funding structure; the obligor uses derivatives only for risk-mitigation purposes; material operating risks are properly managed;	
Cashflows	(e) the cash flows that the obligor generates are predictable and cover all future loan repayments during the duration of the loan;		– the obligor generates cash flows that are predictable and cover all future loan repayments;
Re-financing risk	(f) the re-financing risk of the exposure is low or adequately mitigated, taking into account any subsidies, grants or funding provided by one or more of the entities listed in points (b)(i) and (b)(ii) of paragraph 2;	the obligor can meet its financial obligations even under severely stressed conditions due to the presence of all of the following features: low refinancing risk of the exposure by the obligor or that risk is adequately mitigated by a commensurate residual asset value or recourse to a protection provider with high creditworthiness;	
Contractual arrangements to protect lending institution	(g) the contractual arrangements provide lenders with a high degree of protection including the following: (i) where the revenues of the obligor are not funded by payments from a large number of users, the contractual arrangements shall include provisions that effectively protect lenders against losses resulting from the termination of the project by the party which agrees to purchase the goods or services provided by the obligor;		– the contractual arrangements effectively protect the lending institution against losses resulting from the termination of the project;

	Infrastructure Supporting Factors	'High quality' Object finance	'High quality' Project finance
Reserve funds	(ii) the obligor has sufficient reserve funds fully funded in cash or other financial arrangements with highly rated guarantors to cover the contingency funding and working capital requirements over the lifetime of the assets referred to in point (b) of this paragraph;		– the obligor has sufficient reserve funds fully funded in cash, or other financial arrangements, with highly rated guarantors to cover the contingency funding and working capital requirements over the lifetime of the project being financed;
Control over the assets	(iii) the lenders have a substantial degree of control over the assets and the income generated by the obligor;	<p>the contractual arrangements on the assets provide lenders with a high degree of protection including the following features:</p> <ul style="list-style-type: none"> the lenders have a legally enforceable first-ranking right over the assets financed, and, where applicable, over the income that they generate; there are contractual restrictions on the ability of the obligor to change anything to the asset which would have a negative impact on its value; where the asset is under construction, the lenders have a legally enforceable first-ranking right over the assets and the underlying construction contracts; 	
Assets and contracts pledge	(iv) the lenders have the benefit of security to the extent permitted by applicable law in assets and contracts critical to the infrastructure business or have alternative mechanisms in place to secure their position;		– all assets and contracts necessary to operate the project have been pledged to the lending institution to the extent permitted by applicable law;
Equity pledge	(v) equity is pledged to lenders such that they are able to take control of the entity upon default;		– equity is pledged to the lending institution such that they are able to take control of the obligor entity upon default;

	Infrastructure Supporting Factors	'High quality' Object finance	'High quality' Project finance
Restrictions over cashflows	(vi) the use of net operating cash flows after mandatory payments from the project for purposes other than servicing debt obligations is restricted;	<p>the contractual arrangements on the assets provide lenders with a high degree of protection including the following features:</p> <p>the lenders have a legally enforceable first-ranking right over the assets financed, and, where applicable, over the income that they generate;</p>	
Restrictions over obligor's activity	(vii) there are contractual restrictions on the ability of the obligor to perform activities that may be detrimental to lenders, including the restriction that new debt cannot be issued without the consent of existing debt providers;	<p>the obligor can meet its financial obligations even under severely stressed conditions due to the presence of all of the following features:</p> <p>the obligor has contractual restrictions over its activity and funding structure;</p>	– there are contractual restrictions on the ability of the obligor to perform activities that may be detrimental to lenders, including the restriction that new debt cannot be issued without the consent of existing debt providers;
Seniority of lender's claim	(h) the obligation is senior to all other claims other than statutory claims and claims from derivatives counterparties;	<p>the contractual arrangements on the assets provide lenders with a high degree of protection including the following features:</p> <p>the lenders have a legally enforceable first-ranking right over the assets financed, and, where applicable, over the income that they generate;</p> <p>there are contractual restrictions on the ability of the obligor to change anything to the asset which would have a negative impact on its value;</p> <p>where the asset is under construction, the lenders have a legally enforceable first-ranking right over the assets and the underlying construction contracts;</p>	
Criteria for equity investors	(i) where the obligor is in the construction phase, the following criteria shall be fulfilled by the equity investor, or where		– the contractual provisions governing the exposure to the obligor provide for a high degree

