



# INVESTMENTS IN INFRASTRUCTURE MANUFACTURING AND SERVICES

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Strategy Department

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FMO Evaluation

## Contents

Executive summary.....	III
1. Introduction .....	1
2. History and mandate of the IMS Department .....	2
3. Evaluation questions and methodology .....	3
3.1. Evaluation questions.....	3
3.1.1. Project relevance .....	4
3.1.2. Project performance.....	4
3.1.3. Achievement of development results .....	4
3.1.4. FMO work quality .....	5
3.2. Methodology .....	5
4. The sample .....	6
4.1. Sample selection .....	6
4.2. Sample characteristics .....	6
4.3. Evolution of the IMS portfolio since 2010-2012 .....	7
5. Results.....	10
5.1. Project relevance .....	10
5.1.1. Development relevance .....	10
5.1.2. Financial additionality.....	12
5.1.3. Catalysing.....	14
5.2. Project performance.....	14
5.2.1. Business performance .....	14
5.2.2. E&S performance .....	15
5.2.3. Investment performance for FMO .....	16
5.3. Achievement of development results.....	18
5.3.1. Defining and assessing development results .....	19
5.3.2. Development performance ratings and patterns.....	20
5.4. FMO work quality .....	20
6. Cases .....	22
6.1. DP World Dakar.....	22
6.2. JK Paper Ltd.....	25
6.3. Base Titanium.....	28

7.	Summary and recommendations .....	31
7.1.	Summary of findings .....	31
7.2.	Recommendations .....	32
7.2.1.	Development relevance .....	32
7.2.2.	Development results monitoring .....	32
7.2.3.	Risk assessment .....	33
7.2.4.	Investment focus .....	33
7.2.5.	Reliance on partners .....	34

## Executive summary

Every year, FMO's Development Impact and Sustainability team carries out a sector evaluation. The studies investigate, among other things, the effectiveness of FMO's support to projects and businesses in the selected sector and the performance of these projects and businesses. The evaluations serve the dual objective of (1) results accountability and (2) institutional learning. This year, FMO's investments in Infrastructure, Manufacturing and Services (IMS) have been subjected to an evaluation. In the majority of the transactions in IMS, FMO co-finances with partners that are relied upon for sector expertise. This makes IMS different from the other FMO investment sectors (Financial Institutions, Energy and Agriculture, Food and Water).

The evaluation questions we are interested in were clustered in four groups. We analyze:

- 1) *Project selection*: Does FMO select investments in IMS that are – from an ex-ante point of view - developmentally relevant and is FMO's financing in IMS additional to commercially available funding?
- 2) *Project performance*: Do the supported projects or businesses develop in line with the initial expectations? We are interested in the operational and financial performance of the businesses, their environmental and social performance and the investment result to FMO;
- 3) *Achievement of development results*: Looking at investments that have reached the stage of early maturity, have the IMS investments made a significant contribution to economic, social and/or environmental development of the beneficiary country?
- 4) *FMO work quality*: Is FMO's work in terms of risk assessment, project structuring and project monitoring up to standards?

To answer these evaluation questions, we studied a sample of 25 projects approved in 2010-2012. For these projects, our evaluation comes on average five years after approval – typically a sufficient time lag for a project to have achieved early maturity. The main sectors represented in our sample are transport infrastructure, telecom and manufacturing. Besides the analysis of the full sample, we also present three case studies that were selected to illustrate how the IMS investments contribute to wider economic development. The three case studies include a paper manufacturer in India, a junior mining company in Kenya and a container terminal operator in Senegal.

Our findings from the full-sample analysis can be summarized as follows. Regarding **project selection**, we find that the financed projects are generally of sufficient or high **development relevance**. The expected contributions to sustainable development are mostly in the economic domain (infrastructure for businesses, jobs, government revenue), with a more limited number of projects having a primarily social objective (mostly access to communication services) through telecom investments. There were no projects in our sample with a prime environmental goal. Regarding **financial additionality**, we considered that in most cases the long-term financing provided by FMO would be hard to obtain in the commercial market and encountered no cases of FMO financing displacing commercially available financing. In a few cases, the investees were corporates with access to relatively long-term funding in the banking or capital market. In those cases, financial additionality was considered less plausible.

**Project performance** was assessed at three different levels: business performance, E&S performance and investment performance for FMO. In more than half of the cases (14 out of 25),



the *business performance* was rated either unsatisfactory or partly satisfactory, meaning that the cash flows generated by the business are either insufficient or barely sufficient to remunerate the financiers of the business. The most common factors for underperformance are related to market developments: declining output prices, rising input prices or the entry of new competitors. Other important factors include political and regulatory risk and socio-political unrest. The *investment performance* for FMO is remarkably better than the performance of the business it finances, largely a reflection of the fact that the IMS financing is typically senior lending. Non-performing loans are however more prevalent in IMS than in the other FMO sectors. On the *E&S* front, clients were found to perform quite well. We found that even in transactions where other DFIs are in the lead, FMO often plays an active role in the E&S risk assessment and monitoring. FMO's input and expertise is highly-valued and often actively sought after by its partners.

If a business underperforms in operational and financial terms, the achievement of **development results** is often compromised. This is indeed what we found in this study. In 10 out of the 25 cases, the achievement of development results was considered unsatisfactory or partly satisfactory. A factor that complicated our assessment was that FMO's monitoring framework tracks in a systematic way only a limited number of development outcomes. It was not always easy to obtain information on development outcomes that fall outside the current monitoring framework.

That such a high fraction of projects underperform in business and developmental terms is a disappointing finding and brings us to the question of **FMO work quality**: could a better front-end risk assessment have yielded better outcomes? We argue that the FMO risk assessment was mostly of good quality and that the high incidence of underperforming projects must be seen as largely a consequence of the inherent riskiness of the activities IMS invests in. We did observe that in some projects the market risk was underestimated.

Our analysis yields five recommendations:

- 1) First, we recommend that FMO further refines its procedures and processes to substantiate and assess the development relevance of potential investments. We believe the Global Goals for Sustainable Development (SDGs) provide a useful reference framework for FMO to systematize its assessment of the relevance of a transaction from a sustainable development perspective.
- 2) Secondly and relatedly, we recommend that FMO further develops its development results monitoring system. The Impact Card, the tool FMO has in place to monitor the development effects of its investments, provides important and useful information. However, as the evaluation made clear, the information in the Impact Cards is often insufficient to assess and account for progress on project-specific development goals.
- 3) Thirdly, given that in some cases market risk was underestimated, we recommend that more effort be applied to fully understand the market risks and to make the financial sensitivity analyses robust to combinations of adverse events. The risk analysis should be informed by high-quality sector expertise – either available in-house or available at FMO's financing partners
- 4) Fourthly, we recommend that FMO reflects on a more focused investment approach in IMS. The current IMS investment scope covers too many subsectors for FMO to have expertise in all of them. We believe a more focused approach on well-selected SDG-relevant

investment areas could lead to higher success ratios in terms of business and development impact terms. FMO has taken steps in this direction already and further reflection is part of the currently ongoing strategy review.

- 5) Finally, we recommend that FMO continues to apply great care in selecting its partners in the IMS sectors. We believe that FMO – when it does not have sector expertise in house – should rely only on highly trusted partners whose sector expertise and alignment in E&S and development terms are beyond question. Alternatively – and in line with the previous recommendation – FMO could further develop expertise in certain SDG-relevant IMS subsectors so that it can take on a leading role there.

## 1. Introduction

Every year, FMO's Development Impact and Sustainability team carries out a sector evaluation. The studies investigate, among other things, the effectiveness of FMO's support to projects and businesses in the selected sector and the performance of these projects and businesses. The evaluations cover:

- FMO's execution of its mandate as a Development Finance Institution: selecting and supporting sustainable, developmentally relevant and commercially viable private sector investments, while being additional to the market and seeking to crowd in commercial investors;
- The business and sustainability performance of FMO's clients and the financial performance of FMO's investments, and
- The achievement of sustainable development results.

Following sector evaluations of FMO's investments in Financial Institutions (2014) and the Energy sector (2015), this year FMO's investments in Infrastructure, Manufacturing and Services (IMS) have been subjected to an evaluation. Within the IMS sectors, FMO has mainly financed clients in telecoms, in (private sector) transport infrastructure, in manufacturing industries and in oil, gas and mining. The evaluations are carried out by monitoring and evaluation specialists of the Development Impact and Sustainability team, which is a part of FMO's Strategy Department. The team is mandated to act independently of FMO's management, to ensure an objective evaluation.

This evaluation of IMS presents an ex-post evaluation of a set of mature projects in the sectors concerned and a number of case studies that illustrate how IMS projects contribute to broader sustainable development. This is combined with a description of how FMO operates in these sectors, and how the sector investment portfolio has developed over time.

This approach makes it possible to analyze to what extent FMO achieves the intended development results in these sectors, as well as the factors that influence results achievement. It thus serves the dual objectives of (1) transparency and results accountability and (2) institutional learning. To serve the latter purpose, conclusions are drawn from the evaluation's observations, and recommendations are formulated to support further improvement of the development effectiveness of FMO's investments in Infrastructure, Manufacturing and Services.

Section 2 of this report describes the history and mission of FMO's IMS Department. Section 3 describes the key evaluation questions and the evaluation methodology, and section 4 presents the sample of IMS projects that we analyzed, as well as how this sample was arrived at. We present our main results in section 5 and section 6 present three investment cases in more detail. We provide our conclusions and recommendations in section 7.

## **2. History and mandate of the IMS Department**

The mandate of the IMS Department differs from that of the other FMO investment departments. To place the evaluation study in context, we briefly sketch the history of the IMS Department.

At the start of the 2009-2012 strategy period, FMO changed the organization of its banking activities from a region-based approach to a sector-based one. Separate departments were set up for selected focus sectors where FMO aimed to increasingly play a leading role: Financial Institutions, Energy and Housing. Outside these focus sectors, FMO aimed to remain active by efficiently co-financing projects where partners could be relied upon for sector expertise. The department that was to serve – with loans and guarantees – the sectors other than the focus sectors was initially called ‘Global Partners’. Equity investments in both focus and non-focus sectors were handled by the Private Equity Department.

Global Partners (GP) went through several name and sector responsibility changes. After FMO added Agribusiness as a focus sector in 2011, GP became ‘Agriculture and Diverse Sectors’ (A&DS). In early 2012, when FMO discontinued Housing as a focus sector, A&DS inherited the existing housing portfolio. And when, by the start of 2015, Agribusiness, Food and Water had, as a focus sector, sufficiently developed to merit an investment department of its own, A&DS acquired its present name: Infrastructure, Manufacturing and Services, or IMS. In this context, infrastructure not only includes physical transport and communication infrastructure, but occasionally also social infrastructure (health and education), as well as oil, gas and mining. Energy infrastructure is handled by the separate Energy Department.

The envisaged approach to efficiently co-finance projects where partners would take the lead and could be relied upon for sector expertise was challenging to execute in practice. Existing clients would not want to be referred to other DFIs as leading financier, and partner institutions at times expected FMO to play an active partner role, also outside FMO’s focus sectors. Partner deals have, therefore, not always been as efficient as expected. FMO has often contributed significantly to due diligence and structuring. And, particularly with existing clients, the department has at times very much played a leading rather than a following role, even acting as mandated lead arranger in transactions. Partners also often expect FMO to play an important (and at times leading) role on environmental and social issues (E&S). This is understandable given FMO’s relatively large E&S experience and capacity.

