# Safran SA SAF (XPAR) | ★★★★

| Last Price | Fair Value | Uncertainty | Economic Moat™ | Moat Trend™ | Stewardship | Industry Group |
|---|---|---|---|---|---|---|
| 61.52 EUR | 75.00 EUR | Medium | Wide | Stable | Standard | Aerospace & Defense |

## Narrow Bodies Equal Fat Profits: How Investors Can Profit From the Aerospace Boom

Updated Forecasts and Estimates from 03 Oct 2016

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**Important Disclosure**

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The primary analyst covering this company does not own its stock.

Research as of 30 Aug 2016
Estimates as of 03 Oct 2016
Pricing data through 08 Nov 2016
Rating updated as of 08 Nov 2016

Currency amounts expressed with "$" are in U.S. dollars (USD) unless otherwise denoted.

**Contents**



### Investment Thesis 25 Aug 2016

Safran is one of few firms in the world that can successfully develop and manufacture civil and defence jet engines, which is key to our belief that it possesses a wide moat. The growing installed base of engines with useful lives of more than 25 years results in a stable long-term annuity of future services revenue. The firm is in the sweet spot of the aftermarket cycle, benefiting from acceleration in the number of overhauls of its installed base of close to 30,000 CFM56 engines, which drive demand for high-margin spares. That said, we do see headwinds for Safran, namely lower exposure to the next generation of wide-body aeroplanes beyond 2020, and short-term margin dilution effects from mix changes as production of the LEAP engine ramps up while the mature and profitable CFM56 programme ramps down.

Safran's significant investments in research and development signify a major structural competitive advantage that has secured a market-leading position in narrow-body aircraft through the CFM 50/50 joint venture with General Electric, including prominent positions on Boeing's 737 and Airbus' A320. The firm has also secured a presence in the next generation of commercial narrow-body aircraft (single-source Boeing 737 MAX, single-source Comac C919, and dual-source Airbus A320neo). The LEAP engine has close to 60% market share for future narrow bodies, with more than 11,000 orders as of July 2016.

Along with its strong position in narrow-body aircraft, Safran also participates in the wide-body aircraft segment through a 23.5% stake in the GE90 (via a partnership with GE). This engine is the single-source option for the successful Boeing 777. Safran's exposure to its successor, the GE9X, will decrease to 11%; however, Boeing aircrafts powered by the GE9X will not be introduced before 2020. As the global market leader in landing systems and the world's second-largest manufacturer of breaking systems and engine nacelles, Safran sells crucial aircraft equipment in the narrow-body and the wide-body market (Airbus 350, Airbus 380, Boeing 777, and 787 Dreamliner). We expect the narrow- and wide-body platforms to produce steady demand for Safran in coming decades.

### Vital Statistics

| | |
|---|---|
| Market Cap (EUR Mil) | 25,620 |
| 52-Week High (EUR) | 70.99 |
| 52-Week Low (EUR) | 48.86 |
| 52-Week Total Return % | -10.8 |
| YTD Total Return % | -1.7 |
| Last Fiscal Year End | 31 Dec 2015 |
| 5-Yr Forward Revenue CAGR % | 6.3 |
| 5-Yr Forward EPS CAGR % | 29.0 |
| Price/Fair Value | 0.82 |

### Valuation Summary and Forecasts

| Fiscal Year: | 2014 | 2015 | *2016(E)* | *2017(E)* |
|---|---|---|---|---|
| Price/Earnings | 39.7 | 41.4 | *15.9* | *14.4* |
| EV/EBITDA | 10.4 | 10.3 | *7.2* | *6.7* |
| EV/EBIT | 16.8 | 15.9 | *9.9* | *9.1* |
| Free Cash Flow Yield % | 3.5 | 3.7 | *3.3* | *4.5* |
| Dividend Yield % | 2.4 | 2.1 | *2.5* | *3.5* |

### Financial Summary and Forecasts (EUR Mil)

| Fiscal Year: | 2014 | 2015 | *2016(E)* | *2017(E)* |
|---|---|---|---|---|
| Revenue | 15,355 | 17,414 | *18,509* | *19,677* |
| Revenue YoY % | 6.9 | 13.4 | *6.3* | *6.3* |
| EBIT | 1,342 | 1,685 | *2,641* | *2,881* |
| EBIT YoY % | 7.9 | 25.6 | *56.7* | *9.1* |
| Net Income, Adjusted | 538 | 641 | *1,610* | *1,773* |
| Net Income YoY % | 1.8 | 19.2 | *151.2* | *10.1* |
| Diluted EPS | 1.29 | 1.53 | *3.87* | *4.26* |
| Diluted EPS YoY % | 1.7 | 18.7 | *152.0* | *10.1* |
| Free Cash Flow | 1,127 | 2,341 | *646* | *957* |
| Free Cash Flow YoY % | -328.2 | 107.7 | *-72.4* | *48.1* |

Historical/forecast data sources are Morningstar Estimates and may reflect adjustments.

### Profile

Safran is a global aerospace, defence, and security group. It designs, manufactures, and services aircraft engines, mechanical, and electrical systems for both military and civil aircraft. The firm is a leader in biometric and detection security systems and, in the defence segment, specialises in navigation, optronic, and avionics systems. In 2015, Safran generated EUR 17.4 billion in revenue. About 80% of revenue comes from aerospace propulsion and equipment sales and services, while defence and security generate the remaining 20% of sales.

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## Morningstar Analysis

**Narrow Bodies Equal Fat Profits: How Investors Can Profit From the Aerospace Boom** 30 Aug 2016

This year marks the start of an unprecedented production increase in narrow-body passenger aircraft, a category that will be a major profit growth driver for aircraft and engine manufacturers. We highlight how investors can best gain exposure to narrow bodies in our Industrials Observer, "Narrow Bodies Equal Fat Profits." Although investor sentiment reflects ever-deepening worries over an ineluctable downturn, we posit that demand will remain solid, and we highlight three firms trading at attractive valuations: Airbus Group, United Technologies, and Safran.

We believe Airbus and Boeing will capture more than 90% of the narrow-body market through 2035 thanks to the introduction of the A320neo and B737 MAX. Our analysis indicates that these new narrow bodies represent a nearly $70 billion opportunity for Airbus and Boeing in present-value terms. However, Boeing's lagging order book indicates to us that the neo enjoys an advantage over the MAX. We think Airbus investors will come off the sidelines as the A320neo production ramp-up adds EUR 2.5 billion of profit contribution from 2016 to 2020 and as capital outlays on other programs taper off.

With its Geared Turbofan engine, we expect that United Technologies' Pratt & Whitney will mount a respectable challenge against incumbent CFM International, the GE/Safran engine joint venture, in the narrow-body engine market. After nearly $10 billion of R&D, the GTF offers an innovative, but still unproven design. In contrast to the Pratt, CFM has developed the LEAP engine, leveraging its successful CFM56 engine. We believe that United Technologies' and Safran's share prices fail to fully reflect the profitability potential of the engine aftermarket because of a consensus built on near-term earnings combined with an underappreciation of the new economics for rate per flight hour services. We believe the duopoly in narrow-body engines will continue for at least the next decade, effectively locking Rolls-Royce out of the market.

**Valuation, Growth and Profitability** 25 Aug 2016

After updating our sales and profit estimates for Safran and correcting for the time value of money, we are increasing our fair value estimate to EUR 75 per share from EUR 71. Ahead of our expectations, wide-moat Safran recorded strong revenue and operating income growth in first-half 2016. Record production rate of 886 deliveries of CFM56 engines, up 8.6% versus first-half 2015, and ramp-up of next-generation engine The LEAP open the door for strong highly profitable aftersales in coming years.

Our model assumes a five-year revenue compound annual growth rate of 6.2%, reflecting strong growth in aerospace and security equipment sales, and modest growth in defence. Increasing services revenue from Safran's large installed base of CFM56 aerospace engine will boost the firm's top line in our five-year forecast period. We expect marginal margin expansion in 2016, close to 20 basis points, as strong growth of high-margin services sales is offset by launch pricing and startup costs of series LEAP production. Beyond 2016, we model net margin expansion, as management increases its focus on operational efficiency and operational leverage as a result of CFM56 and LEAP volume growth and high-margin aftersales services. We forecast adjusted operating margins of 14.3% in 2016, expanding to 15.4% for 2020. Our terminal margin of 15.4% reflects an appropriate balance of equipment and service margins, with the requisite investment of 4% of sales in research and development. Using our assumptions, we expect Safran to generate returns on invested capital of 16.9%, on average, during our five-year discrete forecast horizon--above the firm's cost of capital of 8.6%.

