

H1 2019 Activity

Sustained Sales Growth Combined with Step-up in Margin

Paris, 30 July 2019



Agenda

- Group transformation accelerating and delivering
- Sustained sales growth
- Step-up in margin
- Very active business development
- 2019 outlook confirmed



Group Transformation Accelerating and Delivering

Benoît Potier
Chairman & Chief Executive Officer



Very Solid Performance in H1 2019

Operations

Balance Sheet

Sustained sales growth⁽¹⁾

+7.8%

+4.9% Comparable⁽¹⁾

Step-up in margin

+70bps(2)

ROCE ramping up +30bps⁽⁴⁾

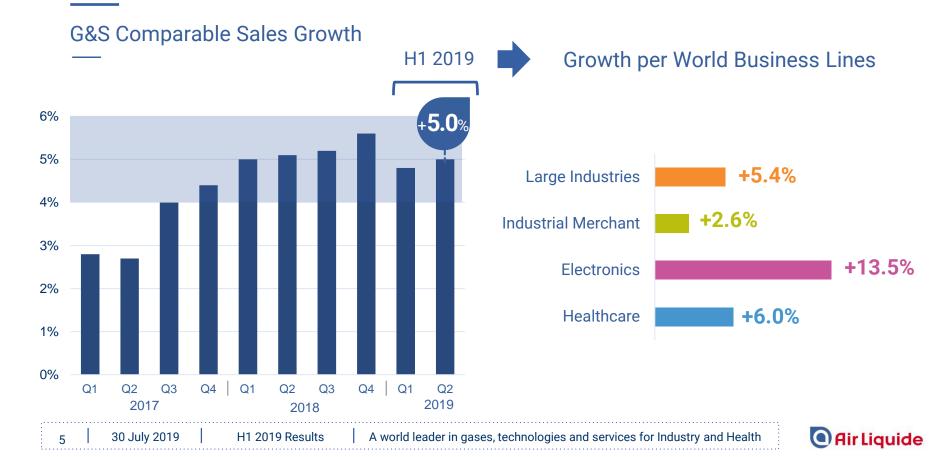
Improved gearing at **71**%⁽⁵⁾

Recurring Net Profit growth +12%(3)

- (1) Group and G&S sales growth in H1 19
- (2) Operating Income Recurring on Sales; including +10bps from IFRS16; no energy impact in H1 2019
- (3) Excluding exceptional items: Fujian in 2019 and financial gain in 2018
- (4) Excluding Fujian exceptional impact in H1 2019; see reconciliation in appendix of Activity Report
- (5) Compared to June 2018 and adjusted for dividend seasonality; excluding lease liabilities (IFRS16) A world leader in gases, technologies and services for Industry and Health



Sustained Sales Growth from all WBLs



Step-up in Margin



Price/Mix



Efficiencies

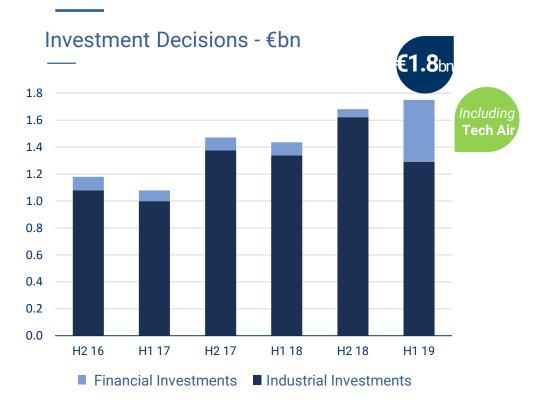


Portfolio Management

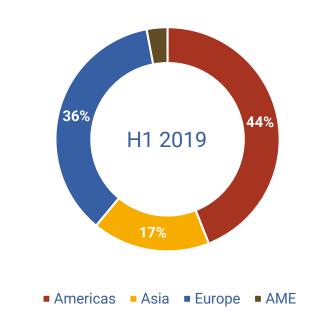


(1) Operating Income Recurring on Sales; including +10bps from IFRS16; no energy impact in H1 2019

Very Active Investment Decisions



Split by Geography (excluding Tech Air)





Group Transformation Accelerating and Delivering

High level of signing



 Deployment of transformation projects

Portfolio management

 S&P outlook revised to Positive



Climate Objectives



Investment alignment



Enhanced innovation



2019 H1 Performance

Fabienne Lecorvaisier
Executive Vice President &
Chief Financial Officer



Highlights

- Sustained comparable sales growth of +5% in Q2
- Step-up in OIR margin
- Solid cash flow
- Increased ROCE
- Very active business development