Non-focus sectors (IMS and, at the time, agribusiness) accounted for 26.4% (EUR 1.2 bln) of FMO’s committed portfolio at the end of 2009. By the end of 2015, Infrastructure, Manufacturing and Services (excluding agribusiness, but now including some housing sector clients) accounted for 16.4 % (EUR 1.5 bln) of FMO’s total assets and managed government funds. FMO’s loan portfolio outside the focus sectors was at the time of the 2012 Strategy Review seen to continue to make a strong contribution to FMO’s profitability (notably thanks to low provisions in 2010/11). At the time, NPL’s were somewhat above average, but this was compensated by relatively high margins. In subsequent years, more problems developed in the IMS portfolio and the NPL ratio increased considerably, to the point where, in 2015, the IMS Department decided to thoroughly investigate the causes of increasing NPLs. We return to the subject of the NPL’s later in this report (section 5.2.3).

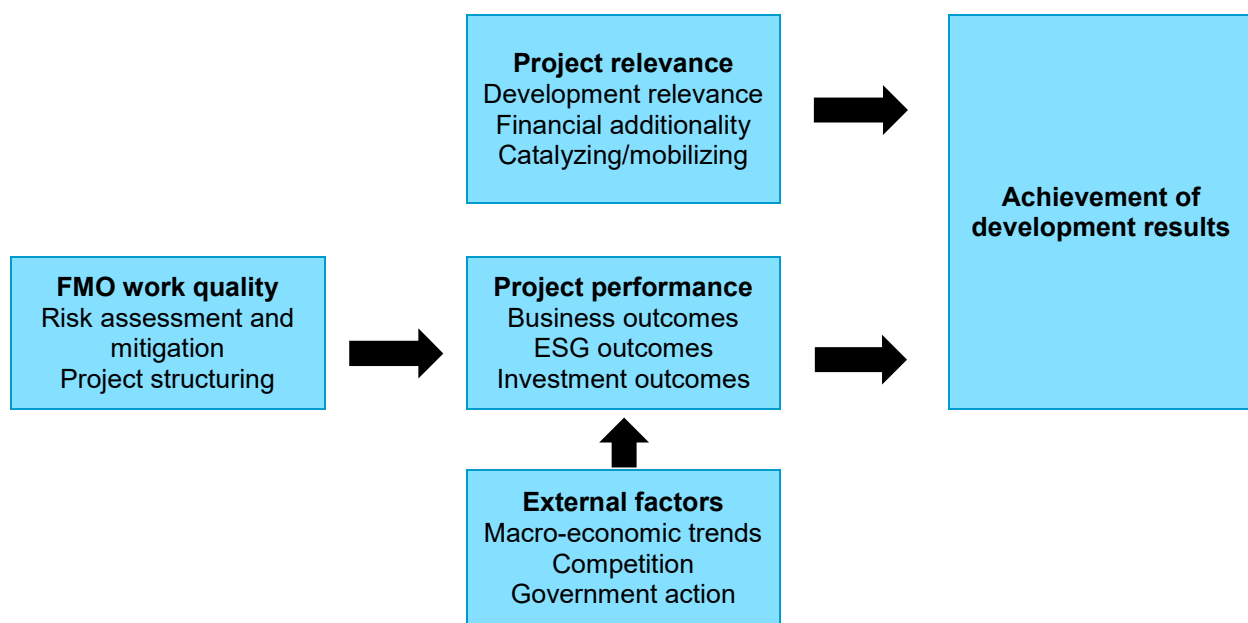


### 3. Evaluation questions and methodology

This section describes the main questions that this evaluation seeks to answer and presents our evaluation approach.

#### 3.1. Evaluation questions

Our interest is in a wide range of evaluation questions. To help understand the interlinkages between the different evaluation questions, Figure 1 below might be helpful. The figure presents our logical framework.



*Figure 1: Logical Framework*

Ultimately, the evaluation seeks to understand how the IMS investments contribute to sustainable development. A precondition for development impact is that developmentally relevant projects are selected to receive financing (project relevance). If those projects perform in line with the operational and financial expectations (project performance), they should generally also make the expected contributions to sustainable development (achievement of development results). Clearly, the extent to which the intended outcomes are achieved is a function of how well the risks of the project were assessed and mitigated at the front end (FMO work quality) and whether or not any residual risk materialized over the course of the project (external factors). This logical framework brings us to the following four sets of evaluation questions.

### 3.1.1. Project relevance

The first set of questions focuses on the ex-ante relevance of a given project: to what extent did the project fit with FMO's mission to bring scarce financing to projects that contribute to sustainable development in emerging markets? The relevance question was broken into three sub-questions.

- a) *Was the project sufficiently relevant from a sustainable development perspective?*  
 A project is considered relevant when it is expected to make a clear contribution to sustainable development of the beneficiary country, in an economic, social and/or environmental sense.
- b) *Was FMO's investment financially additional?*  
 As a development finance institution, it is FMO's role to provide financing only when adequate commercial financing is unavailable. Financial additionality is at the core of FMO's mandate and can be seen as a precondition for development impact. If the financing that FMO provided was available commercially as well, FMO generated no impact in the sense that the project would have performed similarly in the absence of FMO's financing (or in the absence of DFI financing more generally).
- c) *Did FMO catalyze commercial financing?*  
 Catalyzing financing from commercial parties is an explicit goal of FMO: when FMO catalyzes commercial funds, more financing flows to FMO's target markets, increasing the expected development impacts.

### 3.1.2. Project performance

A second set of questions addresses the performance of the project after the start of the investment. Project performance was analyzed from three different perspectives.

- a) *Has the performance of the supported business been satisfactory?*  
 We consider the business performance to be satisfactory if the cash flows generated by the supported project are sufficient to service the debt and generate an adequate return to the shareholders.
- b) *Has the E&S performance of the business been satisfactory?*  
 E&S performance is considered satisfactory when it is compliant with FMO's applicable standards and requirements, the main set of standards being the IFC Performance Standards.
- c) *Has the investment yielded the expected return for FMO?*  
 An adequate return on its investments is key for FMO to sustain its activities in the long term.

### 3.1.3. Achievement of development results

If a project has sufficient development relevance and the performance of the business is adequate, the project will typically perform in development terms as well. Generating sustainable development results can be seen as the ultimate link in FMO's intervention logic. The question we ask here is the following:

*To what extent did the project achieve sustainable development results?*

As explained further below when we discuss our findings, our rating of the achievement of development results is effectively a combined rating in the sense that it takes into account both the ex-ante development relevance of the investment and the extent to which the expected development outcomes were achieved (ex-post). Expected development outcomes were derived from the financing proposals and from interviews with investment officers.

#### 3.1.4. FMO work quality

Obviously, not all FMO's investments work out well. As a development bank, it is FMO's role to take risks that commercial investors shy away from. Taking risk implies that from time to time projects fail and do not generate the expected development impacts. That is unavoidable. At the same time, if a project fails, the question arises whether FMO perhaps underestimated the project risks or did not properly mitigate these risks. That brings us to the question of FMO's work quality:

*Was the initial risk assessment, the project structuring and the monitoring adequate to make development success sufficiently likely?*

### 3.2. Methodology

To answer the above questions, a sample of IMS projects was analysed. All projects in the sample were scored on the same set of fairly broad dimensions (development relevance, financial additionality, business performance, etc.) – using an ordinal scale ranging from 1 to 4, where 1 represents unsatisfactory, 2 partly satisfactory, 3 satisfactory and 4 excellent. Rating methodologies are commonly used by development banks for project evaluations. Rating implies a certain degree of subjectivity but it permits to make a diverse set of projects comparable in terms of a common set of dimensions. To reduce the subjectivity involved in the scoring process, a template containing definitions and guidelines was developed. We also put in place a four-eye principle with project scorings checked by at least one other member of the evaluation team.

The project evaluations followed a two-step process. Most of the work consisted in a desk review of internally available documentation. Typical documents that were consulted were the investment proposals, the advice from the Credit Department, approval documents, financial statements, annual reports, internal credit reviews, E&S monitoring reports and reports by external experts. On the basis of this desk review, a preliminary scoring was conducted. The second step in the process consisted of interviews with the relevant investment officers, portfolio analysts and E&S officers. The purpose of the interviews was to obtain additional information and to cross-check our understanding of the project's history and results/outcomes.

The above process was followed for all projects in the sample. Furthermore, a subsample of three projects was selected to be analyzed as case studies. In addition to the steps described above, the case studies involved site visits and interviews with management and various stakeholders of the selected projects.

## 4. The sample

This section describes the sample selection process and the composition of the sample.

### 4.1. Sample selection

We decided to study a set of FMO-financed projects in the IMS sector that had reached ‘early operating maturity’: mature enough so that project outcomes could be judged, but young enough to still reflect current practices and operations. We started by selecting all projects in the IMS sectors for which financing for FMO’s account was contracted in the years 2010 to 2012. Projects that were only financed out of FMO-managed government funds were excluded, as, for the government funds, a separate evaluation program is in place. We also excluded the portfolio of Housing sector projects that were inherited by the IMS Department when housing was discontinued as a focus sector, as well as agriculture projects in Agribusiness, Food and Water, as we expect to do a sector evaluation of this focus sector in one of the coming years. For similar reasons, we excluded private equity investments in the IMS sectors that were made as co-investments with investment funds that FMO had invested in: we will look into the success of such co-investments when doing an evaluation of FMO’s investment in and with private equity funds. Finally, we excluded projects that did not constitute new independent investment decisions, but rather had the character of a renewal or extension of existing corporate facilities. This process resulted in a total of 25 investments that were subjected to an evaluation.

### 4.2. Sample characteristics

Figure 2 depicts the composition of the sample by sector and by region. Telecom-related projects formed the largest subsector (with five mobile operators, two projects related to satellite voice and data communication, and two telecom towers projects). Transport infrastructure (three container terminals, aircraft leasing, a railroad and a toll bridge) was represented by six projects. Five projects were in manufacturing (from cement and paper to consumer products), four in oil, gas and mining (of which two projects in the retail distribution of petroleum products). One project, finally, was in the health/social infrastructure sector.