The volatility from Safran's currency-hedging practices is considered nonoperating for our model and does not affect our valuation assessment. Given the extent to which the

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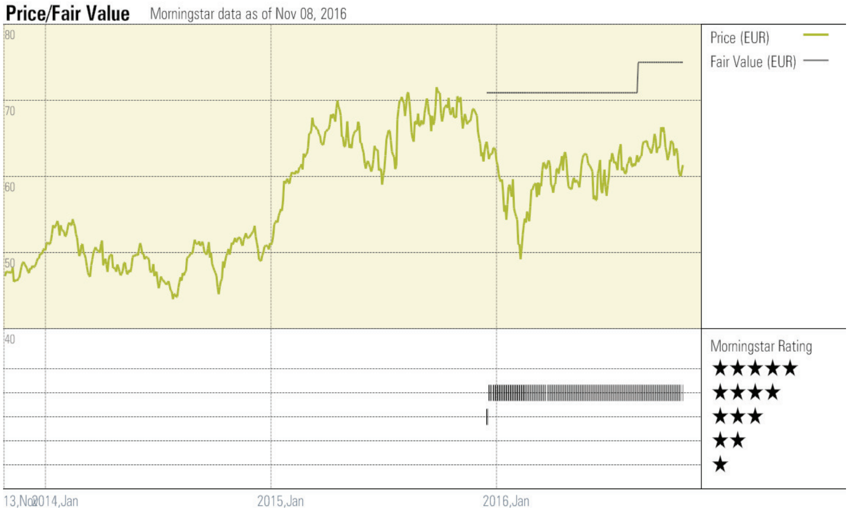
**Price/Fair Value** Morningstar data as of Nov 08, 2016




firm is executing contracts to simply lock in rates on known projects, with no material effect on actual cash flow, we will maintain this approach.

**Scenario Analysis**

Safran's strong equipment backlog, large installed base of long-lived products, and stable long-term annuities of aftermarket revenue can protect the company from shocks and typical cyclicality. However, we still see longer-term capital spending droughts as the major threat to our valuation. We model three scenarios of varying revenue growth and operating margin assumptions. In our base-case scenario, we assume underlying revenue growth of 6.3% in fiscal 2016, driven by strong equipment and services growth for aerospace propulsion, aircraft equipment and security. Our base model assumes margin expansion stemming from operational leverage and increased attribution of profitable aftersales services post-2016, resulting in operating margins of 15.4% by 2020, and generates a fair value estimate of EUR 75 per share.

When thinking about the bear case, we assume that all of Safran's end markets weaken and remain weak through 2016, with revenue in that year of EUR 18.2 billion. We anticipate that operating margins remain weak, though the impact from lower equipment sales would be offset by an increased blend of higher-margin service revenue. Under these assumptions, our fair value estimate falls to EUR 57 per share. In a more optimistic scenario, we assume a 7.7% core five-year CAGR, with margins expanding 150 basis points more than in the base model. Under this scenario, our fair value estimate increases to EUR 95 per share.

**Economic Moat**

We assign a wide moat rating to Safran, mainly owing to switching costs and intangible assets. The firm's strong competitive positions in civil and military aerospace result in returns on invested capital exceeding the costs of capital over our five-year forecast period, and we expect this to continue for years to come. More than 90% of Safran's adjusted profit is derived from aerospace propulsion and equipment. The switching costs result from the firm's gas turbines engine and associated equipment, as well as the integration of landing systems in aircraft platforms, especially in the narrow-body airframes of Boeing and Airbus. Safran's customers, the airline operators, are hesitant to switch to new engines, as it is time-consuming and the change entails significant investment costs and retraining of maintenance personnel. Unplanned downtime in aerospace systems can even be catastrophic when considering the consequences of engine failure. Certain warranties and guarantees related to performance may become null and void if airlines use third-party spares and maintenance, and the motivation to protect an installed base of equipment translates into a high degree of customer switching costs. The firm's engine equipment has a long economic lifetime, and support services increase customer loyalty. Nearly 40% of Safran's revenue comes from aftermarket maintenance and repair services, which we view as evidence of sticky relationships stemming from customer reliance on the original equipment manufacturer. Long product cycles ensure that a platform win brings in revenue for multiple decades. Safran's main source of intangible assets stems from the technical knowledge required to design and manufacture jet engine components, a core competency that is supported by Safran's average yearly spend of close to 4% of its sales on research and development, or R&D.

We consider the aerospace business to have a wide moat. Aerospace propulsion and aircraft equipment combined generated 82% of sales and 91% of adjusted profit in 2015. Fifty percent of sales from the aerospace propulsion division come from aftermarket revenue, of which 30% are related to long-term service agreements of up to 15 years, with the remainder coming from traditional time and materials sales. The civil aerospace engine business is effectively a three-player market, with wide-moat GE leading the market (close to 42% market share), slightly ahead of narrow-moat Rolls-Royce (40% market share) and far ahead of wide-moat United Technologies' engine segment Pratt & Whitney (18% share). Qualifying aerospace component suppliers is a complicated process meant to ensure safety and reliability for the useful life of an aircraft; this tends to limit competition, as few companies have the manufacturing capacity and relationships necessary to become one of only two or three suppliers allowed to design systems customised for the specific needs of the next-generation aircraft body. GE and Safran typically collaborate on the development and aftersales of narrow-body engines. Safran has a 50% ownership in the CFM joint venture, and the CFM56 engine is by far the most successful narrow-body engine ever, with an installed base of close to 30,000 engines and a market share of close to 80%. The blockbuster CFM56 will be sold at least until the end of the decade, and the backlog comprises more than 4,500 engines.

In our view, Safran's large investments in R&D are a major structural competitive advantage that has secured a market-leading position in narrow-body aircraft, with prominent positions on Airbus A320 aircraft and sole-provider status for the Boeing 737. The firm has also secured a presence in the next generation of commercial narrow-body aircraft (single-source Boeing 737 MAX, single-source Comac C919, and dual-source Airbus A320neo). The LEAP engine, the successor to the CFM56, has close to 80% market share for future narrow bodies, with more than 11,000 orders as of July 2016. Close to 70% of the LEAP engine backlog is associated with long-term service contracts of up to 15 years.

Along with its strong position in narrow-body aircraft, Safran also participates in the wide-body aircraft segment through a 23.5% stake in the GE90 (partnership with GE). This engine is the single-source option for the successful Boeing 777. Safran's exposure to its successor, the GE9X, will decrease to 11%; however, Boeing aircraft powered by the GE9X will not be introduced before 2020. As the global market leader in landing systems and the world's second-largest manufacturer of breaking systems and engine nacelles, Safran sells crucial aircraft equipment in the narrow-body as well as the wide-body market (Airbus 350, Airbus 380, Boeing 777, and 787 Dreamliner). Although we see softer demand resulting from lower governmental spending in 2015-16, we still believe Safran is attractively positioned in the military aerospace business. The loss of revenue from equipment deferrals and cancellations can be mitigated with increased service revenue from extended use of the legacy installed fleet.

We consider the defence and security business to enjoy a narrow moat as a result of intangible assets and switching costs. The two divisions combined generated 18% of sales and 9% of adjusted profit in 2015. Safran's defence segment offers a complete range of systems and equipment for both civil and military applications in the key areas of optronics, avionics, navigation, electronics, and safety-critical software, with competitors such as narrow-moat BAE

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## Morningstar Analysis

Systems. Safran's security business spans a number of applications and technologies, including detection of explosives and illicit substances, multibiometric identification, and secure ID documents. For the most part, the contracts signed are lengthy exclusive contracts with municipalities and governments. The firm has secured impressive contract wins, like the renewed contract for all travel documents in the Netherlands; in addition, 80% of US driver's licences are issued by Safran's MorphoTrust.

**Moat Trend**

We believe that Safran has a stable moat trend. In our view, decades of development, a competitive history, and relationship building have combined to establish an entrenched competitive landscape for the aerospace industry. Safran is actively working to enhance the utility of its aftermarket service model by offering comprehensive fleet management programs, while other players are seeking to do the same. These service programmes aim to support airlines on a predictable cost-per-engine-flight-hour basis, to enable accurate forecasting of operating costs, reduced cost of ownership, and improved asset utilisation. We think the uptake of these long-term service contracts could increase customer loyalty, and could even widen an already-wide moat in aerospace engine and systems. However, the impact of the rate-per-flight-hour, or RPFH, programs will be gradual. We envisage LEAP engine customers adopting these programs in large numbers, but the LEAP fleet will represent approximately 10% of the combined CFM fleet by 2020, as CFM56 engine aftersales are mostly based on the time and materials model.

