Brand Finance®



Chemicals 10 2017

The annual report on the world's most valuable chemicals brands

March 2017

Foreword



David Haigh, CEO, Brand Finance

What is the purpose of a strong brand; to attract customers, to build loyalty, to motivate staff? All true, but for a commercial brand at least, the first answer must always be 'to make money'.

Huge investments are made in the design, launch and ongoing promotion of brands. Given their potential financial value, this makes sense. Unfortunately, most organisations fail to go beyond that, missing huge opportunities to effectively make use of what are often their most important assets. Monitoring of brand performance should be the next step, but is often sporadic. Where it does take place it frequently lacks financial rigour and is heavily reliant on qualitative measures poorly understood by non-marketers.

As a result, marketing teams struggle to communicate the value of their work and boards then underestimate the significance of their brands to the business. Skeptical finance teams, unconvinced by what they perceive as marketing mumbo jumbo may fail to agree necessary investments. What marketing spend there is can end up poorly directed as marketers are left to operate with insufficient financial guidance or accountability. The end result can be a slow but

steady downward spiral of poor communication, wasted resources and a negative impact on the bottom line.

Brand Finance bridges the gap between the marketing and financial worlds. Our teams have experience across a wide range of disciplines from market research and visual identity to tax and accounting. We understand the importance of design, advertising and marketing, but we also believe that the ultimate and overriding purpose of brands is to make money. That is why we connect brands to the bottom line.

By valuing brands, we provide a mutually intelligible language for marketers and finance teams. Marketers then have the ability to communicate the significance of what they do and boards can use the information to chart a course that maximises profits.

Without knowing the precise, financial value of an asset, how can you know if you are maximising your returns? If you are intending to license a brand, how can you know you are getting a fair price? If you are intending to sell, how do you know what the right time is? How do you decide which brands to discontinue, whether to rebrand and how to arrange your brand architecture? Brand Finance has conducted thousands of brand and branded business valuations to help answer these questions.

Brand Finance's recently conducted share price study revealed the compelling link between strong brands and stock market performance. It was found that investing in the most highly branded companies would lead to a return almost double that of the average for the S&P 500 as a whole.

Acknowledging and managing a company's intangible assets taps into the hidden value that lies within it. The following report is a first step to understanding more about brands, how to value them and how to use that information to benefit the business. The team and I look forward to continuing the conversation with you.

Contents

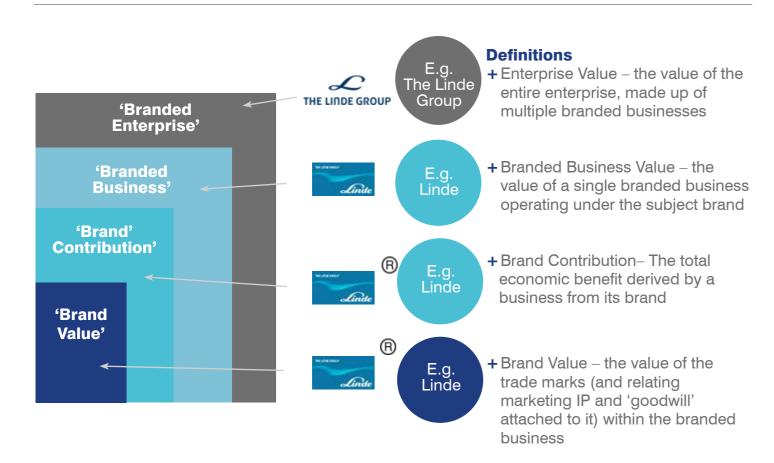
Foreword	2
Definitions	4
Methodology	6
Executive Summary	8
Understand Your Brand's Value	10
How We Can Help	12
Contact Details	13

2. Brand Finance Chemicals 10 March 2017

Brand Finance Chemicals 10 March 2017

3.

Definitions



Branded Business Value

A brand should be viewed in the context of the business in which it operates. For this reason Brand Finance always conducts a Branded Business Valuation as part of any brand valuation. Where a company has a purely mono-branded architecture, the business value is the same as the overall company value or 'enterprise value'.

In the more usual situation where a company owns multiple brands, business value refers to the value of the assets and revenue stream of the business line attached to that brand specifically. We evaluate the full brand value chain in order to understand the links between marketing investment, brand tracking data, stakeholder behaviour and business value to maximise the returns business owners can obtain from their brands.

Brand Contribution

The brand values contained in our league tables are those of the potentially transferable brand asset only, but for marketers and managers alike, an assessment of overall brand contribution to a business provides powerful insights to help optimise performance.

Brand Contribution represents the overall uplift in shareholder value that the business derives from owning the brand rather than operating a generic brand.

Brands affect a variety of stakeholders, not just customers but also staff, strategic partners, regulators, investors and more, having a significant impact on financial value beyond what can be bought or sold in a transaction.