Sustained Sales Growth

Sales in €m	H1 18	H1 19	H1 19/18 Comparable	H1 19/18 As published	Q2 19/18 Comparable
Gas & Services	9,769	10,536	+4.9%	+7.8%	+5.0%
Engineering & Construction	180	176	-3.8%	-2.2%	-11.7%
Global Markets & Technologies	213	240	+10.7%	+12.6%	+6.7%
Group Total	10,162	10,952	+4.9%	+7.8%	+4.7%

• +2.5% FX Impact in H1

Neutral Energy Impact in H1



Robust Markets Through H2 2019

Markets



Metal Fab.

Construction Energy

Food & Pharma

Techno & Research

Integrated Circuit





- High demand from Oil & Gas in Europe
- Active projects signing
- Softer markets due to low investments in the short-term
- Solid consumption-related sectors
- Specific dynamic in China
- Strong Carrier Gases & Advanced Materials
- Slightly lower E&I sales growth





Confirmed Growth Levers in Q2

G&S comparable sales growth **WBLs** Main Geographies contributing Industrial +2% **Asia, Europe, Middle East** Merchant Large Industries +6% Asia, Europe +7% Healthcare **Europe, Americas** +13% **Electronics Asia, Americas**



Very Solid Level of Base Business

—— G&S quarterly growth analysis



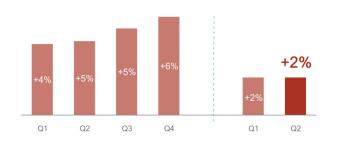
(1) Comparable growth based on 2016 adjusted sales



Q2 - Steady Americas and Strong Europe

G&S comparable sales growth

Americas - Solid HC, Pricing in IM



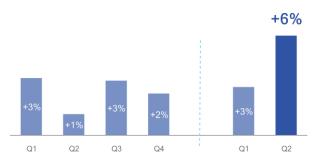
Sales H1 2019

€4,217m



- strong pricing IM
 - contrasted end markets
- solid U.S.
- HC - strong HHC in South America
- still solid E&I • EL
 - high Carrier Gases

Europe – All WBLs Driving Growth



Sales H1 2019

€3,611m

- **high H**₂ for refining in Benelux • 11
 - Ramp-Ups in Turkey and Kazakhstan
- high pricing • IM
 - positive underlying volumes
- high organic growth in HHC



Q2 – High Growth in Asia, Dynamic IM in AME

G&S comparable sales growth

Asia – Strong LI and EL



Sales H1 2019

€2,405m

- O₂ Ramp-Ups in China for Chemicals
- strong cylinder volumes in China - solid growth in South East Asia
 - strong growth across the region
- >+15% in Carrier Gases and Advanced **Materials**
 - high E&I

AME - Major LI Turnaround



Sales H1 2019

€303m

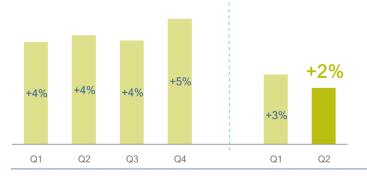
- major turnaround in South Africa
- continuous high growth in Middle-East, **Egypt and India**



Q2 - Resilient IM, High Growth in LI

—— G&S comparable sales growth

Industrial Merchant - Solid Performance



Sales H1 2019

€4,827m

- Stronger pricing at +4.1%
- Contrasted end markets:
 - Strong Food & Pharma
 - Flat automotive
 - Construction and Metal Fab
 - . lower in the U.S.
 - . solid in Europe and Canada
 - . strong in China

Large Industries – High contribution from Ramp-Ups



Sales H1 2019

€2,904m

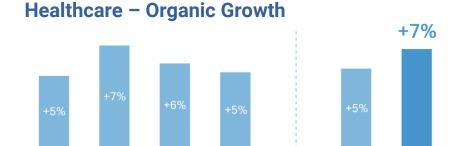
- Strong Oil & Gas in Benelux with high H₂ volumes
- Chemicals driven by Ramp-ups in China
- Softer Metals in Europe