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## Bulls Say/Bears Say

### Bulls Say

- Safran has secured a dominant position in narrow-body engines. The legacy CFM56 engine is on approximately 78% of existing Airbus A320s, while the LEAP engine has a 79% market share combined as the single-source provider for the next-generation Boeing 737 MAX and the dual-source Airbus A320neo.

- Safran's large installed base of close to 30,000 engines results in a stable long-term annuity of services revenue.

- Safran can largely mitigate lower spending on military-based equipment through increased services revenue from extended use of the legacy installed fleet.

### Bears Say

- The firm's low exposure to next-generation commercial dual-aisle engines will hurt profitability, as much of the value of engine and services deliveries will continue to flow to the wide-body frames.

- The firm's currency hedge book can produce volatile results and skew earnings in the short term. Safran has locked in hedge rates above the current spot level, so it will take years before the company benefits from the weaker euro.

- The high development costs and low launch pricing of LEAP, the successor to the high-margin CFM56 engine, will hurt profitability in the short term.

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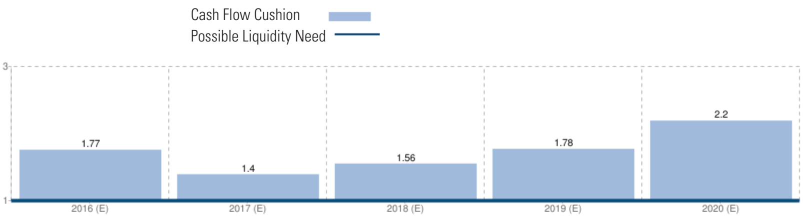
### Five Year Adjusted Cash Flow Forecast (EUR Mil)

| | 2016(E) | 2017(E) | 2018(E) | 2019(E) | 2020(E) |
|---|---|---|---|---|---|
| Cash and Equivalents (beginning of period) | 1,845 | 2,077 | 1,995 | 2,043 | 2,361 |
| Adjusted Available Cash Flow | 67 | 136 | 266 | 536 | 827 |
| Total Cash Available before Debt Service | 1,912 | 2,213 | 2,261 | 2,579 | 3,189 |
| | | | | | |
| Principal Payments | -883 | -1,379 | -1,249 | -1,249 | -1,249 |
| Interest Payments | -200 | -200 | -200 | -200 | -200 |
| Other Cash Obligations and Commitments | — | — | — | — | — |
| Total Cash Obligations and Commitments | -1,083 | -1,579 | -1,449 | -1,449 | -1,449 |

### Cumulative Annual Cash Flow Cushion




### Adjusted Cash Flow Summary

| | EUR Millions | % of Commitments |
|---|---|---|
| Beginning Cash Balance | 1,845 | 26.3 |
| Sum of 5-Year Adjusted Free Cash Flow | 1,832 | 26.1 |
| Sum of Cash and 5-Year Cash Generation | 3,677 | 52.5 |
| | | |
| Revolver Availability | — | — |
| Asset Adjusted Borrowings (Repayment) | — | — |
| | | |
| Sum of Cash, 5-Year Cash Generation, Revolver and Adjustments | 3,677 | 52.5 |
| Sum of 5-Year Cash Commitments | -7,009 | — |

### Financial Health

Safran has a solid financial position. As at June 30, 2015, the firm had EUR 1.8 billion of cash versus EUR 3.3 billion of debt. The firm has to repay EUR 1.57 billion of debt within one year and close to EUR 500 million within one to five years; however, we do not anticipate these debt repayments will be problematic, given Safran's existing cash balance and future cash-generation potential. The firm also has a EUR 2.55 billion global undrawn borrowing facility to fund short-term needs.

### Enterprise Risk

We assign a medium uncertainty rating, as Safran's high-risk equipment sales are well balanced with low-risk aftermarket sales. The firm develops complex products for several civil and military platforms, conforming to stringent and sometimes challenging specifications. A delay, disruption, or cancellation of any of these programs will undermine the firm's financial performance. The biggest risk going forward is the industrial ramp-up of the LEAP engine for Boeing 737 MAX and Airbus A320neo. Safran and its partner GE have a monumental task in front of them in order to increase production without suffering a meltdown in their own assembly line or across their suppliers. The growing installed base of engines that have useful lives of more than 25 years supports a stable, long-term annuity of future aftersales service revenue. Service revenue represented 47% of the firm's sales in 2015. All of Safran's engines are priced in U.S. dollar terms, and corporate's manufacturing base is largely euro-denominated. Thus, the company is implicitly short the euro and long the U.S. dollar. In the defence business, the firm faces significant uncertainty from government decisions. Safran pursues an aggressive long-term currency hedging strategy that aims to protect future cash flows from volatility. This approach generates more volatile reported earnings than industry peers. To arrive at our valuation and historical analysis, we consider these transactions a financing activity, as opposed to an operating activity. At Jan. 28, 2016, Safran's U.S. dollar hedge book was $20.6 billion, representing around three years of net exposure and a hedge rate of EUR 1/$1.24 for 2016, a hedge rate of EUR 1/$1.22 for 2017, and a hedge rate of EUR 1/$1.17-$1.20 for 2018.

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## Management & Ownership

### Management Activity

| Name | Position | Shares Held | Report Date* | InsiderActivity |
|---|---|---|---|---|
| NA | NA | NA | NA | NA |

*Represents the date on which the owner's name, position, and common shares held were reported by the holder or issuer.

### Fund Ownership

| Top Owners | % of Shares Held | % of Fund Assets | Change (k) | Portfolio Date |
|---|---|---|---|---|
| Tweedy, Browne Global Value Fund | 1.03 | 3.43 | — | 30 Sep 2016 |
| Oakmark International Fund | 0.91 | 1.16 | -168 | 30 Sep 2016 |
| VA CollegeAmerica New Perspective | 0.84 | 0.42 | 105 | 30 Sep 2016 |
| Vanguard Total Intl Stock Idx Fund | 0.79 | 0.10 | 15 | 30 Sep 2016 |
| Davis New York Venture Fund | 0.68 | 1.63 | 2,850 | 31 Jul 2016 |
| Concentrated Holders | | | | |
| TREETOP SICAV Sequoia Equity | 0.08 | 9.82 | — | 30 Jun 2016 |
| Advantage Total Return | — | 7.72 | — | 31 Oct 2016 |
| Epargne Française | — | 5.88 | — | 30 Sep 2015 |
| IGS Actions Europe Evolution | 0.01 | 5.56 | -11 | 30 Jun 2016 |
| Eurovalor Emerg. Empresas Europeas FI | — | 5.35 | -1 | 31 Mar 2016 |

### Institutional Transactions

| Top 5 Buyers | % of Shares Held | % of Fund Assets | Shares Bought/ Sold (k) | Portfolio Date |
|---|---|---|---|---|
| Davis Selected Advisers LP | 1.08 | 1.76 | 4,416 | 30 Sep 2016 |
| Janus Capital Management LLC | 0.41 | 1.63 | 403 | 30 Sep 2016 |
| Morgan Stanley Investment Management Inc | 0.19 | 1.20 | 305 | 30 Sep 2016 |
| T. Rowe Price Associates, Inc. | 0.45 | 1.02 | 282 | 30 Sep 2016 |
| STANLIB Asset Management Limited | 0.04 | 0.79 | 160 | 31 Mar 2016 |
| Top 5 Sellers | | | | |
| Capital Research and Management Company | 1.69 | 0.12 | -3,047 | 30 Sep 2016 |
| BlackRock Advisors LLC | 0.58 | 0.28 | -227 | 30 Sep 2016 |
| BlackRock Investment Management (UK) Ltd. | 1.30 | 1.27 | -181 | 30 Sep 2016 |
| Harris Associates L.P. | 0.93 | 1.15 | -161 | 30 Sep 2016 |
| Deutsche Asset & Wealth Management Investment GmbH | 0.30 | 0.60 | -161 | 07 Nov 2016 |

### Management 03 Mar 2016

On April 23, 2015, Philippe Petitcolin was named CEO of Safran and Ross McInnes was named chairman of the board, succeeding Jean-Paul Herteman, who held both functions. While Herteman managed both roles respectably, we are pleased that the chairman and CEO roles are no longer held by the same individual because of inherent conflicts of interests.

The 17-member board consists mostly of nonexecutive members with significant industry experience. They include three representatives of the French state appointed by ministerial decree, as the French state still has 25% of the voting rights. Executive pay does not appear to be exorbitant, and annual pay is a mix of base salary and incentives. The firm awards annual bonuses based on a combination of financial objectives like EBIT, working capital, free cash flow, and personal objectives.

