



EFSI Operation Scoreboard¹

PROJECT PRESENTATION	
<u>Project name</u>	AMS SEMICONDUCTOR SOLUTIONS RDI
<u>Promoter or financial intermediary</u>	AMS AG
<u>Country of implementation</u>	Austria, Regional – EU countries, Germany, Belgium
<u>Summary project description</u>	<p>The promoter, one of the few remaining European semiconductor manufacturers, is specialised in the design and manufacturing of advanced sensor solutions and analogue Integrated Circuits (ICs). The promoter is a [...] player in the global market for sensors [...].</p> <p>[...]</p> <p>[...]</p> <p>[...]</p> <p>[...] The project concerns investments in RDI activities and equipment of semiconductor devices. The project foresees investments in the promoter's ongoing RDI programme in order to develop both the leading-edge products in the fields of imaging, optical and environmental sensors. The development of advanced optical sensors for spectral sensing (for example for biosensing) and proximity sensors for 3D sensing, light analysis, spectral sensing and [...] sensors for mobile devices are some examples of the expected results of the project. Other activities included in the project relate to the development of new high-speed image sensors for machine vision, hyper-spectral sensing, computer tomography, micro camera modules for medical applications and X-Ray sensors and detectors.</p> <p>The promoter is actively participating in public and European RDI programmes and has a wide list of collaborations with Universities and Research Institutes.</p>

¹ This Scoreboard of indicators reflects the information presented to the EFSI Investment Committee (IC) for its decision on the use of the EU guarantee for this operation. Therefore, the document does not take into account possible developments that could have occurred after this decision. Parts of this document that fall under the exceptions for disclosure defined by the EIB Group Transparency Policy, notably under the articles 5.5 (protection of commercial interests) and 5.6 (protection of the Bank's internal decision-making process), have been replaced by the symbol [...].

PROJECT PILLAR ASSESSMENT

Pillar 1

Contribution to EU policy	Significant
EFSI	
Contribution to EFSI	100.00%
EFSI: Research, development and innovation	100.00%
Other research, development and innovation	100.00%

Pillar 2

Quality and soundness of the project	Good
1. Growth	[...]
2. Promoter capabilities	[...]
3. Sustainability	[...]
4. Employment	[...]

This pillar evaluates the quality and soundness of the operation. This pillar is composed of four indicators which include:

- (i) "Growth" i.e. for example and where relevant the economic rate of return ("ERR"), which considers the project's socioeconomic costs and benefits, including its spillover effects;*
- (ii) "Promoter capabilities" i.e. the capacity of the promoter/intermediary to implement the project and create the expected impact at the [final] beneficiary level;*
- (iii) "Sustainability" i.e. environmental and social sustainability²;*
- (iv) "Employment" i.e. the project's direct employment effect.*

Pillar 3

EIB Technical and financial contribution to the project	Moderate
1. Financial contribution	[...]
2. Financial facilitation	[...]
3. Advice	[...]

This pillar measures the EIB's particular contribution to the project and its financing scheme in the form of financial and non-financial benefits which go beyond what commercial players would normally be able to offer. This dimension of value added is assessed through three indicators:

- (i) "Financial Contribution" i.e. improving the counterpart's funding terms compared to market sources of finance (interest rate reduction and/or longer lending tenor),*
- (ii) "Financial Facilitation" i.e. helping to attract private financiers (for example through positive signaling effects), promoting synergies in co-financing with other public sources of funds including National Promotional Banks or EU financial instruments,*
- (iii) "Technical Contribution and Advice" i.e. providing advice with a view to optimizing the financing package (financial structuring), or technical advisory services in the form of expert input / knowledge transfer – provided in-house by the EIB or in the form of assignments to external consultants – to facilitate the preparation or implementation of a project.*

² For additional information on the EIB's assessment of the project's environmental and social aspects, please refer to the project's Environmental and Social Data Sheet (ESDS) published on the EIB website.