Q2 - Strong HC, High Growth in EL

—— G&S comparable sales growth

Q3



Q4

Sales H1 2019

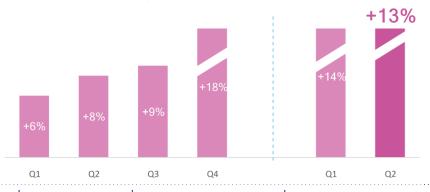
€1,821m

Q2

Q1

- Strong HHC across all of Europe, diabetes therapy in Nordics
- Solid Medical Gases in Americas

Electronics – High Carrier Gases & Advanced Materials



Sales H1 2019

€984m

- >+13% growth in Carrier Gases;2 Start-Ups
- Double digit growth in Advanced Materials
- Solid sales to Integrated Circuit Memory market
- Strong FPD in China

Air Liquide

Q1

Q2

+70 bps OIR Margin improvement

In €m	H1 18	H1 19	H1 19/18
Revenue	10,162	10,952	+7.8%
Purchases	(3,949)	(4,230)	+7.1%
Personnel expenses	(2,041)	(2,184)	+6.9%
Other net income and expenses	(1,676)	(1,661)	-0.9%
Operating profit before depreciation	2,496	2,878	+15.3%
Depreciation and amortization	(879)	(1,064)	+21.1%
Operating Income Recurring	1,617	1,814	+12.2%
Group OIR margin	15.9%	16.6%	+70bps
G&S OIR margin	17.8%	18.4%	+60bps

H1 2019 - including +10bps from IFRS 16 - no Energy impact



Pro-active Management of Pricing and Product Mix



- Pricing aligned with cost inflation
- Focus of sales teams
- Leveraging competitive position on Helium market
- Priority to added value services and products
 - √ Gas applications in China
 - ✓ Inteliox cylinders in US



€197m Delivered Efficiencies in H1 19

Accelerated momentum



Continuous improvement

14k employees trained out of 30k targeted



Investment in efficiencies

+63% vs. H1 2018



Transformation



• Closing of PG filling centers, logistics



- Leveraging on 4 SIO centers
- Business Support Centers extended Asia & Europe
- Mutualization of WBLs technical teams Europe, Japan

Optimization



- 3,000 Airgas trucks with on-board computers
- Big data from LI production to IM logistics Italy



- Argon production & supply chain US, Canada, France, Vietnam
- Optimization of technicians' time HHC Europe



Continuous Portfolio Management

Divestitures over last 2 years ———

Airgas

- Refrigerant activity
- Onsite safety services
- Ophthalmic protection equipment
- 1 active project





- 2 active projects

China

- Fujian assets
- IM JV swap

- Focus on core business
- Densification of operations: swap, bolt-on acquisitions
- Accretive impact on margin
- Contribution to ROCE improvement



Strong Recurring Net Profit

In €m	H1 18	H1 19	H1 19/18
Revenue	10,162	10,952	+7.8%
Operating Income Recurring	1,617	1,814	+12.2%
Other non-recurring operating income & expenses	(30)	(86)* *	
Operating income	1,587	1,728	
Net financial costs and other net financial expenses	(145)**	(239)	
Income taxes	(360)	(385)	
Tax rate	24.9%	25.9%	
Share of profit of associates	3	3	+12
Minority interests	46	48	
Net profit (Group share)	1,040	1,059	+1.8%
Earnings per share (in €)	2.44	2.48	+1.6%

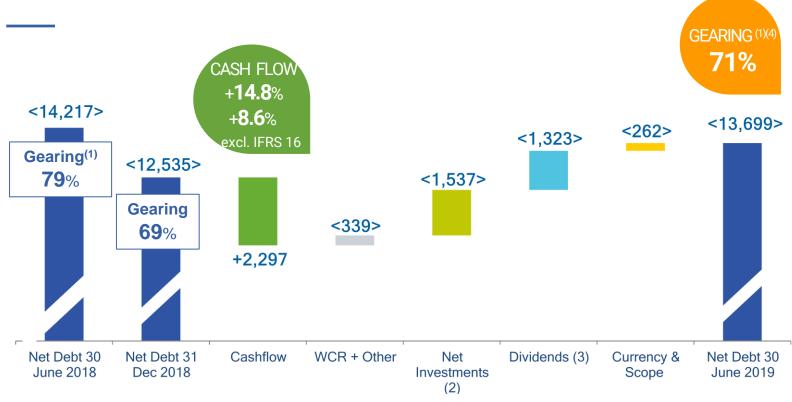
* Recurring Net profit

Excluding one-offs:

