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Ratings

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L'Air Liquide S.A.

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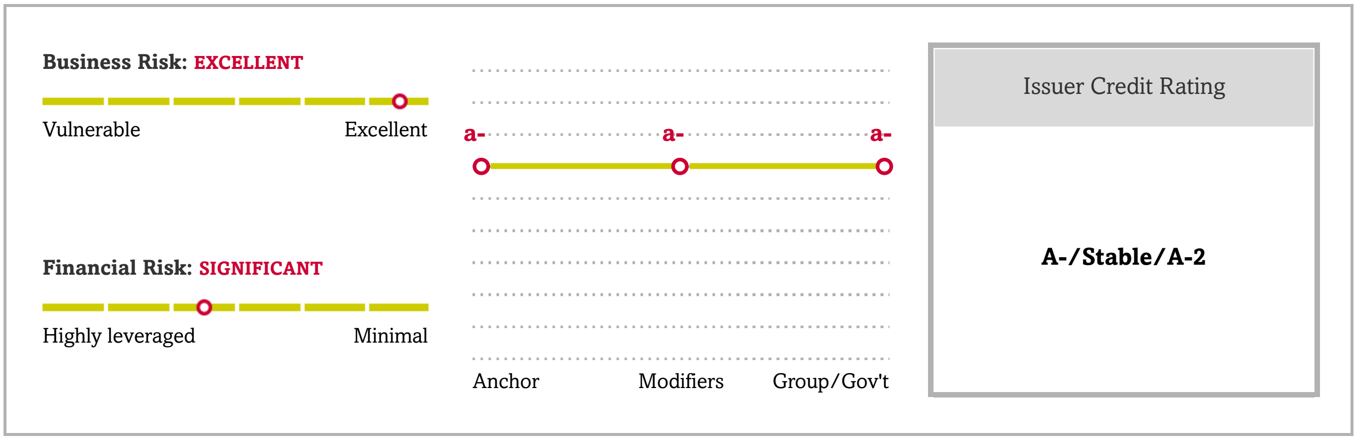


Credit Highlights

Overview

Key Strengths	Key Risks
Leading global player in the industrial gases sector with supportive market fundamentals and favorable growth prospects.	An acquisitive track record including continued bolt-ons and potential larger acquisitions translating into temporary leverage increases.
Superior resilience of activity and profitability, benefiting from long-term contracts, off-take volumes, and energy pass-through clauses.	Fairly high capital expenditures, including for significant growth projects, notably in Asia and emerging markets
Strong diversification by geography and end markets.	A shareholder-friendly, but very stable, dividend policy.
High profitability, with EBITDA margins of 25%-26%, and a track record of achieving efficiency targets and realizing synergies.	Marginal variability in top-line growth linked to regional macroeconomic changes, modest cyclicality of some markets, and currency exposures.
High, predictable, and recurring free cash flow, enabling efficient debt leverage management, as shown following the Airgas acquisition in 2016, with funds from operations (FFO) to debt promptly recovered and likely to exceed 25% in 2018.	
Prudent and disciplined financial policy, strongly committed to the 'A' category.	

Air Liquide continues its track record of efficiently managing leverage in line with targets. The large Airgas acquisition, although prudently funded, temporarily weakened Air Liquide's credit metrics in 2016. However, cash flow generation helped FFO to debt rebound to about 25% by year-end 2017, and we expect further upside in 2018 and 2019. This follows pro forma FFO to debt for Airgas of about 20% in 2016. The strong deleveraging reflects, in our view, rapid synergy realization since then, with $260 million in synergies at end-June 2018 of a total $300 million targeted by midyear 2019. It also demonstrates very efficient debt management, balancing investment needs and opportunities with significant operating cash flow generation.