	Infrastructure Supporting Factors	'High quality' Object finance	'High quality' Project finance
	<p>there is more than one equity investor, the following criteria shall be fulfilled by a group of equity investors as a whole:</p> <ul style="list-style-type: none"> (i) the equity investors have a history of successfully overseeing infrastructure projects, the financial strength and the relevant expertise; (ii) the equity investors have a low risk of default, or there is a low risk of material losses for the obligor as a result of their default; (iii) there are adequate mechanisms in place to align the interest of the equity investors with the interests of lenders; 		of protection for the lending institution in case of a default of the obligor;
Completion safeguards	(j) the obligor has adequate safeguards to ensure completion of the project according to the agreed specification, budget or completion date; including strong completion guarantees or the involvement of an experienced constructor and adequate contract provisions for liquidated damages;	<p>the assets being financed meet all of the following standards to operate in a sound and effective manner:</p> <ul style="list-style-type: none"> where the asset is under construction, the obligor has adequate safeguards on the agreed specifications, budget and completion date of the asset, including strong completion guarantees or the involvement of an experienced constructor and adequate contract provisions for liquidated damages; 	
Material operating risks	(k) where operating risks are material, they are properly managed;	the obligor can meet its financial obligations even under severely stressed conditions due to the presence of all of the following features: <ul style="list-style-type: none"> material operating risks are properly managed; 	

	Infrastructure Supporting Factors	'High quality' Object finance	'High quality' Project finance
Technology and design	(l) the obligor uses tested technology and design;	the assets being financed meet all of the following standards to operate in a sound and effective manner: the technology and design of the asset are tested;	
Permits and authorisations	(m) all necessary permits and authorisations have been obtained;	the assets being financed meet all of the following standards to operate in a sound and effective manner: all necessary permits and authorisations for the operation of the assets have been obtained;	
Obligor's use of derivatives	(n) the obligor uses derivatives only for risk-mitigation purposes;	the obligor can meet its financial obligations even under severely stressed conditions due to the presence of all of the following features: the obligor uses derivatives only for risk-mitigation purposes;	
ESG assessments	(o) the obligor has carried out an assessment whether the assets being financed contribute to the following environmental objectives: (i) climate change mitigation; (ii) climate change adaptation; (iii) sustainable use and protection of water and marine resources; (iv) transition to a circular economy, waste prevention and recycling; (v) pollution prevention and control; (vi) protection of healthy ecosystems.		

Annex 3: Survey and data collection templates

Part 1 – General questions

	Question	Answer
Q1	LEI of the credit institution	
Q2	Name of the credit institution	
Q3	Country of residence	(choose from list)
Q4	Total assets (EUR)	
Q5	Does your credit institution provide infrastructure project loans? (Yes/ No) This is a broad question about infrastructure in general, not specifically those subject to ISF.	No
Q6	Is your credit institution specialised in infrastructure project loans? (Yes/ No)	(choose from list)
Q7	Have you changed lending policy or part of your lending policy to consider the introduction of the Infrastructure Supporting Factor in Article 501a? (Yes/ No)	(choose from list)
Q7.a	Explain how (open question, optional):	(text)
Q8	Does your credit institution assess whether the infrastructure loans qualify for the application of Article 501a? (Yes/ No) Note: given that the CRR represent minimum requirement, not applying Article 501a would represent a more conservative approach, hence some banks may choose not to apply it.	No
Q9	Choose the most appropriate reasons from the list below, or explain what are other reasons:	
Q9.a	Generally too difficult/ complex to assess	(choose from list)
Q9.b	Some criteria difficult to assess	(choose from list)
Q9.c	Do not have enough information to assess/ Insufficient information on the project	(choose from list)
Q9.d	Not interested in getting a supporting factor	(choose from list)
Q9.e	Immaterial amount of capital savings	(choose from list)
Q9.f	Other reasons (please specify)	(text)