- Fujian in 2019
- financial gain in 2018



Solid Cash Flow

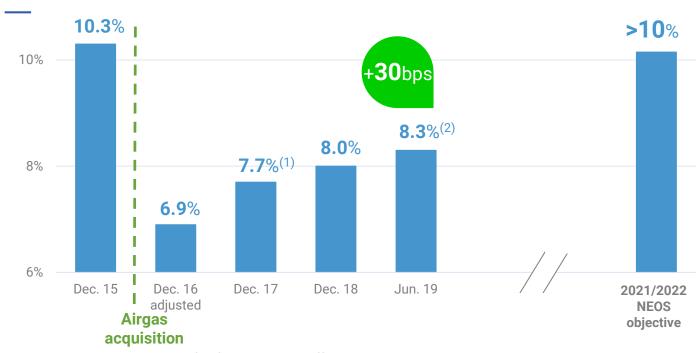


- (1) June 30 gearings adjusted for dividend seasonality
- (2) Including acquisitions, transactions with minority shareholders, net of divestitures
- (3) Including share purchases and capital increases
- (4) Net debt excluding lease commitments (IFRS 16)



ROCE Improvement



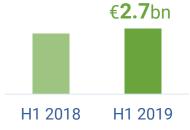


- (1) Excluding positive impact on 2017 net profit of non-cash one-off items
- (2) Excluding Fujian exceptional impact in H1 2019; see reconciliation in appendix of Activity Report



Very Active Business Development

Investment Opportunities⁽¹⁾ 12-month portfolio



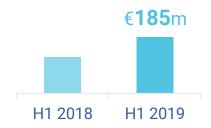
- Well-balanced by geography
- ~€20m average project size
- >1/3 of projects linked to climate objectives

H1 2019 Investment Decisions⁽¹⁾



- **High** level of signings
 - 2 on U.S. pipeline network
 - H₂ energy
 - Biomethane, Norway
- Acquisitions:
 - Tech Air, major IM U.S. distributor
 - Medidis in HHC Netherlands

H1 2019 Start-up/Ramp-up Sales Growth Contribution



- 5 Start-Ups in EL in Asia
- 1 CO₂ purification plant in the U.S., circular economy

(1) See definitions in appendix



Confirmed Start-Ups Forecast

Major Start-Ups



Sales growth contribution - FY 2019

~€**300**m

Steady Backlog >€2bn



Yearly Sales Backlog after full Ramp-ups

Note: T/O = Take Over

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H1 2019 Results

A world leader in gases, technologies and services for Industry and Health



2019 Outlook

_____ H1 2019 ____ 2019 ____

- Sustained sales growth
- Step-up in margin
- ROCE improvement
- Very active business development

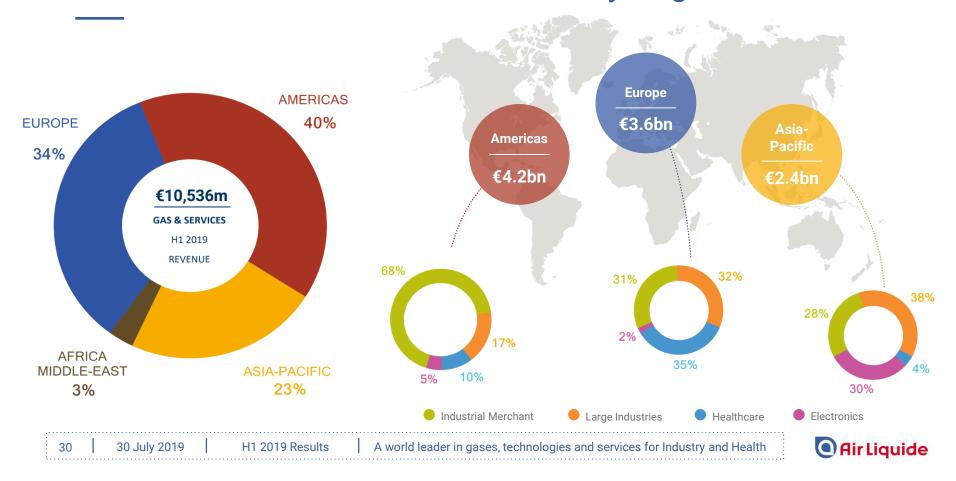
"Assuming a comparable environment, Air Liquide is confident in its ability to deliver net profit growth in 2019, calculated at constant exchange rate"