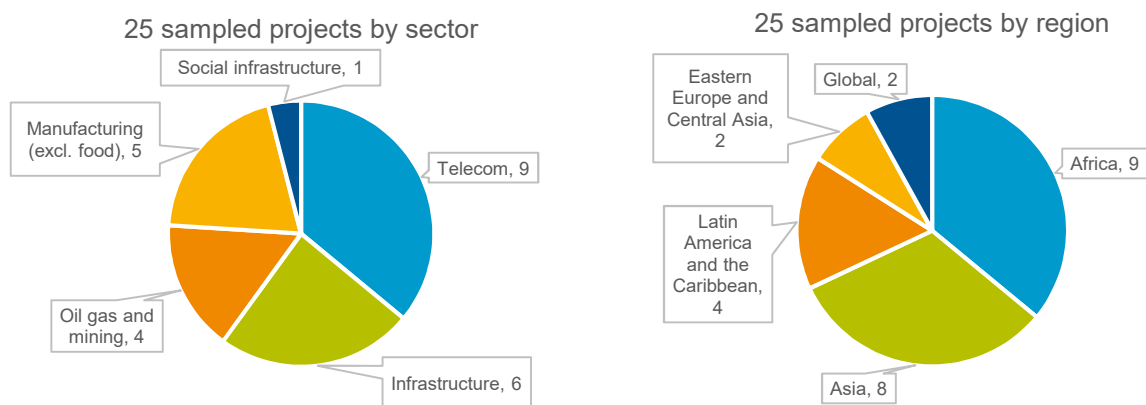


Figure 2: Sample composition by sector and region

By region, the majority of projects were in Africa and Asia, followed by Latin America and the Caribbean, and Eastern Europe and Central Asia. Eight projects were undertaken in low-income countries and a further 14 in lower-middle-income countries. One project was in an upper-middle-income country. Two projects in satellite voice and data communication operated across multiple countries and continents (the 'Global' category in Figure 2).

Given the mandate of IMS, most of the transactions that FMO supports in IMS are large debt packages arranged by (consortia of) DFIs (IFC, EBRD, DEG, etc.) and/or commercial banks. In these broad syndications, DFIs – including FMO – typically fill a financing gap that is left after what can be made available by shareholders and commercial banks. Compared to the commercial banks, the DFI tranche typically has a longer tenor or accepts more risk in a different manner. DFIs can, for example, finance without cover being provided by export credit agencies. IFC most frequently had the lead in syndicated transactions (11 cases in total), followed by DEG (3 cases) and EBRD (2 cases). For five projects, including some existing telecom and manufacturing clients, FMO did not rely on a trusted partner for due diligence and structuring.

The total financing contracted for the 25 projects was EUR 463 mln (or on average EUR 18.5 mln per project). In a few cases, amounts of less than EUR 10 mln were contracted as part of club deals with IFC, or under a risk sharing framework with a commercial bank. Of the total contracted EUR 463 mln, 91% was effectively disbursed. All projects received financing for FMO's own account ('FMO-A'), in almost all cases senior debt and in one case equity. In addition to the FMO-A financing, three of the 25 clients received (subordinated or equity) financing out of the FMO-managed Infrastructure Development Fund as well.

At the time of the evaluation, the vast majority of the evaluated projects (19) were supervised – or had been supervised until (p)repayment – by the IMS Department. Five of the evaluated projects ended up at Special Operations, FMO's department for restructuring/recovery of problem loans. The one equity investment (in a telecom towers company) was supervised by the Private Equity Department.

#### **4.3. Evolution of the IMS portfolio since 2010-2012**

To place our sample in context, this section looks at the evolution of the IMS portfolio since the sample period (2010-2012). We briefly analyze a total number of 78 IMS investments contracted over the 2010-2015 period from FMO-A funding (excluding government funds and equity investments), representing a total contracted amount of USD 1.4 billion.



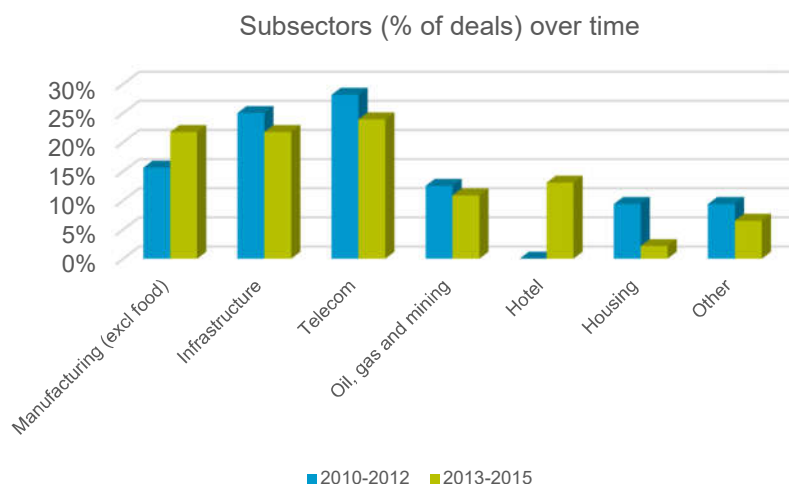


Figure 3: Subsectors

In terms of subsectors, the three main subsectors we found in the evaluation sample (infrastructure, telecom and manufacturing) continue to be the most important subsectors after 2012 (Figure 3). Manufacturing has become more significant as a subsector, with housing becoming less important. Housing has been replaced by the hotel sector, which was introduced in the IMS portfolio in 2013. The share of deals in oil, gas and mining has remained virtually the same.

In regional terms, Africa and Asia continue to be the most important regions of IMS investment (Figure 4). The importance of Africa and Latin America and the Caribbean (LAC) has increased, at the expense mostly of Eastern Europe and Central Asia (ECA). Related to these regional shifts, the country income category shows a movement from lower-middle to low-income countries.

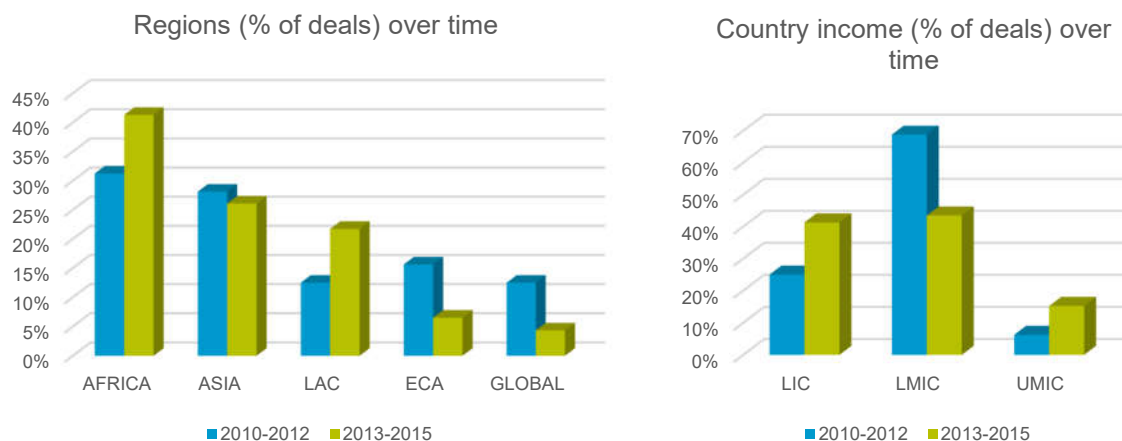


Figure 4: Region and country income

In terms of leading parties, the share of deals where FMO took the lead has significantly increased (Figure 5). The share of deals with another DFI in the lead has stayed almost the same, with the share of deals where a commercial party is in the lead declining. IFC continues to have an important position as a leading party, also after 2012.

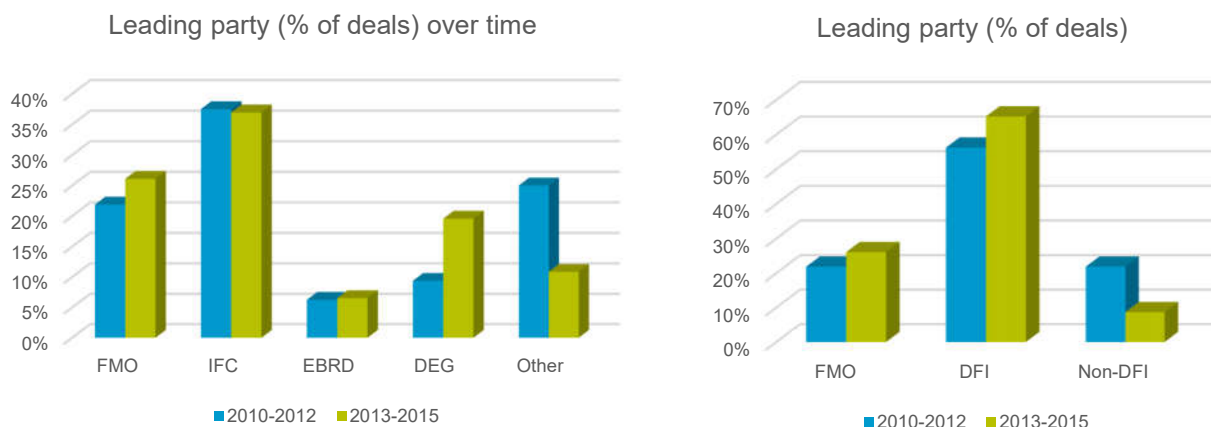


Figure 5: Leading party

In terms of green deals, no deals were labeled green in the 2010-2012 period. In 2015, 3 commitments were considered green, which accounted for 17% of total commitments in that year<sup>1</sup>. The fraction of green deals was still modest and fell slightly short of the FMO-wide target of 25% green deals.<sup>2</sup>

<sup>1</sup> Note however that the numbers are difficult to compare as the green labeling framework has changed over time. For 2013 and 2014, there is no information in FMO's databases on the green character of deals.

<sup>2</sup> The FMO green target has been increased to 30% since.

## 5. Results

This section presents the findings from the analysis of the full sample of 25 projects. The description of the results follows the sequence of the evaluation questions as outlined in section 3: project relevance, project performance, achievement of development results and FMO work quality.

### 5.1. Project relevance

#### 5.1.1. Development relevance

The assessment of the developmental relevance of investment projects is a complex task, and sometimes controversial. Development is multifaceted and opinions may differ on whether or not a project is sufficiently developmental. For the purpose of this evaluation, we reflected on development relevance from three different angles:

- a) *Economic value creation*: to what extent does the investment create added economic value for the beneficiary country? Economic value creation can take many different forms and can take place within the supported business or in the wider economy. Typical dimensions are job creation and the generation of government revenue.
- b) *Access to basic goods and services*: to what extent is the investment likely to bring important goods and services to segments of the population that previously did not have access to these goods and services?
- c) *Environmental sustainability*: to what extent is the investment contributing to the fight against climate change or to the preservation or growth of natural resources and biodiversity?

We did not take the stance that a project should score well on each of these three dimensions in order to be of high developmental relevance but we considered that a project could be highly relevant because of an important contribution to just one or two of the above dimensions (provided that the project did not have significant negative effects on any of the other dimensions).

The relation between our assessment of development relevance and the FMO Impact Model deserves further comment. The FMO Impact Model is a macro-economic model based on input/output tables that is used by FMO to estimate – at the time of contracting – the expected direct and indirect employment effects and the effects on GHG avoidance of an investment. While these model estimates served as input into our assessment, we did go beyond the two Impact Model indicators and considered other development dimensions as well (such as innovation, balance of trade effects, access to basic services and goods, etc.). Where the FMO Impact Model focuses on indicators that can be aggregated across the portfolio, the advantage of in-depth sector evaluations such as this one is that a broader set of dimensions can be looked at. Because of the wide set of dimensions considered, our assessment is – ultimately – mostly qualitative and constitutes an expert judgment on whether or not the investment helps solve in a relevant way the development needs of the beneficiary country.