The industrial gases business remains resilient and cash generative. So far this year, we have observed generally well-oriented markets in most segments and geographies, acceleration of comparable sales growth, notably in developing economies and the Americas, and very dynamic health care and electronics segments. In our view, this is fueled by expanding industrial production, although subdued in the eurozone, translating into strong organic growth of Air Liquide's core business, contributing more than start-ups, ramp-ups, and changes in perimeter. This is nevertheless partly mitigated by currency value fluctuations, which may stunt reported revenue growth for full-year 2018, depending on U.S. dollar/euro variations. We also anticipate a limited impact from scheduled turnarounds in the large industries segment in 2018. With efficiency gains slightly ahead of plan (€300 million per year in 2017-2019) for this year, we expect resilient and improving performance will deliver about €5.2 billion-€5.3 billion of S&P Global Ratings-adjusted EBITDA in 2018, after €5.2 billion in 2017.

Credit metrics should strengthen further in 2019 on a selective investment approach, prudent working capital spending, and disciplined debt management. Following Air Liquide's prudent approach to capital expenditure (capex) in 2017, which was at the low end of its 10%-12% of sales guidance, we expect investments in 2018-2019 to increase slightly, owing to investment opportunities and upcoming start-up projects notably in Asia, while currently strong markets support undertaking further growth projects. Despite likely high capex of around 12% of sales for these years, we anticipate solid organic growth, efficiency gains, and synergies to support very high cash flows and improvement in credit metrics, with FFO to debt possibly approaching 30% by end-2019, in our base case.

Outlook: Stable

The stable outlook on France-based industrial gas supplier L'Air Liquide S.A. reflects S&P Global Ratings' expectation that the company will report overall resilient performance and strong free operating cash flow generation that should allow FFO to debt to remain at about 25% in 2018 and exceed that level in 2019. This assumes Airgas synergies staying well on track, and sustained activity supported by a high level of industrial production, despite marginal currency exposure. We also acknowledge management's disciplined financial policy and commitment to maintain a rating level of at least 'A-'.

Upside scenario

We could raise the rating if market growth and operating margins stay resilient, such that FFO to debt approaches 30% on a sustainable basis, and management remains committed to balancing investments and shareholder returns to maintain that ratio level.

Downside scenario

Although unlikely in the near term, given the current comfortable rating headroom, we could lower the rating if weaker operating performance or further mergers and acquisitions kept the FFO-to-debt ratios significantly below 25% for a prolonged period.

Our Base-Case Scenario

Assumptions

- A U.S. dollar to euro exchange rate of 1.2-1.3 in 2018-2019.
- Total revenue growth of about 5% in 2018-2019 on a comparable basis, slightly above our global GDP growth forecast of about 3.8% per annum over the same period. We expect fairly flat reported revenues including the impact of currencies in 2018.
- Broadly stable reported EBITDA margins of 25%-26%, supported by increasing synergies and efficiency gains.
- Capital expenditures (capex) of €2.5 billion-€2.6 billion or 12.0%-12.5% of revenues per annum, including notably growth projects in the large industries segment.
- Modest working capital movements.
- Bolt-on to midsize acquisitions, partly compensated by minor asset sales.
- A steady increase in the dividend payout to €1.2 billion-€1.3 billion.

Key Metrics

	2017A	2018E	2019E
EBITDA (bil. €)*	5.2	5.2-5.3	5.5-5.7
FFO/debt (%)	25.2	25.0-27.0	27.0-30.0
Debt/EBITDA(x)	3.1	3.0	<3.0

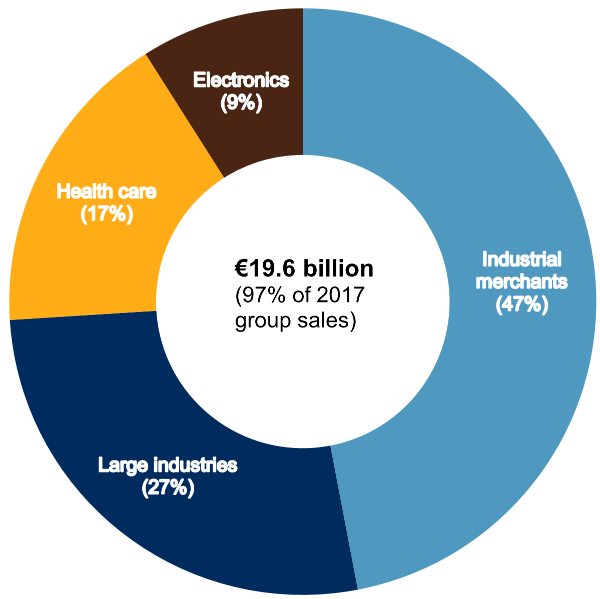
Note: All figures are adjusted by S&P Global Ratings. *Rounded. FFO--Funds from operations. A--Actual E--Estimate