H1 2019 Appendix



H1 2019 G&S Revenue Breakdown by Region



Americas

Q2 Gas & Services Sales: €2,148m

INDUSTRIAL MERCHANT

- Strong pricing +4.8%
- Helium contributing to growth
- Contrasted end-markets:
- strong Food & Pharma
- lower Construction and Metal Fab in U.S., remaining solid in Canada

LARGE INDUSTRIES

- **High O**₂ volumes in **U.S.**
- Strong cogen in U.S. and Canada
- Start-up of T/O in Mexico
- Robust Metals in Canada

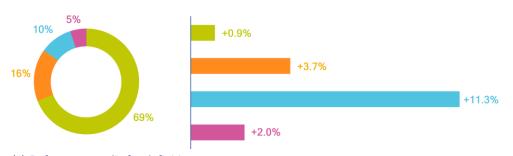
HEALTHCARE

- Very solid medical gases in the U.S. for Proximity care
- Strong HHC in South America
- Very limited M&A

ELECTRONICS

- High growth in Carrier Gases
- Still solid E&I

Q2 19/18 Comparable growth: +2.4%



In €m	H1 2019	Growth as published	Comparable growth ⁽¹⁾
Sales	4,217	+8.9%	+2.4%
OIR	730	+14.8%	
OIR/Sales	17.3%	+90bps	+100bps

(1) Refer to appendix for definitions

(2) Excluding energy impact

Note: T/O = Take Over

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Europe

Q2 Gas & Services Sales: €1,782m

INDUSTRIAL MERCHANT

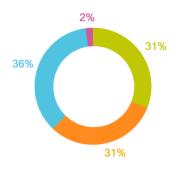
- Further accelerated pricing at +3.8%
- Positive underlying volumes
- All major geographies contributing to growth

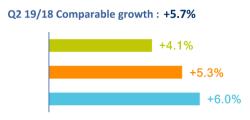
LARGE INDUSTRIES

- **High H**₂ sales for **refining** in Benelux
- Softer 0₂ volumes from steel customers
- Ramp-Ups in Turkey and Kazakhstan

HEALTHCARE

- High organic growth in HHC with strong diabetes activity in Nordics
- Very solid Hygiene
- Limited M&A





In €m	H1 2019	Growth as published	Comparable growth ⁽¹⁾
Sales	3,611	+4.2%	+4.2%
OIR	688	+5.6%	
OIR/Sales	19.0%	+20bps	+30bps ⁽²⁾

(1) Refer to appendix for definitions

30 July 2019

(2) Excluding energy impact

Asia-Pacific

Q2 Gas & Services Sales: €1,211m

INDUSTRIAL MERCHANT

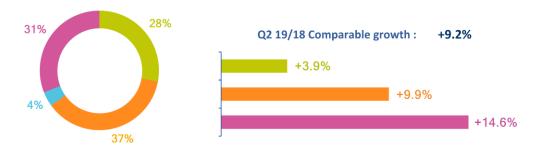
- Strong cylinder volumes in China
- High helium volume and price across the region
- · Solid activity in South East Asia

LARGE INDUSTRIES

- O₂ Ramp-Ups in China
- High volumes for Chemicals

ELECTRONICS

- Strong growth in China, Korea, Singapore, Taiwan and very solid Japan
- >+15% sales growth in Carrier Gases and Advanced Materials
- High E&I sales, in particular in Singapore and China



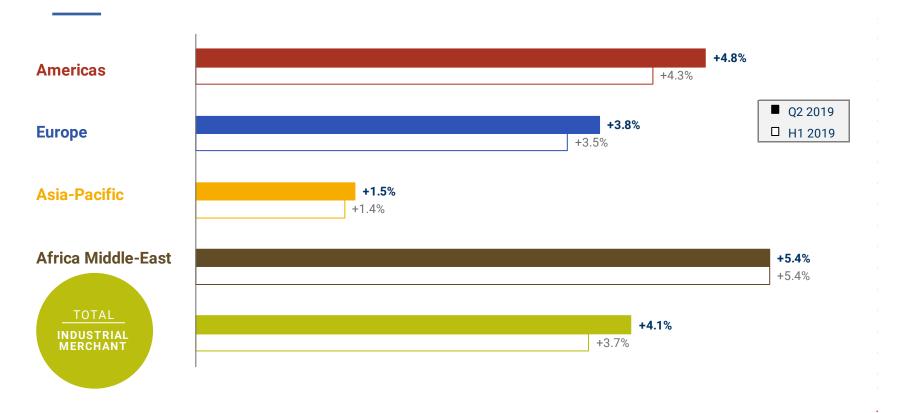
In €m	H1 2019	Growth as published	Comparable growth ⁽¹⁾
Sales	2,405	+14.1%	+11.1%
OIR	473	+16.2%	
OIR/Sales	19.7%	+40bps	+40bps