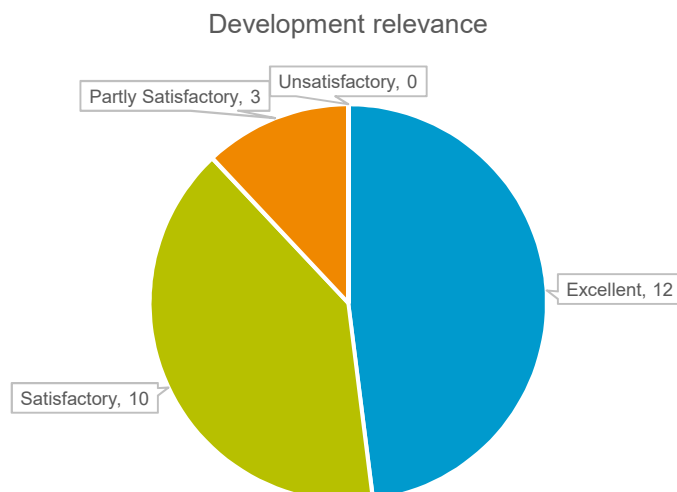


Figure 6 Development Relevance

Of the 25 projects in the sample, 22 projects – the vast majority – were considered to be of high (12 projects) or sufficient (10 projects) developmental relevance, with only 3 projects in the sample where the development relevance was considered doubtful or insufficiently motivated. We next discuss our findings by subsector.

Most of the investments in *transport infrastructure* were considered to be of high developmental relevance. This is because these investments typically provide critical infrastructure in countries where transport infrastructure is a major bottleneck to economic development. Investments in ports and railways in countries where transport infrastructure is ill-developed, are expected to have important enabling effects on the rest of the economy. Estimates from the FMO Impact Model suggest that one million EUR invested in transport infrastructure supports about 370 jobs. Most of the estimated job effects are due to the enabling effects. Besides these enabling effects, large private infrastructure projects also contribute to government revenue through royalties, concession fees and income tax and generate jobs in construction. Examples of projects that were scored excellent include container terminal infrastructure in Africa and South-East Asia and a railway in Africa.

Ratings for the *telecom* investments were evenly distributed between satisfactory and excellent. Job effects from telecom investments are rather small (about 85 jobs supported per million EUR invested according to the FMO Impact Model). The purpose of telecom investments, however, is not job creation but the provision of basic communication services to the population. In developing countries, telecom also provides a platform for mobile banking and other services. Our choice between satisfactory and excellent development relevance is largely a function of the telecom market development at the time of the investment: if the investment was expected to have an important effect on the population's expanded access to communication services, the development relevance was considered high. Investments in more mature telecom markets were typically considered of sufficient relevance.

Scores for *manufacturing* investments ranged from excellent over satisfactory to insufficient. The main dimensions we took into account to score the development relevance of *manufacturing* investments were job creation (direct and indirect), the environmental effects of the investment (GHG emissions, resource efficiency) and the novelty of the business. Job effects of manufacturing investments are typically important. The FMO Impact Model estimates that one million EUR invested in manufacturing supports on average 420 jobs. Most of these jobs are indirect jobs in the value chain. The variation in our scoring of manufacturing investments is mostly explained by the environmental and novelty dimensions. We consider novelty to be linked to economic value creation as investments in novel projects and businesses are less likely to crowd out competitors than investments that do ‘more of the same’ in relatively mature sectors of the economy<sup>3</sup>. An investment that was scored partly satisfactory was an investment in a CO2-intensive industry in a relatively mature market. Similarly, the development relevance of two investments in *oil, gas and mining* was rated insufficient because these too were investments in CO2-intensive industries in relatively mature markets.

While development relevance was in the vast majority of cases scored to be sufficient or excellent, we note that the sustainable development dimension that predominated in our assessments was the economic dimension (infrastructure, manufacturing, oil, gas and mining). In a more limited number of cases, the main objective of the investment was social in nature (telecom). None of the investments in our sample had a prime environmental sustainability rationale<sup>4</sup>.

Finally, it is worth noting the main source of information for our assessment of the development relevance was the financing proposal. The financing proposals describe the country and market context and include a section that discusses the importance of the project from a development perspective. We found some variation in the breadth and depth of the development motivation. While in many financing proposals the key development objectives were well-articulated, there were also cases where there seemed room for improvement. In such cases, the interviews with front office staff provided an important additional source of information to assess the development relevance of a project.

#### 5.1.2. Financial additionality

Another important aspect of project relevance is financial additionality. Assessing financial additionality is far from straightforward as it entails assessing whether the project would have been able to secure adequate commercial financing in the absence of DFI financing. Note that financial additionality – in our understanding – refers not to the additionality of FMO strictly speaking but to the additionality of the DFI consortium in the transaction (if FMO finances alongside other DFIs).

Financial additionality is a function of – among other things – the country risk, the project risk and the sophistication of local financial markets. FMO derives its financial additionality typically from the

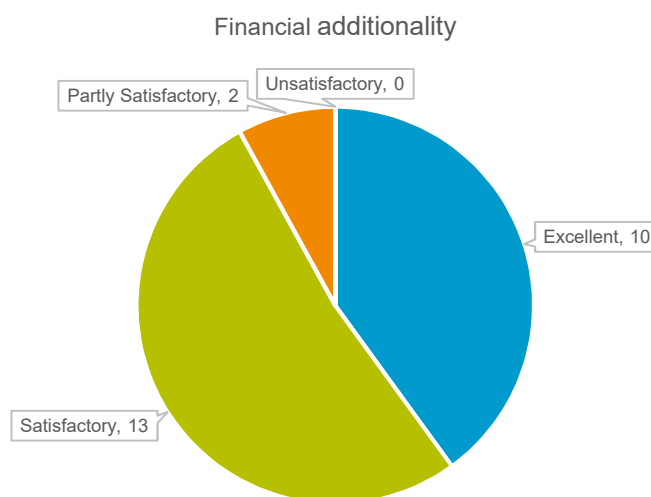
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<sup>3</sup> Note that the FMO Impact Model assumes that investment leads to an increase of output in the economy in a linear way. While this seems a reasonable assumption for most of FMO’s investments, we believe this is questionable if investments do ‘more of the same’.

<sup>4</sup> Regardless of the prime rationale of the investment, for all investments FMO’s E&S work (discussed below) aims at ensuring that any negative social and environmental impacts are minimized or mitigated.



long tenors of its financing. Such long tenors are needed since the supported investments are generally CAPEX investments that generate returns over long horizons. Long-term financing carries relatively high risks and is often hard to find in the commercial market.



*Figure 7: Financial Additionality*

Financial additionality was mostly scored excellent or satisfactory. An excellent rating was assigned when it was deemed highly unlikely that commercial parties would have been willing to provide the required long-term financing. In our sample, this is typically the case for investments in high-risk countries with no recourse to a strong shareholder. Satisfactory ratings were assigned when the financial additionality was somewhat less obvious but still fully plausible. In three out of the 25 projects, we judged – on the basis of our desk study – the financial additionality of FMO as ‘partly satisfactory’. In one of these cases, discussions with the project’s management during a project evaluation visit convinced us that the DFI-tranche in which FMO participated was not only necessary to achieve financial close, but had also catalyzed commercial bank finance (as it was regarded as quasi-equity). The two remaining cases of ‘partly satisfactory’ additionality were transactions with established corporates in middle-income countries that were able to (re)finance themselves commercially very soon (within one or two years) after FMO’s investment.

As mentioned previously, the IMS investments are often participations in larger debt packages. It is not uncommon for commercial banks to participate in these transactions alongside DFIs. We did not see participation of commercial banks in the financing as a counter-indication of financial additionality, as long as the commercial banks played a minor role in the financing or took a less risky position in the financing structure. In many such cases, it can even be plausibly argued that the DFIs provided the necessary comfort to commercial investors and hence catalyzed commercial financing, as discussed in the next subsection.

### 5.1.3. Catalysing

To increase its impact footprint, FMO has an explicit goal to channel commercial funds towards development finance. In general, thanks to its trusted expertise and by absorbing some of the financial risk, FMO is regularly in a position to provide comfort to commercial investors. In our sample, however, there are no examples of transactions where FMO itself catalyzed commercial financing. That is not surprising given that bringing commercial parties to the table typically falls upon the lead arranger of the transaction, which – as was mentioned above – in most of the transactions in our sample is not FMO. Where FMO provided financing alongside other DFIs, we also looked at the catalytic effect of the DFI tranche as a whole. It could then often be observed that the long tenor or the more junior/subordinated nature of the DFI tranche did enable the project to attract (international and/or local) commercial financiers. That was the case in 7 out of 25 projects.

## 5.2. Project performance

Having investigated the ex-ante project relevance in the previous subsection, we now turn to an analysis of how the supported projects performed after the start of the investment. We approached the question of project performance from three different angles: business performance, E&S performance and investment performance for FMO.

### 5.2.1. Business performance

We considered a project to have a satisfactory business performance if the business/project generated sufficient cash to meet its financial obligations. This typically means that in operational terms the project developed broadly in line with the expectations. Figure 8 presents an overview of our findings.

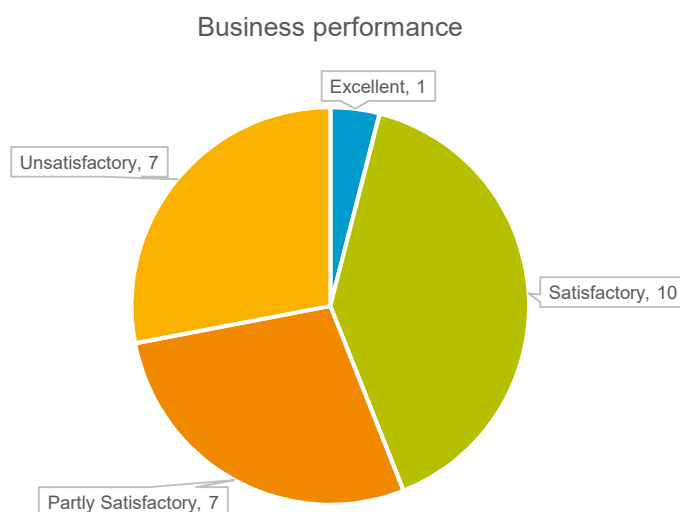


Figure 8: Business performance

For fewer than half of the projects, the business objectives were broadly achieved (11 projects with a satisfactory or excellent performance). We assessed the business performance of the majority of the projects as partly satisfactory (7 projects) or unsatisfactory (7 projects). In cases of unsatisfactory as well as partly satisfactory performance, we assessed financial obligations to be under pressure. However, when we assigned an unsatisfactory (rather than a partly satisfactory) rating, we considered the problems to be more fundamental and unlikely to be of a short-term nature.

An example of a project with an unsatisfactory performance is a cement manufacturing company where the production ramp-up was much delayed and the sales volumes remained far below expectations due to challenging market conditions that we expect to persist in the medium term. An example of a project with a partly satisfactory performance is a telecom company in Africa that performed quite well for a number of years but that has recently been hit by government intervention in the telecom sector, leading to financially challenging conditions. As the business fundamentals are strong, we consider the prospects to be good and expect the company to return to financial health.

It is worth noting that, although technical implementation issues and cost overruns are often encountered, these are rarely the main (or the unique) cause for disappointing business results. In the majority of cases, the main reasons for underperformance are of an external nature. There are three types of risk that we ran into recurrently as a major cause of underperformance: market risk, regulatory risk and socio-political instability.