Pillar 4 – Complementary indicators

Additionality

In line with the EFSI objectives of supporting research, development and innovation (RDI), the operation supports investment in RDI activities in the sector of semiconductors, in particular the field of high performance sensor solutions, sensor integrated circuits, interfaces & related software. The promoter aims at creating sensor solutions that make devices and technology smarter, safer, and easier to use. The operation is expected to advance research and development in fields such as innovative sensors and sensor solutions, which are a key requirement for the realization of a number of megatrends: 3D sensing/augmented reality, Internet of Things and autonomous driving. The operation will also target research in micro- and nano-electronics, one of the Key Enabling Technologies (KETs) identified by the European Commission as source for innovation that feed into many different industrial value chains and sectors and are crucial to maintain the competitiveness of the European industry.

The financing of RDI projects supports the generation of significant positive knowledge, technology, and/or environmental externalities through the creation of innovative products and through skills development and upgrading. In particular, research and development activities in one of the KET enables other sectors to innovate further their products and services and to increase competitiveness and productivity. Therefore, an RDI project in this sector provides positive externalities to other sectors resulting in higher benefits.

The semiconductor industry is cyclical as it is strongly driven by the demand in volatile end markets/sectors (e.g. consumer, automotive) which makes raising debt financing challenging, leading to a sub-optimal investment situation.

The operation will be risky and categorized as EIB Special Activities. This is mainly due to the high risk inherent with financing RDI activity in new semiconductor technologies, the cyclicity of the business segment, the borrower's weakened credit metrics due to a major recent acquisition, the large size of the lending amount as well as the unsecured format of the financing. Without the support of EFSI, the EIB could not provide financial support to the promoter to the same extent.

The proposed long-term EIB loan will provide a signalling effect to the company's existing bank lenders and investors (debt as well as equity) as it indicates the Bank's confidence in the company's strategy. Over the medium term, the EIB/EFSI loan's contribution to further diversifying the company's funding structure is expected to catalyse crowding-in of additional long-term financing providers to the company, thus benefiting the promoter's overall debt structure and increasing the company's financial prospects, allowing it to advance with other major investment projects in the future.

This will be the first operation for the EIB with the borrower. The promoter will benefit from EU grants.

Set of indicators related to the macroeconomic environment

Austria - Economic environment

Economic Performance

	AT 2016	EU 2016	US 2016	AT 2001-2007
GDP per capita (EUR, PPS)	37,209	29,440	42,615	36,467
GDP growth (%)	1.5	1.9	1.8	2.2
Potential GDP growth (%)	1.4	1.3	2.1	2.1
Output gap (% of potential GDP)	-0.70	-0.76	-0.03	0.12
Unemployment Rate (%)	5.7	8.2	4.7	4.9
Unemployment Rate (%) - Y/Y change (% points)	-0.3	-0.8	-0.3	0.09
Bank-interest rates to non-financial corporations (%)	1.6	1.4	1.8	3.9
Bank-interest rates to non-financial corporations (%) - Y/Y change (% points)	-0.11	-0.21	-1.4	-0.21
Investment rate (GFCF as % of GDP) - Total	22.9	19.7	19.6	23.6
Investment rate (GFCF as % of GDP) - Public	3.0	2.7	3.4	2.7
Investment rate (GFCF as % of GDP) - Private	19.9	17.0	16.2	20.9

General Sector Indicators

	2013	2014	2015	2016	EU (latest available)
Value added in Manufacture of computer, electronic and optical products (% of total)	--	--	--	--	0.7
Employment in Manufacture of computer, electronic and optical products (% of total)	--	--	--	--	--

Information and communications technology

	2013	2014	2015	2016	EU (latest available)
The Digital Economy and Society Index (DESI) (composite index)	--	45.9	50.4	54.5	52.3
Fixed broadband subscriptions (lines) per 100 people	26.3	27.5	28.3	28.8	32.7
Fixed broadband Next Generation Access (NGA) coverage/availability (% of households)	70.2	0.98	0.89	--	0.71
Mobile broadband subscriptions per 100 population	64.2	66.8	67.4	77.2	83.9
Internet bandwidth (kb/s per user)	17.0	21.0	35.0	--	--