Company Description

Air Liquide is one of the largest industrial gas suppliers worldwide, with sales of €20.3 billion in 2017. About 97% of the group's sales come from industrial gas and services, its core business, and the remainder from engineering and construction, and global markets and technologies divisions. Its industrial gas products include oxygen and nitrogen produced in air-separation units, and hydrogen and carbon monoxide produced in steam methane reformers. Air Liquide's products are sold to metals, chemicals, oil refining, energy, glass, and electronics companies, as well as in the health care, food processing, paper, and aerospace markets. The Paris-listed group employs about 65,000 people and is present in about 80 countries.

Chart 1

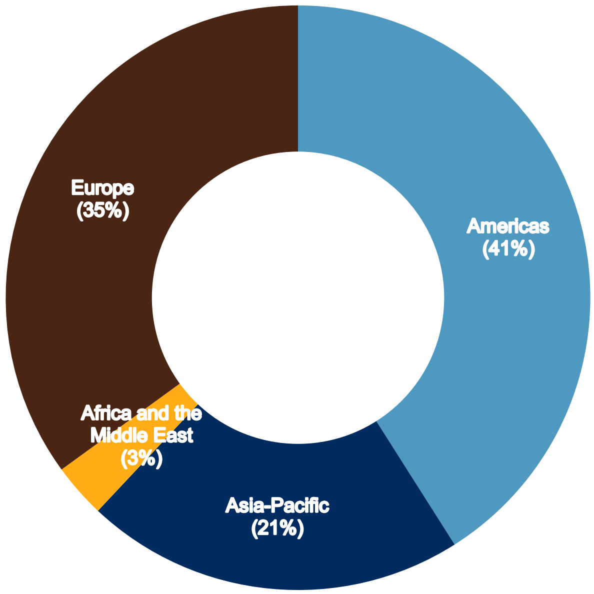
Air Liquide Gas & Services 2017 Revenue By Segments



Source: Air Liquide 2017 Annual Report.

Chart 2

Air Liquide Gas & Services 2017 Revenue By Region



Source: Air Liquide 2017 Annual Report.

Business Risk: Excellent

We generally view the industrial gases business as more resilient than specialty chemicals; therefore we consider Air Liquide's earnings and cash flows to show superior resilience and stability over time. We place a strong emphasis on that aspect of the business when analyzing the company's profitability and financial metrics. Consequently, we view the group's EBITDA and profit margins as less volatile than that of most rating peers in the chemicals sector. This is a key consideration in our assessment of the company's excellent competitive position.

Air Liquide is a clear leading player in its market worldwide, which we view as fairly consolidated and benefiting from significant barriers to entry in terms of capital intensity of the asset base, economies of scales, and technological know-how. The group benefits from superior end market and geographic diversity, with a balanced footprint across all regions. The various business segments also provide diversity from partly uncorrelated end markets. In addition, the most capital-intensive portion of the business--the large industries segment--which generates a significant portion of group revenues, notably in Asia and in Europe, benefits from very long-term contracts, energy cost pass-through clauses, and minimum offtake volumes. Similarly, we view the health care business as bringing stability and growth prospects to the group's revenues and earnings, supported by aging populations in developed markets and rising income in developing economies.

Growth factors remain a key consideration in this highly consolidated market, in our view, where base business activity may show modest sensitivity to macroeconomic conditions, therefore justifying relatively high investment needs to develop the business. Air Liquide typically spends 10%-12% of sales in capex, mostly targeting expansion projects, of which a large part are in growth regions: currently ramping-up in South Africa, with several start-ups upcoming in China in the next few quarters. The investment opportunities portfolio remains quite large (€2.5 billion at end-June 2018), as does the investment backlog, showing high market activity and dynamic bidding on small and midsize projects in a relatively competitive market. Growth and size aspects explain why mergers and acquisitions are generally high on the agenda in the sector, which we view as a potential risk from a credit perspective.

