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CREDIT OPINION
21 August 2018

Update

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RATINGS

Siemens Aktiengesellschaft

Domicile	Germany
Long Term Rating	A1
Type	LT Issuer Rating - Fgn Curr
Outlook	Stable

Please see the ratings section at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

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Siemens Aktiengesellschaft

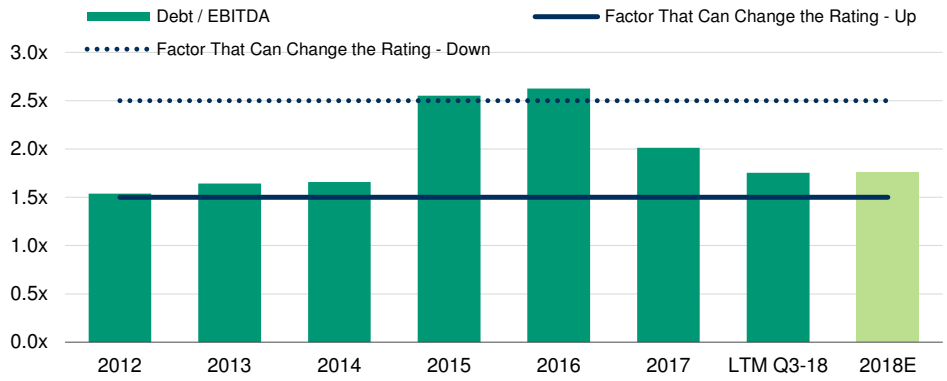
Update to credit analysis

Summary Rating Rationale

Siemens A1 ratings reflect (1) its diversified revenue base by product and geography; (2) leading market positions in a range of key industrial technologies and services with high barriers to entry; (3) the ability to consistently generate high positive free cash flow (FCF) during the cycle, sometimes offset by share buy back programmes reducing excess cash, (4) its improved profitability to above 10%, although still somewhat low compared with sector peers, and (5) a strong liquidity profile supported by a well-balanced debt maturity profile, sizeable cash and cash equivalents on hand as well as good access to the capital markets.

Siemens has reduced its (Moody's adjusted) leverage to 1.8x (LTM 06/18), which is in line with our expectations for the rating following elevated levels in 2015 and 2016. After the acquisition of DresserRand Inc. in 2015 the company started to manage its balance sheet more aggressively with debt-funded acquisitions and share buybacks, positioning leverage at the lower end of the capital structure. The recent debt repayment in Q318 of €3.1 billion coupled with lower pension debt (partially thanks to a pension fund contribution) helped to further Siemens balance sheet. Whilst the pace of operating margin improvements has stalled in FY18 due to restructuring costs and FX burden, the absolute level of operating profitability has improved over the last years. We also note an increasing share of minorities - 15% in the case of Siemens Healthineers, 41% for Siemens Gamensa Renewable Energy (SGRE) - that become more visible but not too material in terms of the overall EBITDA leakage estimated to be around €700 million per year in context of Siemens group EBITDA of about €11.2 billion (LTM 06/18).

Exhibit 1
Moody's expects adjusted gross leverage to remain within the guidance for A1 rating



Metric incorporates Moody's Standard Adjustments and represents Moody's forward view; not the view of the issuer.
Source: Moody's Investors Service

The rating also takes into account the growing asset size of Siemens' finance captive Siemens Financial Services (SFS), which has almost doubled in the last seven years to about €26.4 billion (as of FYE17). Asset growth in FY17 was almost flat suggesting that SFS has now reached a scale when it will not grow with the same rates as in the previous decade. The presence of SFS' activities adds risks typical for a vendor financing operation to the risks that a manufacturing company is usually exposed to. This is balanced by Siemens' ability to offer its customers bespoke financing solutions, which is differentiating Siemens from some of its competitors.