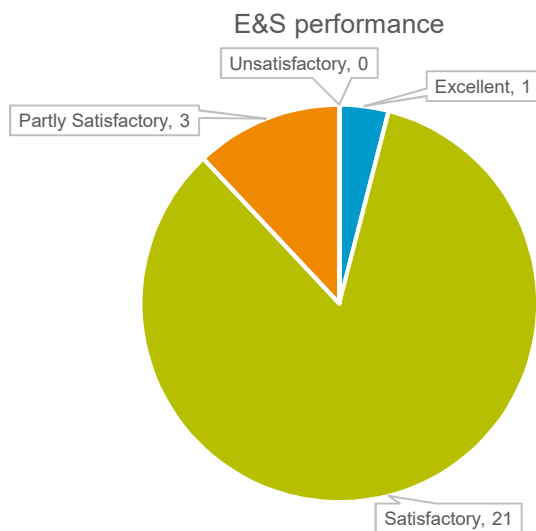
Under *market risk*, we understand unfavorable evolutions of input and/or output prices or the unexpected entry of competitors in the project's market. Unsurprisingly, the manufacturing and oil, gas and mining subsectors are especially sensitive to adverse price evolutions. An example is a mining project in Africa that suffered from unexpected declining world prices (as discussed below in a case study). The arrival of unexpected competition was seen as a reason for underperformance mostly in infrastructure, an example being a container terminal in Asia that ceased to attract customers after an existing nearby port was significantly upgraded. *Regulatory risk* (related to licensing or the unexpected imposition of price controls and taxes) is a second reason for underperformance. In our sample, this risk has materialized mostly in the telecom sector. An example is found in a telecom tower company operating across Central America, where permits and licenses were obtained from the government only after serious delays. A third external factor that has put serious pressure on the business results of some of the projects in the sample is *socio-political instability*. Instances of instability occurring in Eastern Europe and the Middle East had considerable adverse effects on the regional economies, affecting the FMO clients in these regions as well.

These risks (except for the socio-political risk) were typically adequately identified at the time of approval. However, it seems the probability that these risks would materialize was sometimes underestimated or mitigation proved more difficult than anticipated. We return to the quality of the risk assessment below.

### 5.2.2. E&S performance

A next dimension of project performance is the environmental and social (E&S) performance of the projects. In the majority of cases, E&S performance was regarded satisfactory (21 projects),

meaning that the project complied with the applicable standards or made the required steps towards compliance. The E&S performance was considered excellent in one case and partly satisfactory in three cases. In the three cases of underperformance, significant delays in the implementation of important E&S action items or issues with health and safety standards were observed. As a compliment to the work of FMO's E&S officers, we encountered several cases where FMO was not the leading E&S party but nevertheless started playing an active role when E&S issues became apparent.



*Figure 9: E&S performance*

As an important caveat, it should be noted that our ex-post evaluation of E&S performance was relatively light and based mostly on internal reporting as prepared by the front office. We also consulted reports by external experts when available, typically only the case for high-risk projects. For low-risk projects, including most telecom projects, client reporting requirements are typically light and, hence, little E&S monitoring information was available. When no issues were noted in the yearly credit reviews, we gave projects the benefit of the doubt and rated the E&S performance as satisfactory.

### 5.2.3. Investment performance for FMO

A final dimension of project performance that we looked at is the investment return to FMO. A decent return on its investments is essential for FMO to accomplish its corporate purpose and to sustain its activities in the long term. For debt investments, we consider the investment performance of a project to be satisfactory if the loan is (expected to be) repaid as scheduled or was rescheduled but is (expected to be) repaid without loss of originally expected income. For equity investments, we compared the (updated/final) internal rate of return to what was initially expected.

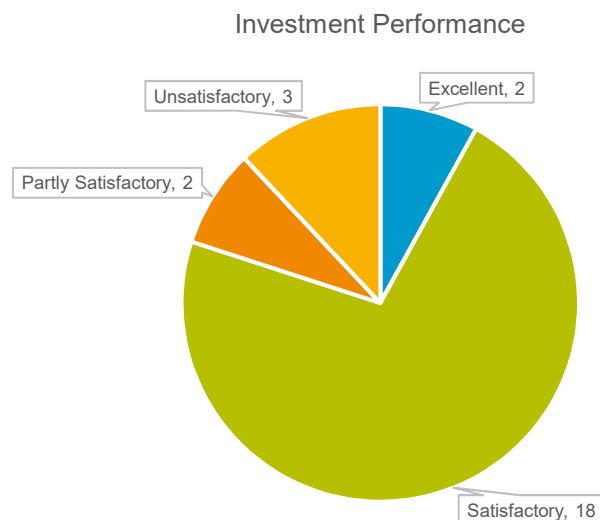


Figure 10: Investment performance

Figure 10 depicts our ratings of investment performance. In the sample, the majority of projects (18 projects) achieved a satisfactory investment performance. In two cases of equity investments, the projects earned or were expected to earn significantly more than expected, yielding an excellent rating. Five investments were rated either partly satisfactory (with some loss of income realized/expected; 2 projects) or unsatisfactory (with considerable losses realized/expected; 3 projects). Of the five underperforming investments in the sample, two are in the *infrastructure* subsector and two in the *oil, gas and mining* subsector. All *manufacturing* investments were rated satisfactory and most *telecom projects* satisfactory or even excellent.

The fact that the investment performance to FMO is often remarkably brighter than the business performance of the underlying project may come as a surprise and merits further comment. Table 1 shows the relationship between the two performance dimensions. As can be seen, the correlation between business performance and investment performance is relatively weak, with a fair number of projects underperforming in business terms but performing satisfactorily in investment terms. To a large extent, this finding is a consequence of, on the one hand, the definitions we used and, on the other hand, the fact that most of the IMS investments concern senior loans. We considered business performance to be (partly) unsatisfactory if the operational results were lagging behind expectations with the client's ability to meet its financial obligations from its operational cash flows under pressure. There are a variety of reasons why a (partly) unsatisfactory business performance does not necessarily imply that the project underperforms from the (debt) investor's point of view. First, even if the operational cash flows are disappointing, there are often ways to service the debt either from cash reserves or from additional liquidity injections. Secondly, a loan may be rescheduled to bring the debt service requirements again in line with operational cash flows. Thirdly, guarantees can in some cases be called upon to ensure repayment of the loan (one project in our sample). Interestingly, we also encountered a number of cases where the business seemed to underperform



but where the FMO debt was entirely prepaid by existing shareholders or by new equity investors who apparently were confident in the long term prospects of the business.

		Business Performance			
		Unsatisfactory	Partly Satisfactory	Satisfactory	Excellent
Investment Performance	Unsatisfactory	3	0	0	0
	Partly Satisfactory	1	1	0	0
	Satisfactory	3	6	9	0
	Excellent	0	0	2	0

*Table 1: Business and investment performance*

The reader might wonder whether the 20% of projects that we assessed to be underperforming in investment terms is to be considered high or low. As IMS is the only sector for which this rating exercise was conducted, we do not have exactly comparable numbers for other FMO sectors. To compare the investment performance of IMS with other FMO sectors, we can however make use of non-performing loan (NPL) data. We note that for projects originated in the 2010-2012 period the likelihood that a loan becomes a NPL is substantially higher in IMS than in the other FMO sectors.

In this context, a question of interest relates to FMO's partner strategy in the IMS sectors. As was mentioned before, in most of the IMS transactions FMO follows a lead partner that is relied upon for sector expertise. In addition to proven sector expertise, the FMO investment criteria require the partner to be financially aligned with FMO. The question arises whether all of FMO's partners in IMS have consistently been as reliable as FMO would have wished. To look into this question, we investigated whether NPLs are correlated with the type of leading partner. Since our sample of 25 projects is too small to uncover any statistical correlation partners, we used a bigger sample for this analysis consisting of all IMS transactions approved in 2010-2014. Our analysis did not find any clear correlations between the likelihood that a loan becomes a NPL and the leading partner.

Finally, it is of interest to note that Table 1 shows no cases that combine a satisfactory business performance with an unsatisfactory investment performance. This combination could arise from contracting errors or fraud. The fact that there are no such cases is reassuring and testifies to FMO's quality of work in this area.

### 5.3. Achievement of development results

In the previous subsection, we analyzed the performance of the supported projects in business, E&S and investment terms. A satisfactory project performance – business and E&S performance in particular – is generally a necessary precondition for the achievement of development results. The extent to which development results were achieved is the ultimate question of interest of this evaluation and the question we turn to now.

### 5.3.1. Defining and assessing development results

We thought of developmental performance as the combination of two elements: the ex-ante developmental relevance and the relative extent to which the project lived up to the initial development expectations. The development expectations were derived from the financing proposals and through interviews with front office staff. To arrive at an overall rating of development performance, we combined our (previously discussed) rating of ex-ante project relevance with a measure of ex-post performance relative to expectations. Figure 11 shows how the evaluated projects were rated on both aspects individually, and how we combined the two ratings into an overall rating of development performance.

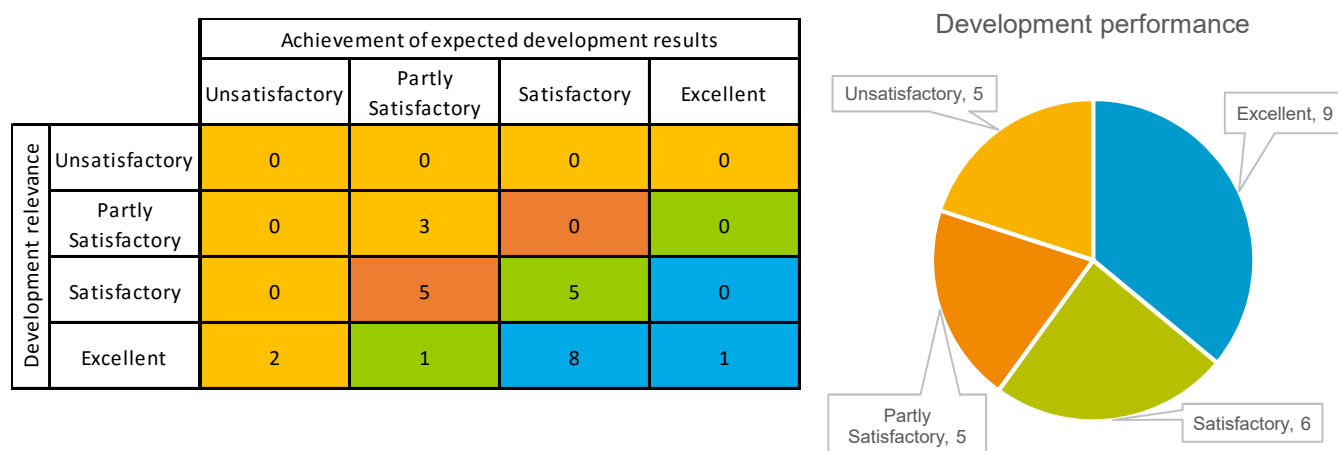


Figure 11: Development performance

Rating projects on achieved development results has not always been easy. Our assessments have been complicated by the fact that monitoring data on development indicators were not always available. It is important in this context to distinguish between standardized development indicators (that apply to a wide range of projects) and project-specific indicators. Data on a number of standardized development indicators (e.g. direct jobs, income tax, etc.<sup>5</sup>) are available in the Impact Cards, a monitoring system FMO has in place since 2015. Investments in our sample often have quite specific development objectives however – e.g. a telecom investment aimed to increasingly serve rural or low income groups, or a manufacturing investment where an important development rationale was to provide income opportunities to farmers. Data on such project-specific development objectives are generally not available in FMO's data systems and we had to search for the relevant information in various reporting documents. When no data could be found, we tried to infer from the project's logic and business development whether the effects were likely to have taken place. Where effects were sufficiently plausible to have occurred, we have given projects the benefit of the doubt.