Historically, the company has made reasonable capital-allocation decisions, shunning acquisitions with lofty valuations and protecting returns on invested capital. Additionally, the management team has consistently paid a dividend, reflecting its commitment to returning excess cash to shareholders. For these reasons, we think Safran merits a Standard stewardship rating.

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## Analyst Notes

**We Increase Our Fair Value Estimate for Wide-Moat Safran to EUR 75; Shares Undervalued** 25 Aug 2016

After updating our sales and profit estimates for Safran and adjusting for the time value of money, we are increasing our fair value estimate to EUR 75 per share from EUR 71.

Wide-moat Safran recorded strong revenue and operating income growth ahead of our expectations in first-half 2016. Record production rate of 886 deliveries of CFM56 engines, up 8.6% versus first-half 2015, and the ramp-up of next generation engine The LEAP open the door for strong highly profitable aftersales in coming years. We believe Safran's shares are undervalued, and we rank the company as one of the most attractive investment opportunities in the European aerospace segment. We're not making any changes to our wide moat rating.

Safran's adjusted revenue was up 6.3% year over year (6.5% organic), as strong momentum in aerospace services (notably civil aftermarket up 8.5% in U.S. dollar terms) and in security (up 10.4% year over year on an organic basis) more than offset lower helicopter turbine sales, principally at customers in the oil and gas sector, along with defence revenue declines driven by lower sales of sighting systems and the end of the contribution of the FELIN Programme. The firm’s recurring operating income was up 11.8% year over year, with margins expanding 70 basis points, owing to high-margin aftermarket activities growth.

Momentum for The LEAP continues, with total firm order and commitments of more than 11,100 engines as of the end of the Farnborough airshow. The first Airbus A320neo equipped with LEAP-1A was delivered on July 19 to Pegasus Airline, and 11 engines in total were delivered in second-quarter 2016. Safran is ramping up production, with two new assembly lines dedicated to The LEAP in France and a third production plant in Mexico.

The firm is in the sweet spot of the aftermarket cycle, benefiting from acceleration in the number of overhauls of its installed base of close to 30,000 CFM56 engines, driving demand for high-margin spares. That said, we see short-term margin dilution effects from mix changes as production of the LEAP engine ramps up while the mature and profitable CFM56 programme ramps down. Margins will increase only 20 basis points in 2016, owing to launch pricing and startup costs of series LEAP production. Beyond 2016, we model net margin expansion as management increases its focus on operational efficiency and operational leverage as a result of CFM56 and LEAP volume growth and high-margin aftersales services. We forecast adjusted operating margins of 14.3% (previously 14.1%) in 2016, expanding to 15.4% (previously 14.5%) for 2020.

**What to Watch for at the Farnborough Airshow** 06 Jul 2016

We’re attending the Farnborough International Airshow in England next week. We expect potential news on Boeing’s much-discussed middle-of-the-market plane, more chatter around a 777-10X, a possible Airbus A350-2000 launch decision, few major order announcements, and a strong focus on production rate increases.

Boeing recently revealed more details about its midmarket plane, which we think may be launched at Farnborough. The new jet would respond to threats from the Airbus A321neo and sit between the 737-9 MAX and the 787-8. We think entry into service will be around 2025. We’re skeptical of the market for this jet, though, noting that the installed base of 757s and 767s stands at about 1,750, which even with additional demand doesn’t seem to offer enough sales. An all-new midmarket program would weigh on Boeing’s shares and prompt us to revisit our fair value estimate.

Rumors of a 777-10X derivative are likely to continue at the show, but we don’t expect a product launch. The market for a larger version of the new 777X series looks small

## Safran SA SAF (XPAR) | ★★★★

| Last Price | Fair Value | Uncertainty | Economic Moat™ | Moat Trend™ | Stewardship | Industry Group |
|---|---|---|---|---|---|---|
| 61.52 EUR | 75.00 EUR | Medium | Wide | Stable | Standard | Aerospace & Defense |

# Analyst Notes

considering that Middle Eastern airlines already account for over 80% of the orders for the -8 and -9 variants. Airbus could announce an A350-2000 to compete with the 777X.

Finally, we anticipate lots of discussion of the production ramp-up challenge for aircraft and engine manufacturers, as well as their suppliers. Automation and efficiency improvements remain a hot topic. Moreover, all these new aircraft may lead to opportunities around the "connected aircraft," and we expect companies to highlight the growth potential in this market.

Order flow will be slow. However, Emirates may be in the market for 100 787s or A350s, and Boeing may convert some 747-8 options. Single-aisle orders are expected, but we believe these announcements won't move share prices because of already massive backlogs. If panic over the cycle sets in, this could be an entry point for longer-term investors to pick up some quality names.

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|---|---|---|---|---|---|---|
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## Morningstar Analyst Forecasts

### Financial Summary and Forecasts

Fiscal Year Ends in December

| Growth (% YoY) | 3-Year Hist. CAGR | 2013 | 2014 | 2015 | *Forecast* 2016 | *Forecast* 2017 | 5-Year Proj. CAGR |
|---|---|---|---|---|---|---|---|
| Revenue | *8.7* | 5.9 | 6.9 | 13.4 | *6.3* | *6.3* | *6.3* |
| EBIT | *5.3* | -13.9 | 7.9 | 25.6 | *56.7* | *9.1* | *16.6* |
| EBITDA | *2.7* | -10.2 | — | 20.7 | *38.9* | *8.3* | *13.4* |
| Net Income | *-13.6* | -46.8 | 1.8 | 19.2 | *151.2* | *10.1* | *28.9* |
| Diluted EPS | *-14.5* | -48.1 | 1.7 | 18.7 | *152.0* | *10.1* | *29.0* |
| Earnings Before Interest, after Tax | *71.0* | -54.2 | 842.0 | 15.7 | *-34.5* | *9.1* | *-2.1* |
| Free Cash Flow | *191.2* | -621.0 | -328.2 | 107.7 | *-72.4* | *48.1* | *-4.1* |

| Profitability | 3-Year Hist. Avg | 2013 | 2014 | 2015 | *2016* | *2017* | 5-Year Proj. Avg |
|---|---|---|---|---|---|---|---|
| Operating Margin % | *9.0* | 8.7 | 8.7 | 9.7 | *14.3* | *14.6* | *14.9* |
| EBITDA Margin % | *14.7* | 15.0 | 14.1 | 15.0 | *19.6* | *19.9* | *20.2* |
| Net Margin % | *3.6* | 3.7 | 3.5 | 3.7 | *8.7* | *9.0* | *9.3* |
| Free Cash Flow Margin % | *5.8* | -3.4 | 7.3 | 13.4 | *3.5* | *4.9* | *5.8* |
| ROIC % | *10.6* | 10.5 | 9.9 | 11.4 | *16.8* | *16.6* | *16.9* |
| Adjusted ROIC % | *16.5* | 17.0 | 15.4 | 17.2 | *25.3* | *24.8* | *25.2* |
| Return on Assets % | *1.8* | 2.3 | 2.0 | 1.2 | *5.4* | *5.6* | *5.8* |
| Return on Equity % | *7.2* | 8.4 | 7.8 | 5.3 | *25.4* | *23.8* | *23.4* |

| Leverage | 3-Year Hist. Avg | 2013 | 2014 | 2015 | *2016* | *2017* | 5-Year Proj. Avg |
|---|---|---|---|---|---|---|---|
| Debt/Capital | *0.36* | 0.34 | 0.38 | 0.37 | *0.32* | *0.30* | *0.28* |
| Total Debt/EBITDA | *1.55* | 1.58 | 1.80 | 1.28 | *0.92* | *0.85* | *0.79* |
| EBITDA/Interest Expense | *13.48* | 15.65 | 13.09 | 11.69 | *18.10* | *19.61* | *21.23* |

### Valuation Summary and Forecasts

| | 2014 | 2015 | *2016(E)* | *2017(E)* |
|---|---|---|---|---|
| Price/Fair Value | — | 0.89 | — | — |
| Price/Earnings | 39.7 | 41.4 | *15.9* | *14.4* |
| EV/EBITDA | 10.4 | 10.3 | *7.2* | *6.7* |
| EV/EBIT | 16.8 | 15.9 | *9.9* | *9.1* |
| Free Cash Flow Yield % | 3.5 | 3.7 | *3.3* | *4.5* |
| Dividend Yield % | 2.4 | 2.1 | *2.5* | *3.5* |

### Key Valuation Drivers

| | |
|---|---|
| Cost of Equity % | 9.0 |
| Pre-Tax Cost of Debt % | 6.5 |
| Weighted Average Cost of Capital % | 8.6 |
| Long-Run Tax Rate % | 30.0 |
| Stage II EBI Growth Rate % | 3.5 |
| Stage II Investment Rate % | 23.3 |
| Perpetuity Year | 20 |

Additional estimates and scenarios available for download at http://select.morningstar.com.