Q10	What is the amount of your infrastructure project loans that are subject to ISF as defined in Article 501a of the CRR, as a share of total infrastructure project loans? (indicative percentages in brackets)	Almost all (80-100%)
Q11	How difficult do you find the verification of the criteria in Article 501? Note: This question refers to the application of all the criteria in Article 501a. Similar questions referring to each individual criterion are given in the next section of the survey.	(choose from list)
Q12	Do you think the ISF has incentivized your institution's lending towards infrastructure? (Yes/ No)	(choose from list)
Q12.a	Explain your answer: (open question, optional)	(text)
Q13	Do you think the ISF has improved the availability and the conditions for infrastructure projects loans (e.g. interest rates)? (Yes/ No)	(choose from list)
Q13.a	Explain your answer: (open question, optional)	(text)
Q14	Do you think that in the current ratings applied to SA rated exposures do not allow for an appropriate measurement of the risk level of qualifying infrastructure projects? (Yes / No/ Not applicable)	(choose from list)
Q14.a	Explain your answer: (open question, optional)	(text)
Q15	Do you think that in the current IRB risk parameter modelling (PD, LGD) or slotting approach do not allow for an appropriate measurement of the risk level of qualifying infrastructure projects? (Yes / No/ Not applicable)	(choose from list)
Q15.a	Explain your answer: (open question, optional)	(text)

Part 2 – Specific criteria

No	Ref	Criterion (article 501a CRR)	a. Clarity	b. Easiness of application
Q16	Art 501a (1) (a)	The exposure is included either in the corporate exposure class or in the specialised lending exposures class, with the exclusion of exposures in default;	(choose from list)	(choose from list)
Q17	Art 501a (1) (b)	The exposure is to an entity which was created specifically to finance or operate physical structures or facilities, systems and networks that provide or support essential public services;	(choose from list)	(choose from list)

Q18	Art 501a (1) (c)	The source of repayment of the obligation is represented for not less than two thirds of its amount by the income generated by the assets being financed, rather than the independent capacity of a broader commercial enterprise, or by subsidies, grants or funding provided by one or more of the entities listed in points (b)(i) and (b)(ii) of paragraph 2 [(i) a central bank, a central government, a regional government or a local authority, provided that they are assigned a risk weight of 0 % in accordance with Articles 114 and 115 or are assigned an ECAI rating with a credit quality step of at least 3; (ii) a public sector entity, provided that it is assigned a risk weight of 20 % or below in accordance with Article 116 or is assigned an ECAI rating with a credit quality step of at least 3;];	(choose from list)	(choose from list)
Q19	Art 501a (1) (d)	The obligor can meet its financial obligations even under severely stressed conditions that are relevant for the risk of the project;	(choose from list)	(choose from list)
Q20	Art 501a (1) (e) and Art 501a (2)	<p>The cash flows that the obligor generates are predictable and cover all future loan repayments during the duration of the loan, where the cash flows generated shall not be considered predictable unless a substantial part of the revenues satisfies the following conditions:</p> <p>(a) one of the following criteria is met:</p> <ul style="list-style-type: none"> (i) the revenues are availability-based; (ii) the revenues are subject to a rate-of-return regulation; (iii) the revenues are subject to a take-or-pay contract; (iv) the level of output or the usage and the price shall independently meet one of the following criteria: <ul style="list-style-type: none"> — it is regulated, — it is contractually fixed, — it is sufficiently predictable as a result of low demand risk; <p>(b) where the revenues of the obligor are not funded by payments from a large number of users, the party which agrees to purchase the goods or services provided by the obligor shall be one of the following:</p> <ul style="list-style-type: none"> (i) a central bank, a central government, a regional government or a local authority, provided that they are assigned a risk weight of 0 % in accordance with Articles 114 and 115 or are assigned an ECAI rating with a credit quality step of at least 3; (ii) a public sector entity, provided that it is assigned a risk weight of 20 % or below in accordance with Article 116 or is assigned an ECAI rating with a credit quality step of at least 3; (iii) a multilateral development bank referred to in Article 117(2); (iv) an international organisation referred to in Article 118; 	(choose from list)	(choose from list)