As a final preliminary point, we note that this evaluation did not attempt to validate the indirect job effect estimates of the FMO Impact Model. As indirect job effects are dispersed across the entire

<sup>5</sup> The set of indicators depends on the sector and type of investment.

economy, it is very difficult to measure these effects empirically. A validation would require in-depth analysis and econometric work – something that falls outside the scope of this evaluation.

### 5.3.2. Development performance ratings and patterns

Looking at the overall development performance ratings in the pie diagram of Figure 11, nine out of the 25 evaluated projects were considered to have performed excellently. All of these projects were ex-ante regarded as having a satisfactory or evident development relevance. One of them also delivered exceptionally well on its original development promises: a mobile telecom operator that made strong contributions to access to mobile telecommunications and mobile banking in countries that still had very low penetration rates when FMO's financing was approved. The other eight projects with an excellent development performance largely delivered on their developmental promises. Together, these projects illustrate that, if FMO wants to support projects with strong development results, it should, to start with, select projects with a high development relevance.

A further six projects, spread across sectors and continents, had a satisfactory development performance (green in Figure 11). Five of these had a satisfactory ex-ante development relevance as well as a satisfactory performance relative to the initial expectations. Five projects were given a 'partly satisfactory' (orange) rating on the overall development performance indicator. Although their development relevance was considered satisfactory at approval, expected development results were only realized in part, typically because their operational business performance was lagging behind expectations. Some positive outcomes were still generated (in terms of jobs, for example, or by providing telecom/infrastructure services), but much less than would have been the case if the companies had developed as expected. This category includes three companies where the investment plan that formed the basis for our investment decision was not – or only partly – implemented, as well as projects where intended target groups were not reached, including a satellite project expected to provide affordable internet connectivity to isolated and remote communities, that in the end provided connectivity to different groups of clients.

Finally, the development performance of five projects was rated as unsatisfactory (yellow). These projects were all facing a (partly) unsatisfactory business performance. In three of these cases, we also considered the ex-ante development relevance to have been insufficient. Two projects where the relevance was, at the time of approval, considered to be high, both in transport infrastructure (a container terminal and a railroad), effectively failed as a business.

## 5.4. FMO work quality

As we have just seen, out of the 25 projects in our sample, quite some were assessed to have a less than satisfactory business (14 projects), investment (5 projects) or development performance (10 projects). Together with external factors outside FMO's control (such as economic and political developments), work quality determines a project's outcomes. The question then arises whether FMO's work quality was in any way deficient: could a better front-end risk assessment, project structuring or monitoring have yielded better outcomes?

Answering this question is not easy. With the advantage of hindsight, it is fairly easy to pinpoint where things went wrong. It would be wrong however to take project failure as a sure indication of deficient work quality. Indeed, risk is part of FMO's business and, in many cases, the risks that

caused a project to derail were properly brought out and addressed at the time of the investment approval. This demonstrates that in the vast majority of cases the front-end *risk assessment* was up to standards. This is of course to be expected where projects are financed by consortia of experienced international (development) financiers. Moreover, we did not encounter cases where obvious deficiencies with respect to the *financial structuring* became apparent. We thus believe that the relatively low success rate of IMS investments is to a large extent a reflection of the inherent riskiness of the sectors and projects that IMS invests in. This is further corroborated by the Global Emerging Markets Risk database, which also shows higher defaults in the IMS subsectors than in other sectors<sup>6,7</sup>.

There were some cases, however, especially in some infrastructure and mining projects, where the complexity and the technical implementation and market risk of the projects seem to have been underestimated. So was the risk of competing projects being established. At times, it seems sensitivity analyses were not rigorous enough, by not testing the project's robustness for combinations of adverse developments. We also encountered two cases where project acceptance appears to have been based on an assessment of the financial risk only – with the financial risk being mitigated by means of sponsor and government guarantees – while it was quite unlikely from the outset that the project would perform in line with the business and development expectations.

In terms of *project monitoring and supervision*, financial monitoring was generally assessed to be diligent. As indicated previously, the monitoring of project-specific development indicators was often found to be lacking. Note however that FMO's systems and procedures do not require monitoring of such project-specific indicators. When looking at the supervision by lead financiers in projects where FMO followed, several instances could be observed of projects going off-track (not implementing the agreed investment program), with corrective actions being taken late or apparently not at all. In a few infrastructure projects, on the other hand, FMO assumed a stronger role in E&S supervision than had been anticipated, when other DFIs in the financing consortium turned out to lack capacity and/or expertise. Other than is the case with front-end project selection and risk assessment, possible shortcomings in monitoring and supervision of IMS projects appear largely unrelated to project outcomes.

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<sup>6</sup> The Global Emerging Risks Database is a database on defaults and losses for the emerging markets with data from various development finance institutions.

<sup>7</sup> Financially speaking, higher defaults are not a problem *per se* if these are compensated by higher margins. FMO portfolio data show however that, in recent years, this has not been the case, with net returns in IMS lower than in the other FMO sectors.

## 6. Cases

As a complement to the high-level results presented in the previous sections, we now describe three investments from our sample in more detail. The three cases are a container terminal operator in Senegal, a paper manufacturer in India and a mineral sands mining project in Kenya. The three cases were not randomly selected but purposely to illustrate how successful FMO investments play a role in meeting local development needs. Evaluation visits to these projects were conducted, during which we interviewed the management of the companies, spoke with employees and met with various stakeholders.

### 6.1. DP World Dakar

In March 2010, FMO approved an investment in DP World Dakar (DPWD). DPWD is a brownfield container terminal operator in the Port of Dakar. DPWD is owned for 90% by DP World, a large global port operator, and for 10% by the Senegalese port authority (Port Autonome de Dakar), a state-owned company. In October 2007, DPWD obtained a 25-year concession (starting from January 2008) to organize, equip, operate and maintain the existing container terminal in the Northern Zone of the Port of Dakar. The Port of Dakar is the only port in Senegal and the terminal operated by DPWD is the only container terminal in the country. Some container traffic however is handled by roll-off roll-on operators that are also operating in the port of Dakar.

The FMO investment concerned a EUR 15 mln senior loan with a total tenor of 6 years. FMO's loan was part of a larger debt package (a total of EUR 95 mln) arranged by Standard Chartered Bank (SCB), together with the African Development Bank. Other financiers were development banks as well as some commercial banks. The purpose of the loan package was to finance the rehabilitation and expansion of the existing container terminal. Major components of the investment plan were the concession entry ticket, civil works and port equipment such as ship-to-shore and yard cranes.

A site visit was conducted in October 2016 during which interviews were conducted with management and staff of DPWD. To understand the wider context in which DPWD operates, we also met with infrastructure experts at the World Bank office in Dakar and with the CEO of one of the major transport and logistical companies in Senegal.

#### *Project relevance*

The Port of Dakar is of major importance to the Senegalese economy. As many other developing countries, Senegal is highly dependent on imports, with imports amounting to 40% of GDP in 2010. In the same year, exports amounted to about 25% of GDP. The Port of Dakar is the major hub for international trade in Senegal, accounting for as much as 95% of customs revenue. The Port of Dakar is important not only for the Senegalese economy but also for Mali, a land-locked country. Dakar is one of the two main transit points (the other one being Abidjan) for imports/exports into/from Mali.

Before DPWD obtained the terminal concession, three operators were active on the container terminal. As the terminal was considered to be in need of upgrading and to increase the efficiency, the Government of Senegal decided to publicly tender the concession. The tender was won by DP World.



Because the container terminal constitutes crucial infrastructure for the Senegalese and Malian economies and because of the clear need for upgrading, we assessed the *development relevance* of the investment to be excellent. Another factor in our assessment was the prospect of important government revenues. Besides the concession entry ticket, the terms of the concession agreement include a fixed annual royalty and a variable royalty based on Origin/Destination and transshipment volumes.

*Financial additionality* was scored excellent as well. Internal FMO documents mention that the lead arrangers of the transaction found the appetite of commercial banks to be insufficient and hence development finance institutions were invited to join. The reasons for the lack of commercial interest are undoubtedly the high country and political risk.

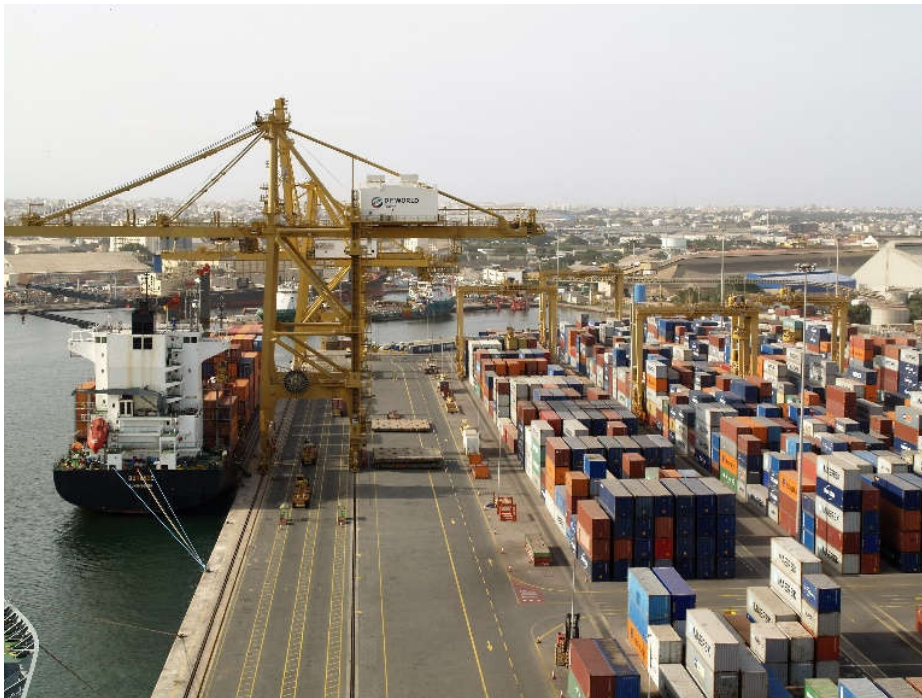
### *Project history*

At the time of the disbursement of FMO's loan, the upgrading of the container terminal was already well under way and had been financed by shareholder loans. The loan package arranged by SCB was used partially to reimburse shareholders and partially to finance the remainder of the upgrading works. The investment plan was completed broadly according to the original timeline. Cost overruns were incurred – mostly due to fact that soil was found to be weaker than indicated in the feasibility studies – but as these were financed from the operational cash, no additional debt or equity was required.