Credit Strengths

» New "Vision 2020+" strategy results in new, leaner corporate structure that can yield efficiencies and lower costs to improve profitability

» Float of Healthineers provides further future monetisation or strategic options for one of Siemens most valuable assets

» Global scale, multiple market leadership positions, broad customer and geographic diversification

» Strong liquidity profile, underpinned by diversity of internal and external sources

Credit Challenges

» Siemens has lost direct access to Healthineers cash - a significant source of group cash flow; more visible presence of structurally subordinated debt

» Structural challenges in certain divisions, such as Power and Gas and Process Industries and Drives, pose a constraint for group performance

» Growing asset size of Siemens Financial Services (SFS), its finance captive arm

Rating Outlook

The stable outlook reflects our expectation that Siemens retains its leading positions in the global power generation, industrial automation and medical equipment sectors. We also expect that even with cyclical pressures and periodic shareholder return initiatives, the company's operating performance and financial policies will remain supportive of an A1 rating over the long-term, as evidenced by EBITA margins of above 10% and debt to EBITDA of around 2.0x (Moody's adjusted). With leverage of 1.8x (as of June 30, 2018) and EBITA margins of 10.0% (both Moody's-adjusted), the rating is now more strongly positioned than it was at FYE15 and FYE16 when leverage was 2.6x and margins reached 9.1% (FY15) and 10.8% (FY16) respectively.

Factors that Could Lead to an Upgrade

» Reduced competitive pressures and revenue growth throughout Siemens' broad operations

» EBITA margins > 13%

» Adjusted gross debt / EBITDA < 1.5x

» Strong liquidity

Factors that Could Lead to a Downgrade

» Evidence of a sustained erosion in Siemens' competitive strength, profitability and cash flow generation

» A more aggressive financial policy, either through additional debt-funded acquisitions or share buybacks exceeding free cash flow generation

» Adjusted gross debt / EBITDA > 2.5x

» EBITA margin meaningfully below 10%

» Weak asset quality in Siemens' captive finance operations

Key Indicators

Exhibit 2
Siemens Aktiengesellschaft

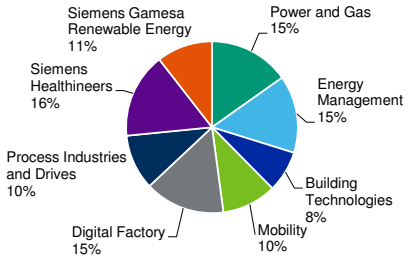
	9/30/2014	9/30/2015	9/30/2016	9/30/2017	6/30/2018(L)
Revenue (USD Billion)	$96.7	$85.9	$87.6	$90.9	$98.0
EBITA Margin	10.2%	9.1%	10.8%	11.7%	10.0%
EBITA / Interest Expense	17.1x	12.4x	14.9x	11.9x	12.0x
Debt / EBITDA	1.7x	2.6x	2.6x	2.0x	1.8x
Retained Cash Flow / Net Debt	72.7%	32.7%	34.2%	47.3%	54.8%
Free Cash Flow / Debt	10.8%	4.0%	4.6%	2.3%	3.9%

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.
Source: Moody's Financial Metrics™

Profile

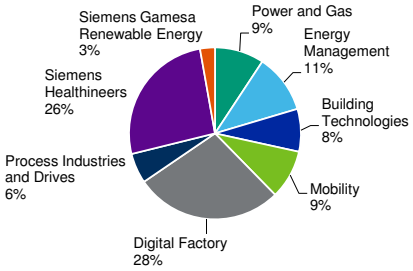
Siemens Aktiengesellschaft (Siemens) is one of the world's leading manufacturers of power generation equipment and energy management systems, industrial automation products and services, building technologies, transportation equipment, as well as medical equipment and diagnostics. Siemens generated revenues of €84.0 billion with its industrial businesses in the last twelve months to June 30, 2018. As of June 2018 end the order backlog of Siemens Group stood at €132 billion. In August 2018 the company disclosed its strategic update Vision 2020+ and a new corporate structure, which will be implemented until the end of March 2019. Once implemented, Siemens will be made up of three operating companies - "Gas and Power", "Smart Infrastructure" and "Digital Industries" - and what Siemens calls strategic companies, namely Siemens Healthineers, Siemens Gamesa Renewable Energy (SGRE) and prospectively Siemens Alstom, pending the antitrust clearance for the merger of Siemens' Mobility division with those of Alstom (Baa2 stable).

Exhibit 3
Siemens has a very broad industry diversification
Revenue split by segment, LTM Q3 2018



Source: Siemens quarterly statements

Exhibit 4
Digital Factory and Healthineers generate the highest margin
Operating profit (as defined by company) split by segment, LTM Q3 2018



Source: Siemens quarterly statements

Detailed Credit Considerations

IPO of Healthineers provided cash injection and further future monetisation options...