- Country average for "GDP per capita (EUR, PPS)" is calculated in real terms

- EU value for "Bank-interest rates to non-financial corporations" corresponds to Euro Area average; Country average is the simple average between 2003 and 2007

- The EU value is displayed as the value in the year that corresponds to the latest value of the indicator in a particular country

Belgium - Economic environment

Economic Performance

	BE	EU	US	BE
	2016	2016	2016	2001-2007
GDP per capita (EUR, PPS)	34,665	29,440	42,615	35,138
GDP growth (%)	1.2	1.9	1.6	2.1
Potential GDP growth (%)	1.3	1.3	2.1	2.0
Output gap (% of potential GDP)	-0.59	-0.75	-0.03	0.76
Unemployment Rate (%)	7.0	8.2	4.7	7.9
Unemployment Rate (%) - Y/Y change (% points)	-1.6	-0.8	-0.3	0.09
Bank-interest rates to non-financial corporations (%)	1.5	1.4	1.8	4.3
Bank-interest rates to non-financial corporations (%) - Y/Y change (% points)	-0.08	-0.21	-1.4	-0.34
Investment rate (GFCF as % of GDP) - Total	23.0	19.7	19.6	21.8
Investment rate (GFCF as % of GDP) - Public	2.3	2.7	3.4	2.1
Investment rate (GFCF as % of GDP) - Private	20.7	17.0	16.2	19.7

General Sector Indicators

	2013	2014	2015	2016	EU (latest available)
Value added in Manufacture of computer, electronic and optical products (% of total)	--	--	--	--	0.7
Employment in Manufacture of computer, electronic and optical products (% of total)	--	--	--	--	--

Information and communications technology

	2013	2014	2015	2016	EU (latest available)
The Digital Economy and Society Index (DESI) (composite index)	--	52.3	56.0	58.3	52.3
Fixed broadband subscriptions (lines) per 100 people	34.2	35.8	36.5	37.2	32.7
Fixed broadband Next Generation Access (NGA) coverage/availability (% of households)	98.3	0.99	0.99	--	0.71
Mobile broadband subscriptions per 100 population	51.1	57.5	66.0	67.8	83.9
Internet bandwidth (kb/s per user)	11.0	11.0	11.0	--	--

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Germany - Economic environment

Economic Performance

	DE	EU	US	DE
	2016	2016	2016	2001-2007
GDP per capita (EUR, PPS)	36,232	29,440	42,615	32,614
GDP growth (%)	1.9	1.9	1.8	1.4
Potential GDP growth (%)	1.8	1.3	2.1	1.3
Output gap (% of potential GDP)	-0.15	-0.75	-0.03	-0.27
Unemployment Rate (%)	3.9	8.2	4.7	9.4
Unemployment Rate (%) - Y/Y change (% points)	-0.5	-0.8	-0.3	0.06
Bank-interest rates to non-financial corporations (%)	1.3	1.4	1.8	4.1
Bank-interest rates to non-financial corporations (%) - Y/Y change (% points)	-0.15	-0.21	-1.4	-0.04
Investment rate (GFCF as % of GDP) - Total	20.0	19.7	19.6	19.9
Investment rate (GFCF as % of GDP) - Public	2.1	2.7	3.4	2.0
Investment rate (GFCF as % of GDP) - Private	17.9	17.0	16.2	17.9

General Sector Indicators

	2013	2014	2015	2016	EU (latest available)
Value added in Manufacture of computer, electronic and optical products (% of total)	--	--	--	--	0.7
Employment in Manufacture of computer, electronic and optical products (% of total)	--	--	--	--	0.6