In operational terms, container volumes have more or less doubled since 2008. Whereas in 2008 273k TEU (twenty-foot equivalent unit) were handled, more than 450k TEU were handled in 2015. The volume growth is broadly in line with the expectations at the time of the investment approval. Efficiency has improved considerably as well. DPWD has invested in state-of-the-art IT operating systems and is continually seeking to find efficiency gains. Data on several of DPWD's internal efficiency KPIs show a continuous upward trend over the past few years. As an example, the average truck turnaround time – the time a truck needs to enter the terminal site, pick up a container and leave – is now under half an hour, compared to several hours before DPWD acquired the concession.

### *Performance*

In terms of financial performance, as DPWD's financial results are not in the public domain, we only note that on all key financial indicators (revenue, EBITDA, profit, etc.) DPWD has either performed in line with or outperformed the initial projections. On the E&S front, the investment was rated as medium risk. The important risk areas mostly concerned health and safety and some environmental issues (waste treatment, etc.). An environmental and social action plan was put in place and executed according to plan. The site visit and interviews with DPWD management (including the operational health and safety manager) convinced us that the company has a strong commitment to instilling a culture of safety among its staff. Employees receive regular safety trainings and adherence to the safety procedures is continuously monitored by a dedicated team of 10 people. Since DPWD took over the terminal, there have been no fatalities and lost-time accidents have been very rare. As further evidence of its commitment to people and planet, DPWD has obtained a series of ISO and other certifications.



### *Development results*

As is clear from the above, DPWD has managed to set up a well-performing container terminal, something that is widely acknowledged by various stakeholders in the terminal and shipping industry. The terminal has been supporting the growth of the Senegalese and Malian economies. Since 2010, throughput volumes have increased considerably and DPWD has managed to increase its share of the Mali trade.

Direct job growth at DPWD has been important. Employment numbers have increased from around 350 FTE in 2010 to around 700 FTE now. Several Senegalese nationals that were formerly employed at DPWD have moved on to fill positions in other DP World business units or at the DP World headquarter. In our assessment, employment conditions are good. The lowest wage paid by DPWD far exceeds the minimum wage and employment benefits exceed statutory requirements in various respects (health insurance, etc.). This translates into high staff retention rates.

As DPWD is at the front end of the logistical and transport sector in Senegal, it also contributes to indirect job creation in these sectors and in the wider economy. Quantification of the indirect job effects is difficult though and would require much more in-depth analysis.

In terms of government revenue, over the last five years DPWD has paid over EUR 100 million in taxes and royalties, ranking DPWD as one of the major tax contributors in Senegal. These payments include the fixed and variable royalties, profit tax and other taxes.

Finally, we note that DPWD has a CSR program through which it supports various health and education initiatives in Senegal. Examples include the renovation of an elementary school and the regular organization of free medical examination days in rural areas.

## *Looking ahead*

The location of the Port of Dakar in the center of the city is sub-optimal. Traffic jams to reach the port are frequent and there is limited space for the further expansion of the port and the associated logistical infrastructure. To enable future growth, DPWD signed a Memorandum of Understanding with the Senegalese government in October 2015 to build and develop a new port and logistics free zone on the outskirts of the city of Dakar.

### **6.2. JK Paper Ltd.**

In 2011, FMO contributed to the financing of JK Paper Ltd (JKPL), one of India's largest paper and board manufacturers. The company operates two plants, one in Orissa and one in Gujarat. FMO subscribed to a Foreign Currency Convertible Bond (FCCB) with a tenor of 7 years for an amount of EUR 13mln. A FCCB is a mezzanine debt instrument that is convertible into shares at a pre-agreed conversion rate. Other European DFIs subscribed to the FCCB as well. The purpose of the financing was a new production line for printer/copier paper for the factory in Orissa. The FCCB covered only a small part of the total investment plan (EUR 276 million). Other financing sources included a rights issue, export credits and long-term debt from IFC and domestic banks.

In August 2016, we visited the Orissa plant and the company's Delhi head office in order to gain a fuller understanding of the company's development impact. Interviews were held with management, staff and pulpwood farmers. The plant and the farm forestry activities were extensively toured, as was a large cross-section of the company's CSR projects.



## *Project relevance*

The ex-ante development relevance of the investment was scored excellent, for two main reasons. First, the project was expected to make an important contribution to the modernization of India's

paper industry. The new production line involved state-of-the-art technology that would make the production process substantially more efficient in terms of the use of energy, water and other resources, putting JKPL ahead of its competitors from an environmental point of view. Second, JKPL operates a large smallholder farming program for its wood supply and the increased need for wood inputs was expected to generate income opportunities for thousands of farmers.

The additionality of FMO's financing was assessed to be evident. The company's management clarified convincingly that the DFI financing was necessary to close the financing, as it helped to mobilize further funding from international and local commercial banks.

### *Business performance*

Some changes in the scope of the investment plan and technical issues resulted in cost overruns, made up for by capital injections and a shareholder loan. Cost overruns together with unexpected increases in input prices led to a disappointing financial performance of the company up to and including the fiscal year to 31 March 2015. Since 2015/16, the company returned to profit. As the investments undertaken have made the Orissa plant one of the most resource-efficient paper mills in a country where per capita paper consumption is expected to increase, we believe the financial prospects are good. The disappointing past performance combined with good prospects led us to score the business performance as partly satisfactory.

The E&S performance of the company has been monitored by an independent expert and no major issues have been flagged. We thus rated the E&S performance as satisfactory. The achievements in the field of resource efficiency are commented upon below.

### *Development results*

The state-of-the-art technology for the new production line has doubled the plant's paper production capacity, but has also led to significant environmental benefits. Whereas 85 m<sup>3</sup> of water was used per ton of paper before the project, this has come down to 41 m<sup>3</sup>. Water is obtained from the Nagavali river, that has a more than adequate flow throughout the year. Use intensities of other raw materials have also come down, which has helped improve (treated) effluent quality, reduce stack emissions and improve ambient air quality. Whereas noise and smells from the plant used to lead to complaints from nearby communities in the past, this is no longer the case. The company's power generation has become much 'greener' as well, and 64% of power generation is now from renewable bio-fuel. The remaining power generation is still coal based but coal consumption per ton of paper produced has come down from 2.1 tons of coal before the project to 0.75 tons in 2015/16. Had the 'green' label as FMO uses it today been in place in 2011, the investment would clearly have qualified as a 'green' transaction.

In terms of employment effects, as was expected at the time of FMO's approval, the project has had limited effects on overall direct employment figures. The number of employees at the Orissa plant evolved from around 1,400 pre-project (in 2011) to 1,342 at the start of 2016. The vast majority of employees is from the region (Orissa and Andhra Pradesh), and working and living conditions were assessed to be good. Housing and education facilities for employees on the factory compound compare very favorably with those in the adjacent township. The Orissa plant also provides employment to around 2,000 employees of contractors and a small number of casual laborers. The management of the Orissa plant estimates that the plant supports indirectly about 4,000 jobs,



including jobs in transport of raw materials and finished products, in planting and harvesting pulp wood, in commerce in the factory's shopping complex and in the neighboring town, and through the livelihood activities supported by its CSR program.

In India, companies like JKPL are not allowed to own large tracts of land. Sourcing wood from large scale tree plantations is therefore not an option, and wood has to be sourced from widely scattered plots worked by smallholders and farmer cooperatives. To secure its supply of wood, JKPL operates a large forestry program that supports tree farming by smallholder farmers in a variety of ways: by providing high yielding, clonal varieties of planting material, by having extension workers promote a good farming practices, and by the formation of tree farmer cooperatives. About 60,000 farmers participate in the program and receive on average gross revenues of around EUR 1,800 every 3 years (trees are harvested after 3 years). After deducting input costs (planting materials, fertilizer, harvesting), farmers are left with around EUR 1,200. A survey of the utilization of harvest proceeds showed strong effects on asset building. The substantial one-off payments after three or four years allow participating farmers to make productive investments (in land, farm equipment), to build or improve a home, or to get married.



A final impact channel that we looked into is the company's corporate social responsibility program. JKPL is well aware of the importance of good community relations, and therefore operates a sizeable CSR program in support of its license to operate. It includes direct livelihood support activities as well as various social services in health and education. We observed nice examples of support being provided to individual and group-based enterprises (vegetables, goats, poultry, etc.). In education, a literacy training program for village women is to be noted for its impressive reach. In the health area, 100 villages have received access to an eye hospital, and receive, among others, immunization and pregnancy advisory services. Company statistics show that its CSR spending benefited 15,000 recipients over the last year, of which 11,000 were women.

### 6.3. Base Titanium

Base Titanium (Base) is a greenfield mining company in Kenya and the first large-scale sand mining project in Kenya. Base mines relatively rare minerals (ilmenite, rutile and zircon) that are used for the production of titanium dioxide, used in paints, plastics and ceramics. FMO's investment in 2012 of US\$ 30 mln was part of a DFI package of US\$ 70mln, arranged by DEG, with a tenor of eight years. Production started in October 2013, with the first shipment taking place in February 2014. In FY16, Base achieved sales of 572,900 tons of end products, compared to 521,600 tons and 194,100 tons in FY15 and FY14, respectively. The plant has surpassed its design production targets, but revenues have been under pressure because of a continuous decrease of mineral prices since 2012. Market prices hit an all-time low in June 2016, but have displayed an upward trend since. Because of the low mineral prices, the loan has been rescheduled twice.

In November 2016, a visit to the Base Titanium mine site was conducted to deepen our understanding of the business and E&S performance and the wider development impacts of the project. The visit included meetings with management, surrounding communities, resettled households and government officials.



#### *Project relevance*

From an ex-ante perspective, the development relevance of this project was rated as excellent. Major areas of expected development impact were direct and indirect employment creation, the generation of government and export revenue. Also, Base is one of the first major modern mining projects in Kenya and, if successful, it could enable further investment in the Kenyan mining sector.

Financial additionally of FMO in this project was considered excellent as well. Given the high risks involved and given that fact that Base is a junior mining company, it seems unlikely that Base would have been able to raise all debt financing in the commercial market. There were some commercial

banks involved in the transaction but these provided financing with shorter tenors than the DFIs. The involvement of DFIs in the project offered two additional advantages: some protection against potential political interference and, because of the promotion of international E&S standards by the DFIs, a benchmark for future mining projects in Kenya.

### *Business performance*

Since the mine came into operation, operational performance has been strong with annually increasing production volumes, in line with and eventually exceeding initial projections. Although Base is operationally doing well, financial conditions have been challenging due to the unfavourable market conditions. The prices of the minerals have dropped by a factor of 2 to 4 (depending on the mineral) between 2012 and June 2016. The operating costs of Base are relatively low, which ensured that the company could survive despite low commodity prices, unlike some competitors. The financial performance of Base Titanium was rated 'partially unsatisfactory', reflecting on the one hand the financially challenging conditions Base has gone through and, on the other hand, the strong operational performance and good prospects.

### *E&S Performance*

Before construction started, numerous environmental and social impact studies were conducted to identify the potential environmental and social effects of the construction and operation of the mine. These studies resulted in an extensive Environmental and Social Action Plan, of which all items were completed by 2015. Several key E&S issues were investigated during the evaluation visit: resettlement, environmental impacts and health and safety.