- (1) Refer to appendix for definitions
- (2) Excluding energy impact



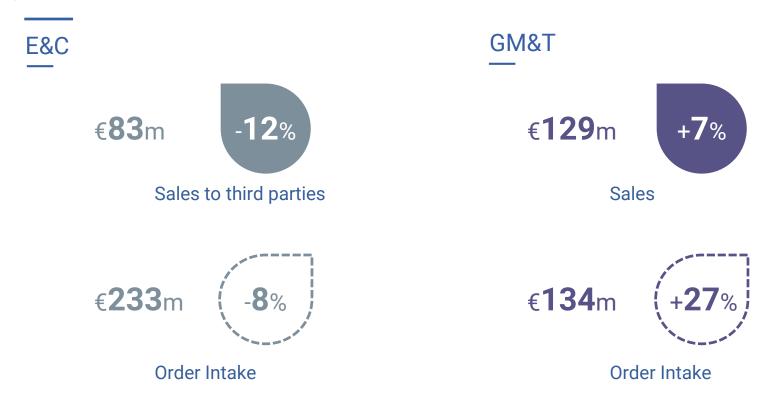


Industrial Merchant Pricing



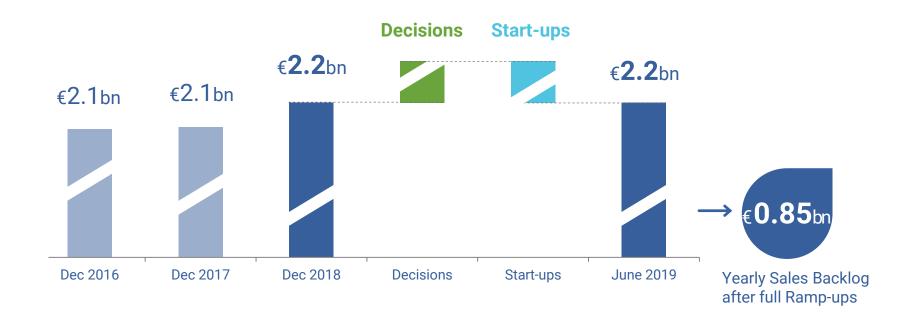


Q2 2019 – E&C and GM&T Activities





Steady Backlog > €2bn



See definitions in appendix

36 30 July 2019 H1 2019 Results A world leader in gases, technologies and services for Industry and Health



Consolidated P&L

In €m	H1 2018	H1 2019	H1 2019 excluding IFRS16
Revenue	10,162	10,952	10,952
Cost of goods	(7,666)	(8,074)	(8,204)
Operating income recurring before depreciation	2,496	2,878	2,748
Depreciation and amortization expenses	(879)	(1,064)	(945)
Operating Income Recurring	1,617	1,814	1,803
Net non-recurring operating income	(30)	(86)	(85)
Operating income	1,587	1,728	1,718
Net finance costs & other net financial expenses	(145)	(239)	(218)
Income taxes	(359)	(385)	(388)
Share of profit of associates	3	3	3
Profit for the period	1,086	1,107	1,115
- Minority Interest	46	48	48
- Net Profit (Group share)	1,040	1,059	1,067
Basic earnings per share (in €)	2.44	2.48	2.50



Consolidated Balance Sheet Simplified - In €m

ASSETS	31/12/2018	30/06/2019
Goodwill	13,345	13,755
Fixed assets	20,847	22,446
Other non-current assets *	1,026	1,116
Total non-current assets	35,218	37,317
Inventories & work in-progress	1,460	1,567
Trade receivables & other current assets	3,533	3,591
Cash and cash equivalents *	1,770	1,083
Total current assets	6,763	6,241
Total assets	41,981	43,558