### Discounted Cash Flow Valuation

| | EUR Mil | Firm Value (%) | Per Share Value |
|---|---|---|---|
| Present Value Stage I | 10,680 | 34.2 | 25.65 |
| Present Value Stage II | 9,072 | 29.1 | 21.79 |
| Present Value Stage III | 11,443 | 36.7 | 27.48 |
| **Total Firm Value** | **31,195** | **100.0** | **74.92** |
| Cash and Equivalents | 2,465 | — | 5.92 |
| Debt | -3,336 | — | -8.01 |
| Preferred Stock | — | — | — |
| Other Adjustments | -599 | — | -1.44 |
| **Equity Value** | **29,725** | **—** | **71.39** |
| Projected Diluted Shares | 416 | | |
| **Fair Value per Share** (EUR) | — | | |

The data in the table above represent base-case forecasts in the company's reporting currency as of the beginning of the current year. Our fair value estimate may differ from the equity value per share shown above due to our time value of money adjustment and in cases where probability-weighted scenario analysis is performed.

# Safran SA SAF (XPAR) | ★★★★

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## Morningstar Analyst Forecasts

**Income Statement** (EUR Mil)
Fiscal Year Ends in December

| | | | | Forecast | |
|---|---|---|---|---|---|
| | 2013 | 2014 | 2015 | *2016* | *2017* |
| **Revenue** | **14,363** | **15,355** | **17,414** | ***18,509*** | ***19,677*** |
| Cost of Goods Sold | 10,772 | 11,516 | 13,061 | *13,882* | *14,757* |
| **Gross Profit** | **3,591** | **3,839** | **4,354** | ***4,627*** | ***4,919*** |
| Selling, General & Administrative Expenses | — | — | — | — | — |
| Research & Development | 536 | 747 | 747 | *740* | *787* |
| Other Operating Expense (Income) | 1,811 | 1,750 | 1,922 | *1,246* | *1,251* |
| Depreciation & Amortization (if reported separately) | — | — | — | — | — |
| **Operating Income (ex charges)** | **1,244** | **1,342** | **1,685** | ***2,641*** | ***2,881*** |
| Restructuring & Other Cash Charges | — | — | — | — | — |
| Impairment Charges (if reported separately) | — | — | — | — | — |
| Other Non-Cash (Income)/Charges | 34 | 107 | 698 | *50* | *50* |
| **Operating Income (incl charges)** | **1,210** | **1,235** | **987** | ***2,591*** | ***2,831*** |
| Interest Expense | 138 | 165 | 223 | *200* | *200* |
| Interest Income | — | — | — | — | — |
| **Pre-Tax Income** | **1,072** | **1,070** | **764** | ***2,391*** | ***2,631*** |
| Income Tax Expense | 529 | 522 | 403 | *765* | *842* |
| Other After-Tax Cash Gains (Losses) | 15 | 18 | 4 | *20* | *20* |
| Other After-Tax Non-Cash Gains (Losses) | — | — | — | — | — |
| (Minority Interest) | -32 | -65 | -50 | *-50* | *-50* |
| (Preferred Dividends) | — | — | — | — | — |
| **Net Income** | **526** | **501** | **315** | ***1,596*** | ***1,759*** |
| Weighted Average Diluted Shares Outstanding | 416 | 416 | 418 | *416* | *416* |
| **Diluted Earnings Per Share** | **1.27** | **1.20** | **0.75** | ***3.83*** | ***4.22*** |
| Adjusted Net Income | 528 | 538 | 641 | *1,610* | *1,773* |
| **Diluted Earnings Per Share (Adjusted)** | **1.27** | **1.29** | **1.53** | ***3.87*** | ***4.26*** |
| Dividends Per Common Share | 1.12 | 1.20 | 1.38 | *1.55* | *2.13* |
| **EBITDA** | **2,126** | **2,053** | **1,909** | ***3,571*** | ***3,873*** |
| **Adjusted EBITDA** | **2,160** | **2,160** | **2,607** | ***3,621*** | ***3,923*** |

# Safran SA SAF (XPAR) | ★★★★

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## Morningstar Analyst Forecasts

**Balance Sheet** (EUR Mil)

| Fiscal Year Ends in December | 2013 | 2014 | 2015 | Forecast 2016 | Forecast 2017 |
|---|---|---|---|---|---|
| Cash and Equivalents | 1,547 | 1,633 | 1,845 | *2,077* | *1,995* |
| Investments | 1,059 | 598 | 620 | *620* | *620* |
| Accounts Receivable | 4,967 | 5,827 | 6,515 | *6,925* | *7,361* |
| Inventory | 3,998 | 4,265 | 4,518 | *5,134* | *5,660* |
| Deferred Tax Assets (Current) | 380 | 452 | 623 | *623* | *623* |
| Other Short Term Assets | — | — | — | — | — |
| **Current Assets** | **11,951** | **12,775** | **14,121** | ***15,380*** | ***16,260*** |
| Net Property Plant, and Equipment | 2,463 | 2,928 | 3,272 | *3,792* | *4,246* |
| Goodwill | 3,399 | 3,420 | 3,590 | *3,890* | *4,190* |
| Other Intangibles | 4,620 | 5,536 | 5,321 | *5,321* | *5,321* |
| Deferred Tax Assets (Long-Term) | 203 | 228 | 984 | *984* | *984* |
| Other Long-Term Operating Assets | 1,050 | 1,217 | 1,184 | *1,184* | *1,184* |
| Long-Term Non-Operating Assets | 12 | 29 | 35 | *35* | *35* |
| **Total Assets** | **23,698** | **26,133** | **28,507** | ***30,586*** | ***32,220*** |
| Accounts Payable | 8,668 | 9,638 | 10,602 | *11,296* | *12,008* |
| Short-Term Debt | 1,445 | 1,507 | 876 | *876* | *876* |
| Deferred Tax Liabilities (Current) | 199 | 220 | 287 | *287* | *287* |
| Other Short-Term Liabilities | 1,284 | 1,584 | 1,776 | *1,776* | *1,776* |
| **Current Liabilities** | **11,596** | **12,949** | **13,541** | ***14,235*** | ***14,947*** |
| Long-Term Debt | 1,961 | 2,371 | 2,460 | *2,460* | *2,460* |
| Deferred Tax Liabilities (Long-Term) | 1,264 | 728 | 677 | *677* | *677* |
| Other Long-Term Operating Liabilities | 1,914 | 1,971 | 1,828 | *1,828* | *1,828* |
| Long-Term Non-Operating Liabilities | 150 | 1,636 | 4,108 | *4,158* | *4,208* |
| **Total Liabilities** | **16,885** | **19,655** | **22,614** | ***23,358*** | ***24,120*** |
| Preferred Stock | — | — | — | — | — |
| Common Stock | 83 | 83 | 83 | *83* | *83* |
| Additional Paid-in Capital | — | — | — | — | — |
| Retained Earnings (Deficit) | 5,137 | 6,246 | 5,927 | *6,879* | *7,751* |
| (Treasury Stock) | — | — | — | — | — |
| Other Equity | 1,415 | -76 | -383 | — | — |
| **Shareholder's Equity** | **6,635** | **6,253** | **5,627** | ***6,962*** | ***7,834*** |
| Minority Interest | 178 | 225 | 266 | *266* | *266* |
| **Total Equity** | **6,813** | **6,478** | **5,893** | ***7,228*** | ***8,100*** |

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|---|---|---|---|---|---|---|
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## Morningstar Analyst Forecasts