About 500 households were resettled from the mine site. These households were offered what seems to be a quite generous compensation package that included land and cash. Social monitoring surveys of the resettled households show that a large majority of the households feel positively about the resettlement. During the visit, we spoke with a number of households that indeed indicated that their living standards had improved since being resettled.

Base monitors various environmental parameters (water, air quality, noise, vegetation, reptiles and amphibians, etc.) and has committed to a number of programs to prevent and mitigate any negative effects of its activities on the environment. About 80% of the water Base uses is recycled and reused. A biodiversity conservation program comprises the establishment of a biodiversity corridor on and around the mine site (including the restoration of a wetland) and an extensive tree nursery program to protect and propagate indigenous tree species (about 75,000 trees have been propagated to date). As part of a waste recycling program, Base employs local carpenters to turn used wood into objects for use in the mine or by surrounding communities (chicken coops, beehives, etc.).

Health and safety are high on Base's agenda and an extensive safety training program for employees and contractors is in place. Since the start of its activities in 2012, lost-time accidents have been very rare. The E&S team at Base (responsible for the environmental, social and health and safety programs) employs 167 people – or almost a quarter of the total number of employees.





## *Investment performance*

Although the DFI loan has been rescheduled, no loss of income for the lenders is expected. Due to the increasing market prices, the prospects are looking good. We thus regarded the investment performance of Base as satisfactory.

## *Development results*

Base currently employs 670 people. The vast majority are Kenyan nationals (94%) and Base actively seeks to further reduce the number of expats by identifying and training talented Kenyans. Employment conditions were considered above standard, with all employees and their families receiving health insurance, for example. Another area of development impact is Base's significant contribution to Kenya's state budget. In FY2016, taxes paid by Base (including royalties) and its employees will amount to USD 14.3mln. Over the 13-year life of the mine, Base is expected to contribute well over USD 200 million in government revenue.

In the past three years, Base spent about USD 9mln on community development programs. These include, for example, health awareness campaigns and the construction of community infrastructure such as health centres, schools and boreholes. With financial support from FMO's Capacity Development program, Base is working with a NGO to re-establish cotton cultivation in the area.

To gain insight into the indirect employment effects, we can make use of the results of a study that was commissioned by Base from Ernst and Young. Using a methodology based on input-output tables, this study estimates that Base's ongoing operations support indirectly 2,790 jobs in the wider economy. During the initial two-year construction period, indirect employment supported by Base was even higher and was estimated at 4,127 jobs per year (over a period of two years).

On closure of the mine, the mining site will be restored and replanted. The exact destiny of the site still has to be decided upon by the national government, the county government, communities and other stakeholders.

## 7. Summary and recommendations

This evaluation study focused on FMO's Infrastructure, Manufacturing and Services investments. The primary objective of the study was to investigate the extent to which the IMS investments contribute to FMO's mission to further sustainable economic and social development in its target markets. This section summarizes our findings and formulates recommendations.

### 7.1. Summary of findings

The evaluation questions were organized into four clusters: project selection, project performance, achievement of development outcomes and FMO work quality. We summarize our findings along these lines.

Regarding **project selection**, we found that the financed projects are generally of sufficient or high *development relevance*. Investments in transport infrastructure such as ports and railways aim to create an improved enabling environment for economic development while the objective of telecom investments is to expand the population's access to important services such as communication and financial services. Regarding manufacturing, the picture is more mixed: for investments in more mature sectors of the economy, the ex-ante developmental value was sometimes less clear. In general, projects with clear environmental goals are exceptions in our sample. *Financial additionality* was assessed to be mostly obvious or plausible. For most projects, we considered that the long-term financing provided by FMO would be hard to obtain in the commercial market. In a few cases, the investees were corporates with access to relatively long-term funding in the banking or capital market. In those cases, financial additionality was considered less plausible.

**Project performance** was assessed at three different levels: business performance, E&S performance and investment performance for FMO. In more than half of the cases (14 out of 25), the *business performance* was rated either unsatisfactory or partly satisfactory, meaning that the cash flows generated by the business are either insufficient or barely sufficient to remunerate the financiers of the business. The most common factors for underperformance are related to market developments: declining output prices, rising input prices or the entry of new competitors. Other important factors include political and regulatory risk and socio-political unrest. The *investment performance* for FMO is remarkably better than the performance of the business it finances, largely a reflection of the fact that the IMS financing is typically senior lending. On the *E&S* front, clients were found to perform quite well. We found that even in transactions where other DFIs are in the lead, FMO often plays an active role in the E&S risk assessment and monitoring. FMO's input and expertise is highly-valued and often actively sought after by its partners.

If a business underperforms in operational and financial terms, the achievement of **development results** is often compromised. This is indeed what we found. In 10 out of the 25 cases, the achievement of development results was considered unsatisfactory or partly satisfactory. An important challenge in assessing the developmental achievements was that monitoring data were often lacking, even on dimensions that in the financing proposal were put forward as prime areas of development impact.

That such a high fraction of projects underperform in business and developmental terms is a disappointing finding and brought us to the question of **FMO work quality**: could a better front-end

risk assessment have yielded better outcomes? We argued that the FMO risk assessment was mostly of good quality and that the high incidence of underperforming projects must be seen as largely a consequence of the inherent riskiness of the activities IMS invests in. We did observe that in a few projects the market risk seems to have been underestimated, a point we return to in the recommendations below.

## **7.2. Recommendations**

We formulate five recommendations. The first two relate to FMO's development effects framework. Although these recommendations emerge from this IMS evaluation, they have a broader relevance for all of FMO's investment activities. The other recommendations are specific to IMS and concern FMO's investment focus in IMS, the assessment of risks and FMO's partner strategy in IMS.

### **7.2.1. Development relevance**

A first recommendation we make is for FMO to further refine its procedures and processes to substantiate and assess the development relevance of potential investments. In this evaluation, we found a small number of projects to have an insufficiently clear development relevance. Moreover, we encountered variation in how well the development relevance of investments was motivated in the financing proposals. Currently, FMO does not have a systematic framework in place to articulate and assess the development relevance of potential investment transactions<sup>8</sup>.

We believe the Sustainable Development Goals (SDGs), a set of global sustainability goals that came into force in January 2016 under the auspices of the UN, provide a useful reference framework for FMO to systematize its assessment of the relevance of a transaction from a sustainable development perspective. We envision a framework that enables the front office to indicate and motivate which SDGs an investment is expected to impact, in a positive or negative way. Besides the fact that such a system would streamline how the development relevance is substantiated across transactions, it would generate information that is useful for reporting, communication and investment steering purposes. Setting up such a system is not straightforward though. The SDGs are broad and general and, to generate useful information, clear guidelines on when a certain SDG can be referenced will have to be elaborated.

### **7.2.2. Development results monitoring**

Secondly and relatedly, we recommend that FMO further develops its development results monitoring system. The Impact Card, the tool FMO has in place to monitor the development effects of its investments, provides important and useful information. However, as the evaluation made clear, the information in the Impact Cards is often insufficient to assess whether progress has been made on project-specific development goals.

If the previous recommendation is acted upon and at the time of investment approval the relevant SDGs are spelled out, accountability requires that a system is put in place that permits to track over

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<sup>8</sup> As a macro-economic tool, the FMO Impact Model is not used to evaluate the development value of individual transactions.

time how an investment is contributing to the relevant SDGs. We believe a two-pronged approach is most likely to be successful. On the one hand, we envision that some standardized quantitative indicators will have to be added to the Impact Card. On the other hand, as standardized indicators will never be capable of capturing the full spectrum of potential development objectives, the Impact Cards will have to be complemented by some form of qualitative monitoring. This qualitative monitoring could be included, for example, in the annual Client Credit Reviews, where reference would then be made to the originally identified development objectives. Even if it would not be possible to aggregate the qualitative information across projects, the monitoring information would be important to underpin any SDG claims FMO makes.

### 7.2.3. Risk assessment

A third recommendation is related to the assessment of risks. Our evaluation found that an important fraction of the investments in the sample did not yield the expected development effects. We saw that in an important number of cases adverse evolutions of the input or output prices, or the unexpected entry of competitors, caused the project to underperform. Though these risks can obviously not be excluded, we encountered a number of cases where they had been underestimated.

Especially in the case of projects without guaranteed off-take or strong sponsor support, we recommend that market risk is mitigated by a high-quality and in-depth analysis of the market, including an analysis of the unique competitive advantages of the financed project. Even if market studies are typically done for project finance transactions, the quality of these studies seems to vary. A complexity in this respect is that without own sector expertise it is difficult to assess the quality of the market studies conducted by external parties.

### 7.2.4. Investment focus

Relatedly, we believe it is important for FMO to reflect on its investment scope in IMS. The businesses supported by IMS frequently do not perform well, often leading to disappointing development results. The question arises whether the current investment scope of IMS – ranging from hospitals and hotels over cement and textile to ports and satellites – is not overly broad. Given the relatively modest size of the IMS investment team, it appears difficult to have expertise in all of these subsectors. We believe a more restricted investment scope focusing on a limited number of subsectors could be beneficial to both the development success and the financial success of FMO's investments in IMS. The IMS management has taken steps in this direction already, for example by its decision to no longer originate transactions in the mining sector.

The choice of the focal IMS subsectors should be guided by a reflection on how FMO can best contribute to the SDGs through its IMS investments. There are a number of key SDG-relevant investment areas that fall within the broad scope of IMS but are currently not or hardly touched upon by FMO. That is the case for example for climate adaptation, health, education and public transportation. Energy and resource efficiency and waste management, on the other hand, are already increasingly within the investment scope of IMS. Admittedly, many of the above mentioned areas are difficult to bank and have traditionally fallen outside the scope of private-sector focused development finance institutions. However, given that the investment needs are high and given FMO's ambition to be the leading impact investor, we think a strategic reflection on how FMO can

specialize in a selected number of these areas – alongside some of the more traditional IMS subsectors such as transport infrastructure, for example – is desired. Developing strategies to bank projects in some of these new areas will require creative thinking and new financing models. In particular, we anticipate that closer partnerships with governments might have to be explored. Blended financing, which is becoming increasingly available, could provide an opportunity to reduce the financial risks of these transactions.

#### 7.2.5. Reliance on partners

As we saw, a central aspect of FMO's strategy in IMS is the reliance on trusted partners. In addition to proven sector expertise, the FMO investment criteria require the partner to be financially aligned with FMO. The question arose whether partners had been consistently as reliable as FMO had imagined. We looked into this question and investigated whether financial underperformance was correlated with the type of leading partner. No clear patterns were found.

Notwithstanding this, we believe there are risks associated with following partners in investment areas where FMO does not have in-house expertise. Even if the leading partner has demonstrable sector expertise and there is alignment in terms of financial risk, a partner may still have its own non-financial interests to move forward with a certain transaction (e.g. political reasons or institutional country or sector targets). We thus recommend that FMO, if it does not have the required sector expertise in house, applies the utmost care in selecting its partners. Alternatively – and in line with the previous recommendation – FMO could further develop expertise in certain subsectors so that it can confidently take on the role of lead arranger in certain subsectors. If partners do not bring to FMO transactions in those SDG-investment areas where it believes it should play an increasing role, FMO will have to lead the way and demonstrate its capacity to innovate, in line with its ambition to be the leading impact investor.