Information and communications technology

	2013	2014	2015	2016	EU (latest available)
The Digital Economy and Society Index (DESI) (composite index)	--	47.7	50.3	53.8	52.3
Fixed broadband subscriptions (lines) per 100 people	35.5	36.4	37.4	38.2	32.7
Fixed broadband Next Generation Access (NGA) coverage/availability (% of households)	74.8	0.81	0.81	--	0.71
Mobile broadband subscriptions per 100 population	54.7	64.8	71.2	73.3	83.9
Internet bandwidth (kb/s per user)	28.0	24.0	20.0	--	--

- Country average for "GDP per capita (EUR, PPS)" is calculated in real terms

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- The EU value is displayed as the value in the year that corresponds to the latest value of the indicator in a particular country

Regional - EU countries - Economic environment
Economic Performance

	EU	EU	US	EU
	2016	2016	2016	2001-2007
GDP per capita (EUR, PPS)	29,440	29,440	42,615	28,710
GDP growth (%)	1.9	1.9	1.6	2.3
Potential GDP growth (%)	1.3	1.3	2.1	2.1
Output gap (% of potential GDP)	-0.75	-0.75	-0.03	1.0
Unemployment Rate (%)	8.2	8.2	4.7	8.5
Unemployment Rate (%) - Y/Y change (% points)	-0.8	-0.8	-0.3	-0.26
Bank-interest rates to non-financial corporations (%)	1.4	1.4	1.8	3.9
Bank-interest rates to non-financial corporations (%) - Y/Y change (% points)	-0.21	-0.21	-1.4	-0.02
Investment rate (GFCF as % of GDP) - Total	19.7	19.7	19.6	21.4
Investment rate (GFCF as % of GDP) - Public	2.7	2.7	3.4	3.1
Investment rate (GFCF as % of GDP) - Private	17.0	17.0	16.2	18.3

General Sector Indicators

	2013	2014	2015	2016	EU (latest available)
Value added in Manufacture of computer, electronic and optical products (% of total)	--	--	--	--	0.7
Employment in Manufacture of computer, electronic and optical products (% of total)	--	--	--	--	0.6

Information and communications technology

	2013	2014	2015	2016	EU (latest available)
The Digital Economy and Society Index (DESI) (composite index)	--	43.2	46.3	49.4	52.3
Fixed broadband subscriptions (lines) per 100 people	29.8	31.0	32.2	32.7	32.7
Fixed broadband Next Generation Access (NGA) coverage/availability (% of households)	61.9	0.68	0.71	--	0.71
Mobile broadband subscriptions per 100 population	63.7	72.0	80.7	83.9	83.9
Internet bandwidth (kb/s per user)	--	--	--	--	--

- Country average for "GDP per capita (EUR, PPS)" is calculated in real terms

- EU value for "Bank-interest rates to non-financial corporations" corresponds to Euro Area average; Country average is the simple average between 2003 and 2007

- The EU value is displayed as the value in the year that corresponds to the latest value of the indicator in a particular country

Other indicators³

Key project characteristics

	Expected at PCR
Start of works	01.01.2018
End of works	31.12.2020
Project investment cost	360.00 MEUR
EIB/EFSI eligible investment mobilised	351.00 MEUR
External EFSI multiplier	2.34
External EIB (non-EFSI) multiplier	
Amount of private financing	201.00 MEUR
Quick start (% of expenditure during 2015-2018)	
Co-financing with national promotional banks	0.00 MEUR
Co-financing with structural funds (ESIF)	0.00 MEUR
Co-financing with other EU instruments (i.e. Horizon 2020, Connecting Europe Facility, etc)	9.00 MEUR
Energy efficiencies realised	0.00 MWh/a
Climate Action indicator	
Employment during construction - temporary jobs	2,200 person years
Employment during operation - new permanent jobs	340 FTE

³ For additional information on the EIB's assessment of the project's environmental and social aspects, please refer to the project's Environmental and Social Data Sheet (ESDS) published on the EIB website. The abbreviation PCR stands for Project Completion Report.