**Cash Flow** (EUR Mil)

| Fiscal Year Ends in December | 2013 | 2014 | 2015 | *Forecast* *2016* | *2017* |
|---|---|---|---|---|---|
| Net Income | 1,386 | -126 | -424 | *1,646* | *1,809* |
| Depreciation | 916 | 818 | 922 | *980* | *1,042* |
| Amortization | — | — | — | — | — |
| Stock-Based Compensation | — | — | — | — | — |
| Impairment of Goodwill | — | 137 | 1,004 | — | — |
| Impairment of Other Intangibles | — | 205 | 131 | — | — |
| Deferred Taxes | — | — | — | — | — |
| Other Non-Cash Adjustments | -356 | 1,434 | 1,180 | *50* | *50* |
| (Increase) Decrease in Accounts Receivable | 193 | -58 | 157 | *-410* | *-437* |
| (Increase) Decrease in Inventory | 54 | -185 | -287 | *-616* | *-526* |
| Change in Other Short-Term Assets | — | — | — | — | — |
| Increase (Decrease) in Accounts Payable | -73 | 132 | 70 | *694* | *712* |
| Change in Other Short-Term Liabilities | — | — | — | — | — |
| **Cash From Operations** | **2,120** | **2,357** | **2,753** | ***2,343*** | ***2,650*** |
| (Capital Expenditures) | -1,421 | -1,617 | -1,779 | *-1,500* | *-1,496* |
| Net (Acquisitions), Asset Sales, and Disposals | -415 | -337 | 511 | *-300* | *-300* |
| Net Sales (Purchases) of Investments | — | — | — | — | — |
| Other Investing Cash Flows | — | — | — | — | — |
| **Cash From Investing** | **-1,836** | **-1,954** | **-1,268** | ***-1,800*** | ***-1,796*** |
| Common Stock Issuance (or Repurchase) | 2 | -1 | -5 | — | — |
| Common Stock (Dividends) | -481 | -511 | -540 | *-644* | *-886* |
| Short-Term Debt Issuance (or Retirement) | -210 | 809 | -650 | — | — |
| Long-Term Debt Issuance (or Retirement) | -98 | -850 | -78 | — | — |
| Other Financing Cash Flows | -18 | 212 | -5 | *-50* | *-50* |
| **Cash From Financing** | **-805** | **-341** | **-1,278** | ***-694*** | ***-936*** |
| Exchange Rates, Discontinued Ops, etc. (net) | -15 | 24 | 5 | *383* | — |
| **Net Change in Cash** | **-536** | **86** | **212** | ***232*** | ***-82*** |

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|---|---|---|---|---|---|---|
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## Comparable Company Analysis

These companies are chosen by the analyst and the data are shown by nearest calendar year in descending market capitalization order.

### Valuation Analysis

| | | Price/Earnings | | | EV/EBITDA | | | Price/Free Cash Flow | | | Price/Book | | | Price/Sales | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Company/Ticker | Price/Fair Value | 2015 | 2016(E) | 2017(E) | 2015 | 2016(E) | 2017(E) | 2015 | 2016(E) | 2017(E) | 2015 | 2016(E) | 2017(E) | 2015 | 2016(E) | 2017(E) |
| General Electric Co GE USA | 0.98 | 23.8 | 19.7 | 17.2 | 24.6 | 11.4 | 10.5 | 38.6 | 21.3 | 17.0 | 3.0 | 3.3 | 3.7 | 2.5 | 2.1 | 2.0 |
| United Technologies Corp UTX USA | 0.84 | 15.4 | 15.7 | 15.6 | 10.7 | 9.7 | 9.5 | 16.0 | 15.0 | 15.4 | 2.9 | 3.2 | 3.1 | 1.4 | 1.5 | 1.4 |
| Average | | 19.6 | 17.7 | 16.4 | 17.7 | 10.6 | 10.0 | 27.3 | 18.2 | 16.2 | 3.0 | 3.3 | 3.4 | 2.0 | 1.8 | 1.7 |
| **Safran SA SAF FR** | **0.82** | **41.4** | **15.9** | **14.4** | **10.3** | **7.2** | **6.7** | **27.1** | **30.4** | **22.2** | **4.7** | **3.7** | **3.3** | **1.5** | **1.4** | **1.3** |

### Returns Analysis

| | | ROIC % | | | Adjusted ROIC % | | | Return on Equity % | | | Return on Assets % | | | Dividend Yield % | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Company/Ticker | Last Historical Year Total Assets (Mil) | 2015 | 2016(E) | 2017(E) | 2015 | 2016(E) | 2017(E) | 2015 | 2016(E) | 2017(E) | 2015 | 2016(E) | 2017(E) | 2015 | 2016(E) | 2017(E) |
| General Electric Co GE USA | 492,692 USD | 9.5 | 13.2 | 14.8 | 6.2 | 8.5 | 9.5 | -5.4 | 13.4 | 17.3 | -1.1 | 2.5 | 2.7 | 3.2 | 3.4 | 3.1 |
| United Technologies Corp UTX USA | 87,484 USD | 21.7 | 23.4 | 23.1 | 11.6 | 12.1 | 12.1 | 26.0 | 19.3 | 19.7 | 8.5 | 6.0 | 6.1 | 2.7 | 2.1 | 2.2 |
| Average | | 15.6 | 18.3 | 19.0 | 8.9 | 10.3 | 10.8 | 10.3 | 16.4 | 18.5 | 3.7 | 4.3 | 4.4 | 3.0 | 2.8 | 2.7 |
| **Safran SA SAF FR** | **28,507** EUR | **11.4** | **16.8** | **16.6** | **17.2** | **25.3** | **24.8** | **5.3** | **25.4** | **23.8** | **1.2** | **5.4** | **5.6** | **2.1** | **2.5** | **3.5** |

### Growth Analysis

| | | Revenue Growth % | | | EBIT Growth % | | | EPS Growth % | | | Free Cash Flow Growth % | | | Dividend/Share Growth % | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Company/Ticker | Last Historical Year Revenue (Mil) | 2015 | 2016(E) | 2017(E) | 2015 | 2016(E) | 2017(E) | 2015 | 2016(E) | 2017(E) | 2015 | 2016(E) | 2017(E) | 2015 | 2016(E) | 2017(E) |
| General Electric Co GE USA | 117,385 USD | 0.2 | 7.1 | 1.0 | -16.5 | 54.4 | 11.0 | 17.1 | 13.8 | 14.2 | 49.3 | -73.9 | 3.7 | 3.4 | — | — |
| United Technologies Corp UTX USA | 56,098 USD | -3.1 | 3.0 | 3.8 | -24.0 | 15.6 | 2.6 | -3.3 | 4.9 | 0.8 | 73.5 | -39.0 | 16.9 | 8.5 | -14.9 | 6.0 |
| Average | | -1.5 | 5.1 | 2.4 | -20.3 | 35.0 | 6.8 | 6.9 | 9.4 | 7.5 | 61.4 | -56.5 | 10.3 | 6.0 | -14.9 | 6.0 |
| **Safran SA SAF FR** | **17,414** EUR | **13.4** | **6.3** | **6.3** | **25.6** | **56.7** | **9.1** | **18.7** | **152.0** | **10.1** | **107.7** | **-72.4** | **48.1** | **15.0** | **12.1** | **37.7** |

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## Comparable Company Analysis

These companies are chosen by the analyst and the data are shown by nearest calendar year in descending market capitalization order.

### Profitability Analysis

| Company/Ticker | Last Historical Year Net Income (Mil) | Gross Margin % 2015 | 2016(E) | 2017(E) | EBITDA Margin % 2015 | 2016(E) | 2017(E) | Operating Margin % 2015 | 2016(E) | 2017(E) | Net Margin % 2015 | 2016(E) | 2017(E) | Free Cash Flow Margin % 2015 | 2016(E) | 2017(E) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Electric Co GE USA | 13,110 USD | 22.2 | 25.0 | 29.6 | 13.8 | 17.4 | 18.6 | 8.4 | 12.1 | 13.4 | 11.2 | 11.2 | 11.8 | 6.5 | 9.7 | 12.0 |
| United Technologies Corp UTX USA | 5,518 USD | 27.9 | 29.0 | 29.0 | 16.3 | 17.8 | 17.6 | 13.0 | 14.6 | 14.4 | 9.8 | 9.4 | 8.9 | 9.0 | 9.8 | 9.2 |
| Average | | 25.1 | 27.0 | 29.3 | 15.1 | 17.6 | 18.1 | 10.7 | 13.4 | 13.9 | 10.5 | 10.3 | 10.4 | 7.8 | 9.8 | 10.6 |
| **Safran SA SAF FR** | **641** EUR | **25.0** | **25.0** | **25.0** | **15.0** | **19.6** | **19.9** | **9.7** | **14.3** | **14.6** | **3.7** | **8.7** | **9.0** | **5.6** | **4.6** | **5.9** |

### Leverage Analysis

| Company/Ticker | Last Historical Year Total Debt (Mil) | Debt/Equity % 2015 | 2016(E) | 2017(E) | Debt/Total Cap % 2015 | 2016(E) | 2017(E) | EBITDA/Interest Exp. 2015 | 2016(E) | 2017(E) | Total Debt/EBITDA 2015 | 2016(E) | 2017(E) | Assets/Equity 2015 | 2016(E) | 2017(E) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Electric Co GE USA | 195,193 USD | 198.6 | 245.5 | 289.1 | 66.5 | 71.1 | 74.3 | 9.5 | 11.8 | 12.8 | 12.0 | 8.9 | 8.5 | 5.0 | 6.0 | 6.8 |
| United Technologies Corp UTX USA | 20,425 USD | 74.7 | 77.9 | 76.2 | 42.8 | 43.8 | 43.3 | 11.1 | 11.4 | 11.4 | 2.2 | 2.0 | 2.0 | 3.2 | 3.3 | 3.2 |
| Average | | 136.7 | 161.7 | 182.7 | 54.7 | 57.5 | 58.8 | 10.3 | 11.6 | 12.1 | 7.1 | 5.5 | 5.3 | 4.1 | 4.7 | 5.0 |
| **Safran SA SAF FR** | **3,336** EUR | **59.3** | **47.9** | **42.6** | **37.2** | **32.4** | **29.9** | **11.7** | **18.1** | **19.6** | **1.3** | **0.9** | **0.9** | **5.1** | **4.4** | **4.1** |