		(v) a corporate entity which has been assigned an ECAI rating with a credit quality step of at least 3; (vi) an entity that is replaceable without a significant change in the level and timing of revenues.		
Q21	Art 501a (1) (f)	The re-financing risk of the exposure is low or adequately mitigated, taking into account any subsidies, grants or funding provided by one or more of the entities listed in points (b)(i) and (b)(ii) of paragraph 2; [(i) a central bank, a central government, a regional government or a local authority, provided that they are assigned a risk weight of 0 % in accordance with Articles 114 and 115 or are assigned an ECAI rating with a credit quality step of at least 3; (ii) a public sector entity, provided that it is assigned a risk weight of 20 % or below in accordance with Article 116 or is assigned an ECAI rating with a credit quality step of at least 3;];	(choose from list)	(choose from list)
Q22	Art 501a (1) (g) (i)	The contractual arrangements provide lenders with a high degree of protection including the following: (i) where the revenues of the obligor are not funded by payments from a large number of users, the contractual arrangements shall include provisions that effectively protect lenders against losses resulting from the termination of the project by the party which agrees to purchase the goods or services provided by the obligor;	(choose from list)	(choose from list)
Q23	Art 501a (1) (g) (ii)	The contractual arrangements provide lenders with a high degree of protection including the following: (ii) the obligor has sufficient reserve funds fully funded in cash or other financial arrangements with highly rated guarantors to cover the contingency funding and working capital requirements over the lifetime of the assets referred to in point (b) of this paragraph; (ii) the obligor has sufficient reserve funds fully funded in cash or other financial arrangements with highly rated guarantors to cover the contingency funding and working capital requirements over the lifetime of the assets referred to in point (b) of this paragraph;	(choose from list)	(choose from list)
Q24	Art 501a (1) (g) (iii)	The contractual arrangements provide lenders with a high degree of protection including the following: (iii) the lenders have a substantial degree of control over the assets and the income generated by the obligor;	(choose from list)	(choose from list)
Q25	Art 501a (1) (g) (iv)	The contractual arrangements provide lenders with a high degree of protection including the following: (iv) the lenders have the benefit of security to the extent permitted by applicable law in assets and contracts critical to the infrastructure business or have alternative mechanisms in place to secure their position;	(choose from list)	(choose from list)
Q26	Art 501a (1) (g) (v)	The contractual arrangements provide lenders with a high degree of protection including the following: (v) equity is pledged to lenders such that they are able to take control of the entity upon default;	(choose from list)	(choose from list)

Q27	Art 501a (1) (g) (vi)	The contractual arrangements provide lenders with a high degree of protection including the following: (vi) the use of net operating cash flows after mandatory payments from the project for purposes other than servicing debt obligations is restricted;	(choose from list)	(choose from list)
Q28	Art 501a (1) (g) (vii)	The contractual arrangements provide lenders with a high degree of protection including the following: (vii) there are contractual restrictions on the ability of the obligor to perform activities that may be detrimental to lenders, including the restriction that new debt cannot be issued without the consent of existing debt providers;	(choose from list)	(choose from list)
Q29	Art 501a (1) (h)	The obligation is senior to all other claims other than statutory claims and claims from derivatives counterparties;	(choose from list)	(choose from list)
Q30	Art 501a (1) (i)	Where the obligor is in the construction phase, the following criteria shall be fulfilled by the equity investor, or where there is more than one equity investor, the following criteria shall be fulfilled by a group of equity investors as a whole: (i) the equity investors have a history of successfully overseeing infrastructure projects, the financial strength and the relevant expertise; (ii) the equity investors have a low risk of default, or there is a low risk of material losses for the obligor as a result of their default; (iii) there are adequate mechanisms in place to align the interest of the equity investors with the interests of lenders;	(choose from list)	(choose from list)
Q31	Art 501a (1) (j)	The obligor has adequate safeguards to ensure completion of the project according to the agreed specification, budget or completion date; including strong completion guarantees or the involvement of an experienced constructor and adequate contract provisions for liquidated damages;	(choose from list)	(choose from list)
Q32	Art 501a (1) (k)	Where operating risks are material, they are properly managed;	(choose from list)	(choose from list)
Q33	Art 501a (1) (l)	The obligor uses tested technology and design;	(choose from list)	(choose from list)
Q34	Art 501a (1) (m)	All necessary permits and authorisations have been obtained;	(choose from list)	(choose from list)
Q35	Art 501a (1) (n)	The obligor uses derivatives only for risk-mitigation purposes;	(choose from list)	(choose from list)

Q36	Art 501a (1) (o)	<p>The obligor has carried out an assessment whether the assets being financed contribute to the following environmental objectives:</p> <ul style="list-style-type: none"> (i) climate change mitigation; (ii) climate change adaptation; (iii) sustainable use and protection of water and marine resources; (iv) transition to a circular economy, waste prevention and recycling; (v) pollution prevention and control; (vi) protection of healthy ecosystems. 	(choose from list)	(choose from list)
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Part 3 – Quantitative - lending

	Variable	Description	2014	2015	2016	2017	2018	2019	2020	2021
01	Stock of corporate loans (EUR)	Exposure value, defined in accordance with Article 111 and Article 166 of the CRR, associated with the outstanding amount of corporate loans in EUR at the end of the relevant year.								
02	Of which: Stock of infrastructure project loans (EUR)	Exposure value, defined in accordance with Article 111 and Article 166 of the CRR, associated with the outstanding amount of infrastructure project loans in EUR at the end of the relevant year If data on infrastructure project loans is not available, as a proxy, data for project finance exposures within the specialised lending exposure class should be provided. If proxy data is used, please specify in comments (Part 1 - General Questions/ Q16).								