EQUITY AND LIABILITIES	31/12/2018	30/06/2019
Shareholders' equity	17,783	17,528
Minority interests	424	438
Total equity	18,207	17,966
Provisions & deferred tax liabilities	4,367	4,452
Non-current borrowings	11,702	11,124
Non-current lease liabilities	8	1,105
Other non-current liabilities *	268	410
Total equity and non current liabilities	34,552	35,057
Provisions	325	278
Trade payables & other current liabilities	4,526	4,308
Current lease liabilties	5	235
Current borrowings*	2,573	3,680
Total liabilities	7,429	8,501
Total equity and liabilities	41,981	43,558

Net debt
 12,535
 13,699 (1)

 Net debt ratio
 68.8%
 70.7% (1)

Air Liquide

^{*} Including fair value of derivatives

⁽¹⁾ Excluding lease liabilities (IFRS16)

⁽²⁾ Adjusted for dividend seasonality

Cash Flow Statement

In €m	H1 2018	H1 2019	H1 2019 excluding IFRS 16
Funds provided by operations	2,000	2,297	2,172
Changes in Working Capital	(196)	(331)	(331)
Other items	(34)	(8)	(8)
Net cash from operating activities	1,770	1,958	1,833
Purchases of PPE* and intangible assets	(1,096)	(1,201)	(1,201)
Purchases of financial assets and the impact of changes in scope	(75)	(446)	(446)
Proceeds from sale of PPE*, intangible and financial assets	38	112	112
Net cash in investing activities	(1,133)	(1,535)	(1,535)
Distribution	(1,213)	(1,198)	(1,198)
Increase in capital stock	36	23	23
Purchase of treasury shares	(63)	(149)	(149)
Transactions with minority shareholders	0	(2)	(2)
Net financial interest paid	(79)	(188)	(173)
Increase (decrease) in borrowings	220	400	510
Effect of exchange rate changes and change in scope of consolidation	30	25	25
Net Increase (decrease) in net cash and cash equivalents	(432)	(666)	(666)
Net cash and cash equivalents at the end of the period	1,084	883	883

^{*} PPE: Property, plant and equipment.



Impact of Currency and Energy on G&S Revenue

Currency	In €m	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q2 19
	€/USD	(258)	(147)	+15	+55	+138	+107
	€/CNY	(26)	(4)	(5)	(7)	+10	(5)
	€/JP¥	(24)	(17)	+1	+8	+16	+14
	Others	(105)	(90)	(72)	(57)	(23)	(13)
	Total currency impact	(413)	(258)	(61)	(1)	+141	+103
	Average rate	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q2 19
	€/USD	1.23	1.19	1.16	1.14	1.14	1.12
	€/CNY	7.81	7.60	7.92	7.89	7.66	7.67
	€/JP¥	133.1	130.1	129.6	128.8	125.1	123.5
Natural Gas	In €m						
	Natural Gas Impact	(14)	+30	+82	+87	+5	(36)
Electricity	In €m						
	Electricity Impact	(2)	+21	+36	+38	+27	+7



Revenue Analysis by Quarter and by Business Line

Sales in €m	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q2 19	Q2 19/18 as published	Q2 19/18 comparable
Large Industries	1,365	1,353	1,454	1,513	1,490	1,414	+4.4%	+5.7%
Industrial Merchant	2,208	2,293	2,312	2,368	2,365	2,462	+7.4%	+2.3%
Healthcare	850	864	862	910	897	924	+6.9%	+6.7%
Electronics	408	428	438	481	485	499	+16.4%	+13.2%
Gas & Services	4,831	4,938	5,066	5,272	5,237	5,299	+7.3%	+5.0%
Engineering & Construction	85	95	105	145	93	83	-11.0%	-11.7%
Global Markets & Technologies	94	119	100	161	111	129	+8.3%	+6.7%
Group Total	5,010	5,152	5,271	5,578	5,441	5,511	+7.0%	+4.7%



Revenue Analysis by Quarter and by Geography

Sales in €m	Q1 18	Q2 18	Q3 18	Q4 18	Q1 19	Q2 19	Q2 19/18 as published	Q2 19/18 comparable
Americas	1,901	1,973	2,017	2,091	2,069	2,148	+8.8%	+2.4%
Europe	1,753	1,711	1,779	1,868	1,829	1,782	+4.1%	+5.7%
Asia-Pacific	1,016	1,091	1,099	1,153	1,194	1,211	+10.9%	+9.2%
Middle-East, Africa	161	163	171	160	145	158	-3.0%	+0.1%
Gas & Services	4,831	4,938	5,066	5,272	5,237	5,299	+7.3%	+5.0%
Engineering & Construction	85	95	105	145	93	83	-11.0%	-11.7%
Global Markets & Technologies	94	119	100	161	111	129	+8.3%	+6.7%
Group Total	5,010	5,152	5,271	5,578	5,441	5,511	+7.0%	+4.7%