We view Air Liquide's profitability as above-average for the wider chemicals sector, with EBITDA margins sustainably at 25%-26%, which is another key strength for our assessment of the business. This is linked to typical market conventions regarding contracts and pricing mechanisms, combined with Air Liquide's strong emphasis on cost management. Air Liquide announced a target of €300 million in efficiency gains annually in 2017-2019, which has outperformed: €323 million realized in 2017, and €174 million in first-half 2018. This target relates in particular to procurement, logistics, reorganization, and restructuring initiatives, as well as digitization of the business across most segments. In addition, Air Liquide has a separate synergies program connected to the integration of Airgas, targeting $300 million by midyear 2019 (EBIT-accretive), which was ahead by $40 million versus the 2017 budget and is still progressing to date, thereby offsetting potential integration and execution risks.

Peer comparison

Table 1

L'Air Liquide S.A.--Peer Comparison

Industry Sector: Chemical Cos				
	L'Air Liquide S.A.	**Linde AG**	**Praxair Inc.**	**Air Products and Chemicals Inc.**
Rating as of Oct. 11, 2018	A-/Stable/A-2	A+/Stable/A-1	A/Watch Pos/A-1	A/Stable/A-1
(Mil. €)	**--Fiscal year ended Dec. 31, 2017--**			**Fiscal year ended Sept. 30, 2017**
Revenues	20,349	17,113	9,524	6,924
EBITDA	5,213	3,891	3,176	2,346
Funds from operations (FFO)	4,065	3,129	2,232	1,965
Net income from cont. oper.	2,237	1,404	1,038	959
Cash flow from operations	4,312	3,238	2,574	2,171
Capital expenditures	2,116	1,649	1,068	863
Free operating cash flow	2,196	1,589	1,505	1,308
Discretionary cash flow	1,097	776	755	642
Cash and short-term investments	1,656	2,055	514	3,110
Debt	16,162	8,160	8,041	1,288
Equity	16,725	15,059	5,431	8,627
Adjusted ratios				
EBITDA margin (%)	25.6	22.7	33.3	33.9
Return on capital (%)	8.9	7.4	15.3	13.8
EBITDA interest coverage (x)	8.7	11.7	15.1	14.3

Table 1

L'Air Liquide S.A.--Peer Comparison (cont.)				
FFO cash int. cov. (X)	70.1	8.7	13.8	17.4
Debt/EBITDA (x)	3.1	2.1	2.5	0.5
FFO/debt (%)	25.2	38.3	27.6	152.4
Cash flow from operations/debt (%)	26.7	39.7	31.9	168.4
Free operating cash flow/debt (%)	13.6	19.5	18.6	101.3
Discretionary cash flow/debt (%)	6.8	9.5	9.3	49.6

Financial Risk: Significant

Air Liquide's capital structure is marked by a fair amount of debt, notably following the Airgas acquisition in 2016, although improving since then. This compares with the significant cash flow used to reduce leverage, which we expect will continue in the coming years. It balances our forecast of continued strong operating performance (EBITDA) against our forecasts of investments, working capital needs, dividends, and bolt-on acquisitions.

More specifically, we expect the group will generate about €2.0 billion-€2.1 billion in free operating cash flow in 2018, reflecting prudent working capital management in a rising volume/price environment, and relatively large capex that we estimate at €2.5 billion-€2.6 billion. This will leave ample leeway under our base case for dividends, steadily increasing as per financial policy, to €1.1 billion-€1.2 billion, and modest share buybacks.

This should lead to further deleveraging in 2018 and 2019, with adjusted FFO to debt improving within the 25%-30% range, well positioned for the current rating. That ratio level offers fair leeway for likely bolt-on acquisitions to continue, partly supported by possible minor asset sales. Our base case also points to very comfortable coverage ratios, and free operating cash flow to debt, capturing the group's increasing capex in 2018 and 2019 being in line with the rating level.