03	Of which: Stock of infrastructure project loans subject to ISF (EUR)	Exposure value, defined in accordance with Article 111 and Article 166 of the CRR, associated with outstanding amount of new infrastructure project loans in EUR at the end of the relevant year, that are subject to the Infrastructure Supporting Factor (Art 501a CRR) This data should be reported starting 2020, when the Article 501a of the CRR became applicable.								
04	Flow of corporate lending (EUR)	Exposure value, defined in accordance with Article 111 and Article 166 of the CRR, associated with new corporate loans in EUR given in the relevant year								
05	Of which: Flow of infrastructure projects loans (EUR)	Exposure value, defined in accordance with Article 111 and Article 166 of the CRR, associated with new infrastructure project loans in EUR in the relevant year. If data on infrastructure project loans is not available, as a proxy, data for project finance exposures within the specialised lending exposure class should be reported. If proxy data is used, please specify in comments (Part 1 - General Questions/ Q16).								
06	Of which: Flow of infrastructure projects loans subject to ISF (EUR)	Exposure value, defined in accordance with Article 111 and Article 166 of the CRR, associated with new infrastructure project loans in EUR given in the relevant year, that qualify for the Infrastructure Supporting Factor (Art 501a CRR). This data should be reported starting 2020, when the Article 501a of the CRR became applicable. If the loan was initiated in 2020, but before 28 June (application date of ISF), the loan should be included if it qualified for the ISF on 29 June 2020.								

Part 4 – Quantitative – riskiness

	Variable	Description	2008	2009	2010	...	2018	2019	2020	2021
07	Number of corporate loans	Total number of corporate loans/ infrastructure project loans/ infrastructure project loans subject to ISF in the relevant year								
08	Number of infrastructure project loans									
09	Number of infrastructure project loans subject to ISF									
10	Default rates for corporate loans	Default rate is defined as per Article 4(78) of the CRR. As such, it should be ensured that: - the denominator consists of the number of non-defaulted obligors with any credit obligation observed at the beginning of the one-year observation period; - the numerator includes all those obligors considered in the denominator that had at least one default event during the one-year observation period.								
11	Default rates for infrastructure projects loans									
12	Default rates for infrastructure projects loans subject to ISF									
13	Share of defaulted exposures for corporate loans	Share of defaulted exposures is defined as the ratio between the following: - the denominator consists of exposure value, defined in accordance to Article 111 and Article 166 of the CRR, associated with the non-defaulted obligors with any credit obligation observed at the beginning of the one-year observation period;								
14	Share of defaulted exposures for									

	infrastructure project loans	- the numerator consists of exposure value, defined in accordance to Article 111 and Article 166 of the CRR, associated with all those obligors considered in the denominator that had at least one default event during the one-year observation period.									
15	Share of defaulted exposures for infrastructure project loans subject to ISF										
16	Loss rate from corporate loans	The loss rate is defined as the ratio between the following: - the denominator consists of the sum of the exposure values, defined in accordance to Article 111 and Article 166 of the CRR, measured exactly on the 31st of December of the year preceding the relevant year, of the exposures that were non-defaulted exactly one year before the 31st of December of the relevant year and which defaulted during the relevant year.									
17	Loss rate from infrastructure project loans	- the numerator consists of the sum of credit risk adjustments and write-offs applied, within the relevant year, to exposures that were non-defaulted the 31st of December of the year preceding the relevant year, and which defaulted during the relevant year.									

<p>18</p>	<p>Loss rate from infrastructure project loans subject to ISF</p>	<p>The numerator shall incorporate all the credit risk adjustments and write-offs related to the exposures that defaulted within the relevant year, including the credit risk adjustments applied before the default date.</p> <p>New exposures generated during the relevant year shall not be included. Exposures that defaulted and were cured again during the relevant year shall be included in the denominator of the loss rate and credit risk adjustments and write-offs on those exposures shall be considered in the numerator of the loss rate. Multiple defaults of the very same obligor shall be considered only once.</p>								
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