### Liquidity Analysis

| Company/Ticker | Market Cap (Mil) | Cash per Share 2015 | 2016(E) | 2017(E) | Current Ratio 2015 | 2016(E) | 2017(E) | Quick Ratio 2015 | 2016(E) | 2017(E) | Cash/Short-Term Debt 2015 | 2016(E) | 2017(E) | Payout Ratio % 2015 | 2016(E) | 2017(E) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Electric Co GE USA | 259,288 USD | 7.04 | 5.71 | 5.79 | 1.58 | 1.44 | 1.42 | 1.37 | 1.23 | 1.21 | 1.41 | 1.08 | 1.02 | -150.0 | 72.8 | 63.2 |
| United Technologies Corp UTX USA | 84,852 USD | 8.01 | 5.92 | 8.33 | 1.18 | 1.10 | 1.20 | 0.82 | 0.74 | 0.82 | 6.40 | 4.46 | 6.08 | 29.7 | 35.0 | 35.0 |
| Average | | 7.53 | 5.82 | 7.06 | 1.38 | 1.27 | 1.31 | 1.10 | 0.99 | 1.02 | 3.91 | 2.77 | 3.55 | -60.2 | 53.9 | 49.1 |
| **Safran SA SAF FR** | **25,620** EUR | **4.42** | **4.99** | **4.79** | **1.04** | **1.08** | **1.09** | **0.71** | **0.72** | **0.71** | **2.11** | **2.37** | **2.28** | **183.0** | **40.4** | **50.4** |

# Research Methodology for Valuing Companies

**Overview**

At the heart of our valuation system is a detailed projection of a company's future cash flows, resulting from our analysts' research. Analysts create custom industry and company assumptions to feed income statement, balance sheet, and capital investment assumptions into our globally standardized, proprietary discounted cash flow, or DCF, modeling templates. We use scenario analysis, in-depth competitive advantage analysis, and a variety of other analytical tools to augment this process. Moreover, we think analyzing valuation through discounted cash flows presents a better lens for viewing cyclical companies, high-growth firms, businesses with finite lives (e.g., mines), or companies expected to generate negative earnings over the next few years. That said, we don't dismiss multiples altogether but rather use them as supporting cross-checks for our DCF-based fair value estimates. We also acknowledge that DCF models offer their own challenges (including a potential proliferation of estimated inputs and the possibility that the method may miss short-term market-price movements), but we believe these negatives are mitigated by deep analysis and our long-term approach.

Morningstar, Inc. and its affiliates ("Morningstar", "we", "our") believes that a company's intrinsic worth results from the future cash flows it can generate. The Morningstar Rating for stocks identifies stocks trading at a discount or premium to their intrinsic worth—or fair value estimate, in Morningstar terminology. Five-star stocks sell for the biggest risk-adjusted discount to their fair values, whereas 1-star stocks trade at premiums to their intrinsic worth.

Four key components drive the Morningstar rating: (1) our assessment of the firm's economic moat, (2) our estimate of the stock's fair value, (3) our uncertainty around that fair value estimate and (4) the current market price. This process ultimately culminates in our single-point star rating.

**1. Economic Moat**

The concept of an economic moat plays a vital role not only in our qualitative assessment of a firm's long-term investment potential, but also in the actual calculation of our fair value estimates.  An economic moat is a structural feature that allows a firm to sustain excess profits over a long period of time. We define economic profits as returns on invested capital (or ROIC) over and above our estimate of a firm's cost of capital, or weighted average cost of capital (or WACC). Without a moat, profits are more susceptible to competition. We have identified five sources of economic moats: intangible assets, switching costs, network effect, cost advantage, and efficient scale.

Companies with a narrow moat are those we believe are more likely than not to achieve normalized excess returns for at least the next 10 years. Wide-moat companies are those in which we have very high confidence that excess returns will remain for 10 years, with excess returns more likely than not to remain for at least 20 years. The longer a firm generates economic profits, the higher its intrinsic value. We believe low-quality, no-moat companies will see their normalized returns gravitate toward the firm's cost of capital more quickly than companies with moats.

To assess the sustainability of excess profits, analysts perform ongoing assessments of the moat trend. A firm's moat trend is positive in cases where we think its sources of competitive advantage are growing stronger; stable where we don't anticipate changes to competitive advantages over the next several years; or negative when we see signs of deterioration.

**2. Estimated Fair Value**

Combining our analysts' financial forecasts with the firm's economic moat helps us assess how long returns on invested capital are likely to exceed the firm's cost of capital. Returns of firms with a wide economic moat rating are assumed to fade to the perpetuity period over a longer period of time than the returns of narrow-moat firms, and both will fade slower than no-moat firms, increasing our estimate of their intrinsic value.

Our model is divided into three distinct stages:

**Stage I: Explicit Forecast**

In this stage, which can last five to 10 years, analysts make full financial statement forecasts, including items such as revenue, profit margins, tax rates, changes in working-capital accounts, and capital spending. Based on these projections, we calculate earnings before interest, after taxes (EBI) and the net new investment (NNI) to derive our annual free cash flow forecast.

**Stage II: Fade**

The second stage of our model is the period it will take the company's return on new invested capital—the return on capital of the next dollar invested ("RONIC")—to decline (or rise) to its cost of capital. During the Stage II period, we use a formula to approximate cash flows in lieu of explicitly modeling the income statement, balance sheet, and cash flow statement as we do in Stage I. The length of the second stage depends on the strength of the company's economic moat. We forecast this period to last anywhere from one year (for companies with no economic moat) to 10–15 years or more (for wide-moat companies). During this period, cash flows are forecast using four assumptions: an average growth rate for EBI over the period, a normalized investment rate, average return on new invested capital (RONIC), and the number of years until perpetuity, when excess returns cease. The investment rate and return on new invested capital decline until a perpetuity value is calculated. In the case of firms that do not earn their cost of capital, we assume marginal ROICs rise to the firm's cost of capital (usually attributable to less reinvestment), and we may truncate the second stage.

**Stage III: Perpetuity**

Once a company's marginal ROIC hits its cost of capital, we calculate a continuing value, using a standard perpetuity formula. At perpetuity, we assume that any growth or decline or investment in the business neither creates nor destroys value and that any new investment provides a return in line with estimated WACC.

Because a dollar earned today is worth more than a dollar earned tomorrow, we discount our projections of cash flows in stages I, II, and III to arrive at a total pres-

**Morningstar Research Methodology for Valuing Companies**

# Research Methodology for Valuing Companies

ent value of expected future cash flows. Because we are modeling free cash flow to the firm—representing cash available to provide a return to all capital providers—we discount future cash flows using the WACC, which is a weighted average of the costs of equity, debt, and preferred stock (and any other funding sources), using expected future proportionate long-term, market-value weights.

**3. Uncertainty around that fair value estimate**
Morningstar's Uncertainty Rating captures a range of likely potential intrinsic values for a company and uses it to assign the margin of safety required before investing, which in turn explicitly drives our stock star rating system. The Uncertainty Rating represents the analysts' ability to bound the estimated value of the shares in a company around the Fair Value Estimate, based on the characteristics of the business underlying the stock, including operating and financial leverage, sales sensitivity to the overall economy, product concentration, pricing power, and other company-specific factors.

Analysts consider at least two scenarios in addition to their base case: a bull case and a bear case. Assumptions are chosen such that the analyst believes there is a 25% probability that the company will perform better than the bull case, and a 25% probability that the company will perform worse than the bear case. The distance between the bull and bear cases is an important indicator of the uncertainty underlying the fair value estimate.

Our recommended margin of safety widens as our uncertainty of the estimated value of the equity increases. The more uncertain we are about the estimated value of the equity, the greater the discount we require relative to our estimate of the value of the firm before we would recommend the purchase of the shares. In addition, the uncertainty rating provides guidance in portfolio construction based on risk tolerance.

Our uncertainty ratings for our qualitative analysis are low, medium, high, very high, and extreme.