Financial summary

Table 2

L'Air Liquide S.A.--Financial Summary					
Industry Sector: Chemical Cos					
	--Fiscal year ended Dec. 31--				
(Mil. €)	**2017**	**2016**	**2015**	**2014**	**2013**
Revenues	20,349	18,135	15,819	15,358	15,225
EBITDA	5,213	4,693	4,192	3,810	3,751
Funds from operations (FFO)	4,065	3,428	3,262	2,848	2,872
Net income from continuing operations	2,237	1,833	1,742	1,665	1,640
Cash flow from operations	4,312	3,668	2,833	2,915	2,920
Capital expenditures	2,116	2,206	1,965	1,862	2,111
Free operating cash flow	2,196	1,462	868	1,053	809
Discretionary cash flow	1,097	443	(107)	169	(68)
Cash and short-term investments	1,656	1,523	966	910	940
Debt	16,162	18,257	9,598	8,406	7,866

Table 2

L'Air Liquide S.A.--Financial Summary (cont.)					
Industry Sector: Chemical Cos					
	--Fiscal year ended Dec. 31--				
(Mil. €)	**2017**	**2016**	**2015**	**2014**	**2013**
Equity	16,725	17,125	12,771	11,827	10,888
Adjusted ratios					
EBITDA margin (%)	25.6	25.9	26.5	24.8	24.6
Return on capital (%)	8.9	9.5	12.0	11.9	12.2
EBITDA interest coverage (x)	8.7	8.4	11.1	10.3	10.3
FFO cash int. cov. (x)	70.1	76.2	12.2	11.7	11.8
Debt/EBITDA (x)	3.1	3.9	2.3	2.2	2.1
FFO/debt (%)	25.2	18.8	34.0	33.9	36.5
Cash flow from operations/debt (%)	26.7	20.1	29.5	34.7	37.1
Free operating cash flow/debt (%)	13.6	8.0	9.0	12.5	10.3
Discretionary cash flow/debt (%)	6.8	2.4	(1.1)	2.0	(0.9)

Liquidity: Adequate

We view Air Liquide's liquidity as adequate, estimating that liquidity sources will exceed liquidity needs by more than 1.2x over the 12 months started July 1, 2018. We also factor in Air Liquide's high credit market standing and prudent liquidity management.

Principal Liquidity Sources

- About €1.3 billion in cash, cash equivalents, and marketable securities, excluding a minor portion located in high-risk countries;
- Undrawn committed credit lines of around €3.1 billion maturing beyond 12 months, including a mix of bilateral facilities and a €1.3 billion revolving credit facility;
- Our forecast of €4.2 billion-€4.3 billion in FFO over the next 12 months; and
- Proceeds from possible small asset sales.

Principal Liquidity Uses

- Debt maturities of about €2.9 billion over the next 12 months;
- Capex of €2.5 billion-€2.6 billion over the next 12 months;
- Dividends of €1.1 billion-€1.2 billion in the next 12 months;
- Moderate working capital swings; and
- Potential bolt-on acquisitions.

Debt maturities

As of Dec. 31, 2017:

- 2018: €2.5 billion

- 2019: €1.3 billion
- 2020: €1.4 billion

Ratings Score Snapshot

Issuer Credit Rating

A-/Stable/A-2

Business risk: Excellent

- **Country risk:** Low
- **Industry risk:** Low
- **Competitive position:** Excellent

Financial risk: Significant

- **Cash flow/Leverage:** Significant

Anchor: a-

Modifiers

- **Diversification/Portfolio effect:** Neutral (no impact)
- **Capital structure:** Neutral (no impact)
- **Financial policy:** Neutral (no impact)
- **Liquidity:** Adequate (no impact)
- **Management and governance:** Strong (no impact)
- **Comparable rating analysis:** Neutral (no impact)

Issue Ratings--Subordination Risk Analysis

Most of the debt is issued by the group's finance subsidiary--Air Liquide Finance--and guaranteed by the holding company Air Liquide S.A. in line with its strategy of central financing. We believe the level of structural subordination is marginal. We consider Air Liquide's funding sources to be well diversified and improving over time, for example, with the placement of an onshore bond in China in 2018. Risk management policy involves maintaining local debt as the primary financing source in countries considered higher risk. We also take into account that remaining debt tranches integrated from Airgas are fully and irrevocably guaranteed by Air Liquide S.A.