Siemens netted €4.2 billion from the share float of 15% of Siemens Healthineers. The listing of Healthineers as a separate independent legal entity allows Siemens to monetise its equity stake (market capitalisation of €37.8 billion as of August 10, Siemens stake is 85%) more easily. Siemens Healthineers continues to be funded by Siemens group internal sources (as of June 30, 2018 liabilities to Siemens group amounted to nearly €4.6 billion and receivables from Siemens group amounted to €1.3 billion).

... balanced against loss of direct access to Healthineers cash - a significant source of group cash flow - and presence of structurally subordinated debt

Siemens has lost direct access to the cash of Healthineers. This is important as Healthineers is currently the largest source of cash flow generation within Siemens' Industrial Business. Healthineers in FY17 accounted for 28.8% of free cash flow (Siemens definition; for Industrial Business, excluding Siemens Financial Services). Although Siemens continues to consolidate Healthineers given its control of Healthineers, it will no longer have direct access to Healthineers' cash except through dividend payments. Healthineers communicated a dividend payout ratio of 50-60% of net income, which would net Siemens almost €700 million in dividend income (assuming 60% payout and an 85% stake based on FY15-17 three-year net income averages), significantly less than the €2.15 billion of annual FCF. This situation will also lead to a cash leakage to third party shareholders of Healthineers.

Healthineers' gross financial debt as of June 30, 2018 amounted to around €4.7 billion (including liabilities to Siemens group of nearly €4.6 billion). As of June 30, 2018 SGRE reported gross financial debt of €1.6 billion. These figures compare to €30.6 billion of Siemens reported group debt (including SFS). So at the moment the preponderance of group debt is still firmly at the Siemens AG level, and that would remain the case even after the announced merger of Siemens Mobility with Alstom; but this represents a significant strategic step away from a one-tier debt structure, and further similar transactions might shift the balance to a point where we might feel it appropriate to notch down the Siemens AG unsecured issuer rating because of the aggregate level of debt at operating company level.

Global scale, multiple market leadership positions, broad customer and geographic diversification

Siemens' very large and diversified portfolio of industrial businesses spans over a broad range of customers, regions and end markets, with a majority of businesses having leading market positions on a global scale, supported by high barriers to entry. The main contributors to the group's industrial operating profits are the Digital Factory and Siemens Healthineers divisions, together representing 54% (LTM Q3 ending 30 June 2018) of the profits from its industrial operations. The market presence, reputation and consistent investments, in particular in R&D and more recently complemented by acquisitions, continue to translate in multiple market leading positions.

Siemens holds number 1 or 2 market positions in the areas of gas turbines, power transmission and distribution equipment and solutions. Its Digital Factory division holds leading market shares globally in programmable logic controllers, industrial switching and industrial software. This position has been further strengthened by the acquisitions of CD adapco (2016) and Mentor Graphics (2017). Following the integration of Mentor Graphics, Siemens is the first provider of a fully integrated digital enterprise software suite to design, simulate, build and analyse products and the respective production processes.

The Process Industries and Drives division is a global leader in inverters and controls, motors, generators and gear-boxes. Siemens Healthineers is one of the leading companies in imaging equipment and in-vitro diagnostics. Each of these divisions has multiple business units that compete against a range of strong companies worldwide.

Siemens' diverse range of businesses exhibit a combination of stability and volatility depending on (among other things) the end market exposure, the ticket size of orders as well as whether sales are linked to short or long-cycle businesses. Consequently, revenue and profitability in divisions such as Power and Gas or Mobility tends to be more volatile than for Digital Factory or Healthineers.

Structural challenges in certain divisions, such as Power and Gas and Process Industries and Drives, pose a constraint for group performance ...

Siemens has announced plans to reduce its global workforce by 6,900 in its Power and Gas (PG) as well as Process Industries and Drives (PD) divisions owing to the structural challenges the company faces in each of these divisions. PG in particular is suffering from global overcapacities for gas turbines and PD from lower demand and increased competition from low-cost producers. In order to offset input price inflation, competitiveness and to achieve productivity gains, the company targets annual productivity savings of between 3% and 5%.

In the past, Siemens had a long track record in terms of "execution" challenges, particulary in activities related to Energy Management and Mobility and as evidenced by sizeable write offs and restructuring charges. These charges had been a drag on operating profitability and cash flow generation. However, Siemens has responded to these charges by focusing on operational excellence and has not recorded any significant charges since 2015.