G&S Revenue Growth by Quarter and by Impact

	Growth as published	Natural Gas	Electricity	Currency	Significant perimeter	Comparable growth
Q1 2018	-4.3%	-0.3%	-0.0%	-8.3%	-0.7%	+5.0%
Q2 2018	+0.1%	+0.6%	+0.4%	-5.3%	-0.7%	+5.1%
Q3 2018	+5.8%	+1.7%	+0.7%	-1.3%	-0.5%	+5.2%
Q4 2018	+8.1%	+1.8%	+0.7%	+0.0%	+0.0%	+5.6%
Q1 2019	+8.4%	+0.1%	+0.6%	+2.9%	+0.0%	+4.8%
Q2 2019	+7.3%	-0.7%	+0.1%	+2.1%	+0.8%	+5.0%



Investment Cycle – Definitions

Investment opportunities at end of the period

- Investment opportunities under consideration by the Group for decision within 12 months.
- Industrial projects with investment value > €5m for Large Industries and > €3m for other business lines.
- Includes asset replacements or efficiency projects. Excludes maintenance and safety.

Investment backlog at end of the period

- Cumulated industrial investment value of projects decided but not yet started.
- Industrial projects with value > €10m, including asset replacements or efficiency projects, excluding maintenance and safety.

Sales backlog

Cumulated expected sales per year generated by the current investment backlog after full ramp-up.

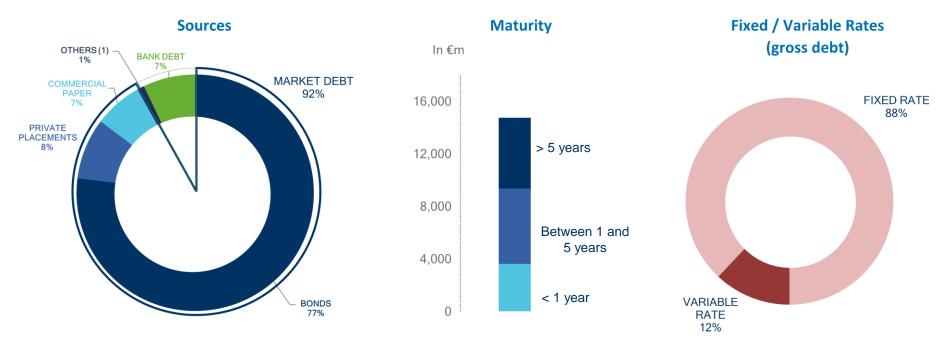
Decisions of the period

- Cumulated value of industrial and financial investment decisions.
- Industrial, growth and non-growth projects including asset replacements, efficiency, maintenance and safety.
- Financial decisions (acquisitions).



Financing Structure

As of June 30, 2019



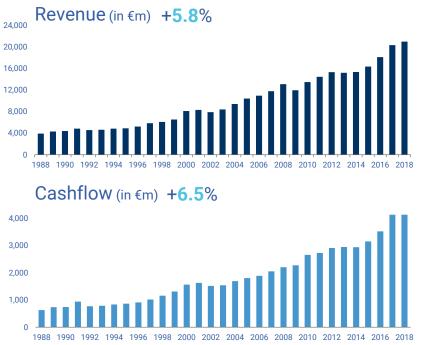
Net debt excluding lease commitments (IFRS)

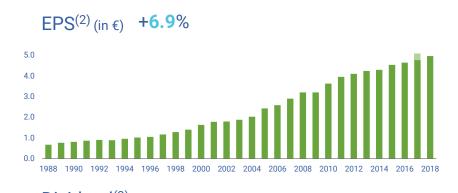
(1) Others: put options granted to minority shareholders.



Regular and Sustained Performance

—— CAGR over 30 years⁽¹⁾







- (1) Calculated according to prevailing accounting rules over 30 years.
- (2) Adjusted for the 2-for-1 share split in 2007, for attributions of free shares and for a factor of 0.974 reflecting the value of the rights of the capital increase completed in October 2016.

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Corporation for the study and application of processes developed by Georges Claude with registered capital of 2,361,913,658.50 euros