Reconciliation

Table 3

Reconciliation Of L'Air Liquide S.A. Reported Amounts With S&P Global Ratings Adjusted Amounts (Mil. €)

	--Fiscal year ended Dec. 31, 2017--							
L'Air Liquide S.A. reported amounts								
	Debt	**Shareholders' equity**	**EBITDA**	**Operating income**	**Interest expense**	**EBITDA**	**Cash flow from operations**	**Capital expenditures**
Reported	15,027	16,318	5,032	3,020	429	5,032	4,254	2,183
S&P Global Ratings adjustments								
Interest expense (reported)	--	--	--	--	--	(429)	--	--
Interest income (reported)	--	--	--	--	--	7	--	--
Current tax expense (reported)	--	--	--	--	--	(541)	--	--
Trade receivables securitizations	459	--	--	--	4	(4)	(123)	--
Operating leases	893	--	282	68	68	213	213	--
Postretirement benefit obligations/deferred compensation	1,187	7	(7)	(7)	23	(46)	36	--
Surplus cash	(1,556)	--	--	--	--	--	--	--
Capitalized interest	--	--	--	--	67	(67)	(67)	(67)
Share-based compensation expense	--	--	34	--	--	34	--	--
Dividends received from equity investments	--	--	5	--	--	5	--	--
Asset retirement obligations	153	--	--	--	7	(7)	(2)	--
Non-operating income (expense)	--	--	--	45	--	--	--	--
Non-controlling Interest/Minority interest	--	401	--	--	--	--	--	--
Debt - Fair value adjustments	0	--	--	--	--	--	--	--
EBITDA - Gain/(Loss) on disposals of PP&E	--	--	(133)	(133)	--	(133)	--	--
D&A - Impairment charges/(reversals)	--	--	--	234	--	--	--	--
Total adjustments	1,135	408	181	207	170	(967)	58	(67)
S&P Global Ratings adjusted amounts								
	Debt	**Equity**	**EBITDA**	**EBIT**	**Interest expense**	**Funds from operations**	**Cash flow from operations**	**Capital expenditures**
Adjusted	16,162	16,725	5,213	3,228	599	4,065	4,312	2,116

Related Criteria

- Criteria - Corporates - General: Reflecting Subordination Risk In Corporate Issue Ratings, Sept. 21, 2017
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017
- Criteria - Corporates - General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- Criteria - Corporates - Industrials: Key Credit Factors For The Specialty Chemicals Industry, Dec. 31, 2013
- General Criteria: Group Rating Methodology, Nov. 19, 2013
- Criteria - Corporates - General: Corporate Methodology: Ratios And Adjustments, Nov. 19, 2013
- Criteria - Corporates - General: Corporate Methodology, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012
- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009

Business And Financial Risk Matrix

	Financial Risk Profile					
Business Risk Profile	Minimal	Modest	Intermediate	**Significant**	Aggressive	Highly leveraged
Excellent	aaa/aa+	aa	a+/a	**a-**	bbb	bbb-/bb+
Strong	aa/aa-	a+/a	a-/bbb+	bbb	bb+	bb
Satisfactory	a/a-	bbb+	bbb/bbb-	bbb-/bb+	bb	b+
Fair	bbb/bbb-	bbb-	bb+	bb	bb-	b
Weak	bb+	bb+	bb	bb-	b+	b/b-
Vulnerable	bb-	bb-	bb-/b+	b+	b	b-

Ratings Detail (As Of October 11, 2018)

L'Air Liquide S.A.	
Issuer Credit Rating	A-/Stable/A-2
Issuer Credit Ratings History	
24-May-2016	A-/Stable/A-2
20-Nov-2015	A+/Watch Neg/A-1
10-Dec-2013	A+/Stable/A-1
26-Nov-2013	A/Watch Pos/A-1

*Unless otherwise noted, all ratings in this report are global scale ratings. S&P Global Ratings' credit ratings on the global scale are comparable across countries. S&P Global Ratings' credit ratings on a national scale are relative to obligors or obligations within that specific country. Issue and debt ratings could include debt guaranteed by another entity, and rated debt that an entity guarantees.

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