... against implementation of new corporate structure with less complexity and potential for lower cost base

As part of Siemens' new financial framework, it has set up an industrial business EBITA margin target of 11%-15% through the cycle. Previously, Siemens had an operating margin target for its industrial business (IB) of 11%-12%, which it has now achieved. The new corporate structure will result in a leaner company and less organisational complexity, from which Siemens expects a more agile company. We anticipate that these changes will result in a lower cost base and will thus contribute in large part to the higher margin target.

Apart from the new EBITA margin ranges, Siemens will retain its capital structure target of up to 1.0x industrial net debt/EBITDA, its dividend payout ratio of 40%-60% (with net income after minorities as the basis) and ROCE of 15%-20%. In addition, Siemens introduces a cash conversion target and now has an absolute revenue growth target of 4%-5% rather than growing stronger than most relevant competitors as was the case previously (and against actual annual revenue growth of around 2.0% over the last three years).

Strong R&D capabilities, complemented by acquisitions funded through asset disposals

Siemens has a strong commitment to research and development (R&D) as witnessed by the sizeable annual R&D spent of around €5.2 billion in FY17 (an increase of 9.1% against FY16), or 6.2% of sales. Siemens is amongst the largest patent application and grant filers in Europe as well as globally. The group held approximately 63,000 patents and employed, on average, 37,800 staff in R&D in FY17.

In order to complement its internal research and product development, Siemens has a long history of strategically complementing its product and service portfolio with acquisitions. An important source of funding for acquisitions have been disposals of non-core activities, such as the white goods joint venture BSH (in 2015) the sale of the hearing aid business Sivantos (in 2015) and the divestment of (loss-making) IT services company Unify. The group's portfolio has sufficient depth and breadth to allow for further future asset disposals and we anticipate Siemens to continue to complement the funding of acquisitions through such measures.

Growing asset size of finance captive

Siemens Financial Services (SFS) is one of nine divisions and responsible for managing a portfolio of €26.4 billion of assets, including project and commercial finance, equity investments and financial leases. SFS' activities support the other eight industrial business-related divisions and hence are an integral part of Siemens' strategy. Despite the high growth rates of SFS' asset size in the last years (2010: €12.5 billion, 2017: €26.4 billion; compared to revenues for the Siemens group 2010: €69.0 billion, 2017: €83.0 billion), growth of SFS' assets in FY17 was more in line with revenue growth of the group, in the low to mid single digit range (%).

The counterparties of SFS are strictly other businesses and are not consumer-related. This also holds true for Siemens Bank GmbH (A1 stable), a wholly-owned bank that is regulated. SFS benefits from its access to Siemens global deal flow and to sector specialists with technical know how. Funding is obtained through Siemens treasury operations, and is maturity and currency matched. As part of its mandate, SFS is engaged in long-term project finance transactions in line with Siemens' project business. Although the life of some projects, especially those related to infrastructure and energy projects, is long, SFS is engaged in the early years (especially during the construction phase) of the overall life span of a project to facilitate the respective financing. Consequently, SFS may not hold the exposure over the full project life cycle. Therefore we expect average maturities for SFS to be between three and four years and generally believe the portfolio is well-diversified and with low defaults.

We monitor SFS' asset growth, gearing and income before income taxes to assess any potential impact its activities might have on the industrial business of Siemens. Under the new corporate structure SFS along with its Business and Real Estate Services will be bundled into the unit Service Companies. Siemens will continue to publish financial headline figures for SFS allowing to assess the leverage of Siemens' captive finance operations.

Liquidity Analysis

Strong liquidity profile, underpinned by diverse internal and external sources

Siemens' liquidity is strong. For the quarter ending June 30, 2018 the company reported nearly €7.1 billion of cash and cash equivalents and almost €1.2 billion available-for-sale financial assets, which was supported with strong funds from operations (Moody's definition) amounting to around €9.4 billion for the last twelve months ending June 30, 2018, comparing to an average of €8.4 billion between FY13 and FY17.

Among the external liquidity sources are, a €4.0 billion syndicated credit facility (maturing on June 25, 2021), a $3.0 billion syndicated credit facility maturing on September 27, 2020 and a €450 million revolving bilateral credit facility maturing in September 2018. As of September 2017 the equivalent of €7.0 billion of lines of credit were unused.