- ►**Low:** margin of safety for 5-star rating is a 20% discount and for 1-star rating is 25% premium.
- ►**Medium:** margin of safety for 5-star rating is a 30% discount and for 1-star rating is 35% premium.
- ►**High:** margin of safety for 5-star rating is a 40% discount and for 1-star rating is 55% premium.
- ►**Very High:** margin of safety for 5-star rating is a 50% discount and for 1-star rating is 75% premium.
- ►**Extreme:** Stock's uncertainty exceeds the parameters we have set for assigning the appropriate margin of safety.

**4. Market Price**
The market prices used in this analysis and noted in the report come from exchange on which the stock is listed which we believe is a reliable source.

For more detail information about our methodology, please go to http://global.morningstar.com/equitydisclosures

**Morningstar Star Rating for Stocks**
Once we determine the fair value estimate of a stock, we compare it with the stock's current market price on a daily basis, and the star rating is automatically re-calculated at the market close on every day the market on which the stock is listed is open. Our analysts keep close tabs on the companies they follow, and, based on thorough and ongoing analysis, raise or lower their fair value estimates as warranted.

Please note, there is no predefined distribution of stars. That is, the percentage of stocks that earn 5 stars can fluctuate daily, so the star ratings, in the aggregate, can serve as a gauge of the broader market's valuation. When there are many 5-star stocks, the stock market as a whole is more undervalued, in our opinion, than when very few companies garner our highest rating.

We expect that if our base-case assumptions are true the market price will converge on our fair value estimate over time, generally within three years (although it is impossible to predict the exact time frame in which market prices may adjust).

Our star ratings are guideposts to a broad audience and individuals must consider their own specific investment goals, risk tolerance, tax situation, time horizon, income needs, and complete investment portfolio, among other factors.

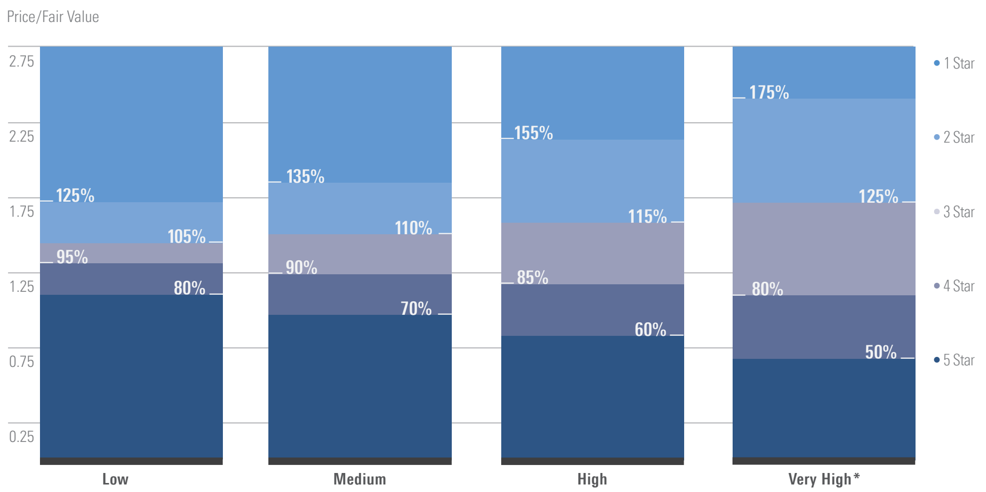
The Morningstar Star Ratings for stocks are defined below:

**Five Stars ★★★★★**
We believe appreciation beyond a fair risk-adjusted return is highly likely over a multiyear time frame. Scenario analysis developed by our analysts indicates that the current market price represents an excessively pessimistic outlook, limiting downside risk and maximizing upside potential.

**Four Stars ★★★★**
We believe appreciation beyond a fair risk-adjusted return is likely.

**Three Stars ★★★**
Indicates our belief that investors are likely to receive a fair risk-adjusted return (approximately cost of equity).

**Morningstar Research Methodology for Valuing Companies**




* Occasionally a stock's uncertainty will be too high for us to estimate, in which case we label it Extreme.

# Research Methodology for Valuing Companies

**Two Stars ★★**
We believe investors are likely to receive a less than fair risk-adjusted return.

**One Star ★**
Indicates a high probability of undesirable risk-adjusted returns from the current market price over a multiyear time frame, based on our analysis. Scenario analysis by our analysts indicates that the market is pricing in an excessively optimistic outlook, limiting upside potential and leaving the investor exposed to Capital loss.

Other Definitions:

**Last Price:** Price of the stock as of the close of the market of the last trading day before date of the report.

**Stewardship Rating:** Represents our assessment of management's stewardship of shareholder capital, with particular emphasis on capital allocation decisions. Analysts consider companies' investment strategy and valuation, financial leverage, dividend and share buyback policies, execution, compensation, related party transactions, and accounting practices. Corporate governance practices are only considered if they've had a demonstrated impact on shareholder value. Analysts assign one of three ratings: "Exemplary," "Standard," and "Poor." Analysts judge stewardship from an equity holder's perspective. Ratings are determined on an absolute basis. Most companies will receive a Standard rating, and this is the default rating in the absence of evidence that managers have made exceptionally strong or poor capital allocation decisions.

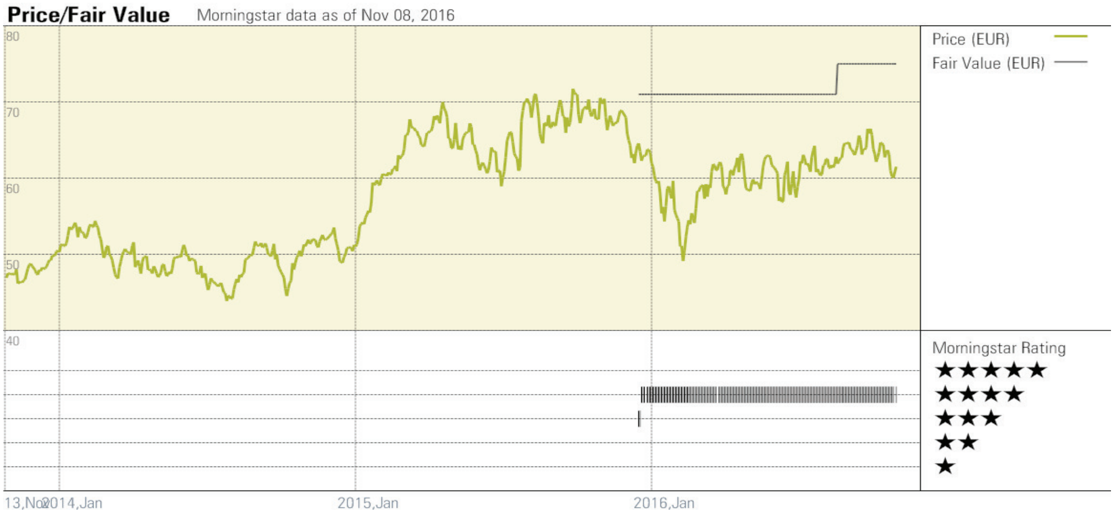
**Quantitative Valuation:** Using the below terms, intended to denote the relationship between the security's Last Price and Morningstar's quantitative fair value estimate for that security.

- **Undervalued:** Last Price is below Morningstar's quantitative fair value estimate.
- **Farily Valued:** Last Price is in line with Morningstar's quantitative fair value estimate.
- **Overvalued:** Last Price is above Morningstar's quantitative fair value estimate.

**Risk Warning**
Please note that investments in securities are subject to market and other risks and there is no assurance or guarantee that the intended investment objectives will be achieved. Past performance of a security may or may not be sustained in future and is no indication of future performance. A security investment return and an investor's principal value will fluctuate so that, when redeemed, an investor's shares may be worth more or less than their original cost. A security's current investment performance may be lower or higher than the investment performance noted within the report. Morningstar's Uncertainty Rating serves as a useful data point with respect to sensitivity analysis of the assumptions used in our determining a fair value price.

# Safran SA SAF (XPAR) | ★★★★

| Last Price | Fair Value | Uncertainty | Economic Moat™ | Moat Trend™ | Stewardship | Industry Group |
|---|---|---|---|---|---|---|
| 61.52 EUR | 75.00 EUR | Medium | Wide | Stable | Standard | Aerospace & Defense |

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## Safran SA SAF (XPAR) | ★★★★

| Last Price | Fair Value | Uncertainty | Economic Moat™ | Moat Trend™ | Stewardship | Industry Group |
|---|---|---|---|---|---|---|
| 61.52 EUR | 75.00 EUR | Medium | Wide | Stable | Standard | Aerospace & Defense |

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