The multiple sources of liquidity allow Siemens to cover cash uses such as working cash (approximated as 3% of annual sales), working capital movements, capital expenditures (5-year average: €3.0 billion), dividend payments (5-year average: €2.8 billion) and share buy-backs (5-year average: €1.2 billion). Siemens has between February 2016 and July 2018 bought back shares worth €2.2 billion under its current €3.0 billion buyback programme. We expect Siemens to retain financial flexibility in particular with regards to the commitment to its own capital structure target of (Siemens defined) industrial net debt to EBITDA below 1.0x (FYE17: 0.9x).

Rating Methodology and Scorecard Factors

Mapping to Moody's Global Manufacturing Methodology

Utilizing the rating factors identified in our Global Manufacturing rating methodology, Siemens' rating factors indicate an A2 grid indicated outcome, one notch below the assigned rating. While Siemens' scale and financial policy point to Aaa/Aa outcomes, the company scores weaker on operating margins, leverage and free cash flow-based metrics. Moody's 12-18 months forward view of Siemens' financial profile suggests a grid indicated outcome of A1, reflecting our expectation of modest improvement in operating performance, cash generation and a conservative financial policy over the rating horizon evidenced by debt/EBITDA moving to below 2.0x.

Exhibit 5

Methodology Grid Siemens Aktiengesellschaft

Manufacturing Industry Grid [1][2]	Current LTM 6/30/2018		Moody's 12-18 Month Forward View As of 8/9/2018 [3]	
Factor 1 : Business Profile (20%)	**Measure**	**Score**	**Measure**	**Score**
a) Business Profile	A	A	A	A
Factor 2 : Scale (20%)				
a) Revenue (USD Billion)	$98.0	Aaa	$95 - $105	Aaa
Factor 3 : Profitability (10%)				
a) EBITA Margin	10.0%	Ba	10% - 12%	Baa
Factor 4 : Coverage and Leverage (40%)				
a) EBITA / Interest Expense	12.0x	A	14x - 16x	Aaa
b) Debt / EBITDA	1.8x	Baa	1.5x - 2.5x	Baa
c) Retained Cash Flow / Net Debt	54.8%	Aa	50% - 70%	Aaa
d) Free Cash Flow / Debt	3.9%	B	3% - 10%	Ba
Factor 5 : Financial Policy (10%)				
a) Financial Policy	Aa	Aa	Aa	Aa
Rating:				
a) Indicated Rating from Grid		A2		A1
b) Actual Rating Assigned				A1

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.
[2] As of 6/30/2018(L);
[3] This represents Moody's forward view; not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures
Source: Moody's Financial Metrics™

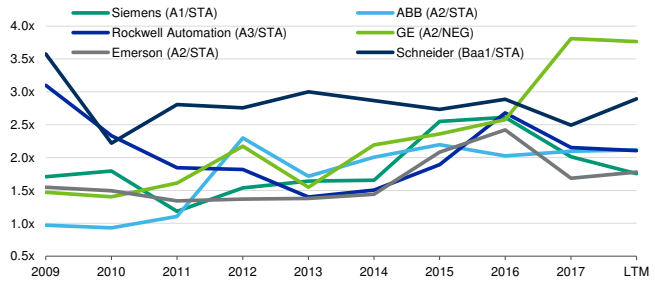
Appendix

Peers

Siemens' main peers include General Electric Company (A2 Negative), Emerson Electric Company (A2 Stable), ABB Ltd. (A2 Stable), Rockwell Automation (A3 Stable) and Schneider Electric SE (Baa1 Stable).

Exhibit 6

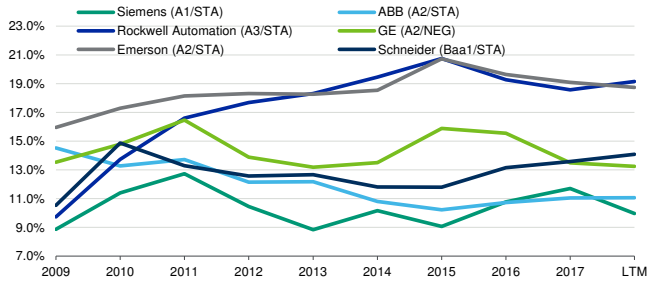
Siemens' leverage is on the lower end of peers



Source: Moody's Financial Metrics™

Exhibit 7

Siemens' EBITA margins are on the lower end of its peer group



Source: Moody's Financial Metrics™

Exhibit 8

Moody's adjusts for SFS debt

Siemens' adjusted debt breakdown

(in EUR millions)	FYE Sep-14	FYE Sep-15	FYE Sep-16	FYE Sep-17	LTM Jun-18
Total Unadjusted Debt	**22,663**	**31,746**	**32,900**	**33,668**	**30,573**
Pension Adjustments	8,537	9,311	13,195	9,082	6,988
Operating Lease Adjustments	3,315	3,354	3,474	3,726	3,726
Hybrid Securities Adjustments	(992)	(995)	-	-	-
Other Standard Adjustments	(17,663)	(19,916)	(20,711)	(21,616)	(21,616)
Total Adjusted Debt	**15,860**	**23,501**	**28,858**	**24,860**	**19,671**

Source: Moody's Financial Metrics™

Exhibit 9

Siemens Aktiengesellschaft

Selected Historic Moody's Adjusted Financial Data

EUR Millions	FYE Sep-14	FYE Sep-15	FYE Sep-16	FYE Sep-17	LTM Jun-18
INCOME STATEMENT					
Revenue/Sales	71,227	74,781	78,820	82,275	82,104
EBITDA	9,571	9,213	11,048	12,346	11,212
EBITA	7,234	6,779	8,495	9,634	8,180
EBIT	6,504	6,002	7,563	8,353	6,899
Interest Expense	422	545	569	811	684
BALANCE SHEET					
Cash & Cash Equivalents	8,938	11,132	11,897	9,617	8,288
Total Debt	15,860	23,501	28,858	24,860	19,671
CASH FLOW					
Funds from Operations (FFO)	7,692	6,913	8,872	10,316	9,396
Cash Flow from Operations (CFO)	7,184	6,713	7,586	7,194	7,557
Capital Expenditures (CAPEX)	2,814	2,907	3,205	3,526	3,630
Dividends	2,658	2,873	3,063	3,101	3,163
Retained Cash Flow (RCF)	5,034	4,040	5,809	7,215	6,233
RCF / Debt	31.7%	17.2%	20.1%	29.0%	31.7%
Free Cash Flow (FCF)	1,712	933	1,318	567	764
FCF / Debt	10.8%	4.0%	4.6%	2.3%	3.9%
PROFITABILITY					
% Change in Sales (YoY)	-3.0%	5.0%	5.4%	4.4%	0.4%
EBIT Margin %	9.1%	8.0%	9.6%	10.2%	8.4%
EBITA Margin %	10.2%	9.1%	10.8%	11.7%	10.0%
EBITDA Margin %	13.4%	12.3%	14.0%	15.0%	13.7%
INTEREST COVERAGE					
EBIT / Interest Expense	15.4x	11.0x	13.3x	10.3x	10.1x
EBITA / Interest Expense	17.1x	12.4x	14.9x	11.9x	12.0x
EBITDA / Interest Expense	22.7x	16.9x	19.4x	15.2x	16.4x
LEVERAGE					
Debt / EBITDA	1.7x	2.6x	2.6x	2.0x	1.8x
Net Debt / EBITDA	0.7x	1.3x	1.5x	1.2x	1.0x

Source: Moody's Financial Metrics™

Ratings

Exhibit 10

Category	Moody's Rating
SIEMENS AKTIENGESELLSCHAFT	
Outlook	Stable
Issuer Rating	A1
Senior Unsecured MTN	(P)A1
Commercial Paper	P-1
Other Short Term	(P)P-1
SIEMENS BANK GMBH	
Outlook	Stable
Issuer Rating	A1
ST Issuer Rating	P-1
SIEMENS FINANCIERINGSMAATSCHAPPIJ N.V.	
Outlook	Stable
Bkd Senior Unsecured	A1
Bkd Commercial Paper	P-1
Bkd Other Short Term	(P)P-1
SIEMENS CAPITAL COMPANY, LLC	
Outlook	Stable
Bkd Senior Unsecured	A1
Bkd Commercial Paper	P-1
Bkd Other Short Term	(P)P-1

Source: Moody's Investors Service

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