Effect of a Brand on Stakeholders



Brand Value

In the very broadest sense, a brand is the focus for all the expectations and opinions held by customers, staff and other stakeholders about an organisation and its products and services. However, when looking at brands as business assets that can be bought, sold and licensed, a more technical definition is required.

Brand Finance helped to craft the internationally recognised standard on Brand Valuation, ISO 10668. That defines a brand as "a marketing-related intangible asset including, but not limited to, names, terms, signs, symbols, logos and designs, or a combination of these, intended to identify goods, services or entities, or a combination of these, creating distinctive images and associations in the minds of stakeholders, thereby generating economic benefits/value".

Brand Strength

Brand Strength is the part of our analysis most directly and easily influenced by those responsible for marketing and brand management. In order to determine the strength of a brand we have developed the Brand Strength Index (BSI). We analyse marketing investment, brand equity (the goodwill accumulated with customers, staff and other stakeholders) and finally the impact of those on business performance.

Following this analysis, each brand is assigned a BSI score out of 100, which is fed into the brand value calculation. Based on the score, each brand in the league table is assigned a rating between AAA+ and D in a format similar to a credit rating. AAA+ brands are exceptionally strong and well managed while a failing brand would be assigned a D grade.

4. Brand Finance Chemicals 10 March 2017 5.

Methodology

League Table Valuation Methodology

Brand Finance calculates the values of the brands in its league tables using the 'Royalty Relief approach'. This approach involves estimating the likely future sales that are attributable to a brand and calculating a royalty rate that would be charged for the use of the brand, i.e. what the owner would have to pay for the use of the brand—assuming it were not already owned.

The steps in this process are as follows:

1 Calculate brand strength on a scale of 0 to 100 based on a number of attributes such as emotional connection, financial performance and sustainability. among others. This score is known as the Brand Strength Index, and is calculated using brand data from the BrandAsset® Valuator database, the world's largest database of brands, which measures brand equity, consideration and emotional imagery attributes to assess brand personality in a category agnostic manner.

Brand strength Brand index (BSI)

Brand investment **Brand** equity Brand performance

Brand strength expressed as a BSI score out of 100.

'Rovalty rate'



BSI score applied to an appropriate sector royalty rate range.

2 Determine the royalty rate range for the respective brand sectors. This is done by reviewing comparable licensing agreements sourced from Brand Finance's extensive database of license agreements and other online databases. **3** Calculate royalty rate. The brand strength score is

- applied to the royalty rate range to arrive at a royalty rate. For example, if the royalty rate range in a brand's sector is 0-5% and a brand has a brand strength score of 80 out of 100, then an appropriate royalty rate for the use of this brand in the given sector will be 4%.
- 4 Determine brand specific revenues estimating a proportion of parent company revenues attributable to a specific brand.
- 5 Determine forecast brand specific revenues using a function of historic revenues, equity analyst forecasts and economic growth rates.
- 6 Apply the royalty rate to the forecast revenues to derive brand revenues.
- 7 Brand revenues are discounted post tax to a net present value which equals the brand value.

Brand revenues

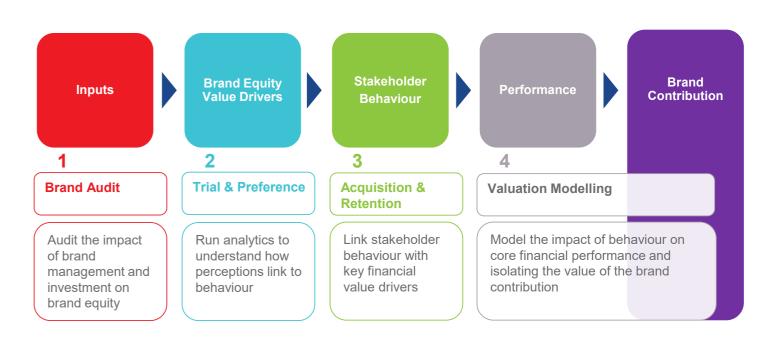
Brand value



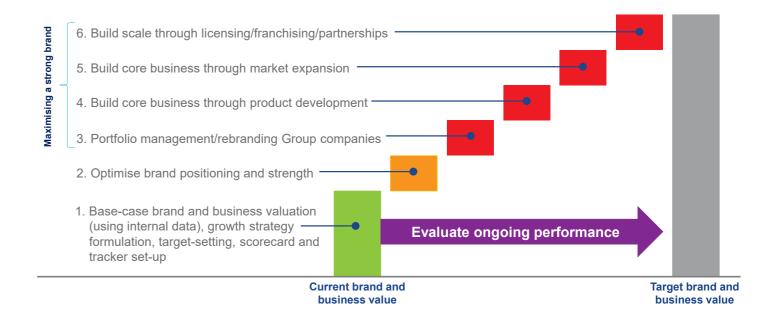
Royalty rate applied to forecast revenues to derive brand values.

Post-tax brand revenues are discounted to a net present value (NPV) which equals the brand value.

Brand Finance Typical Project Approach



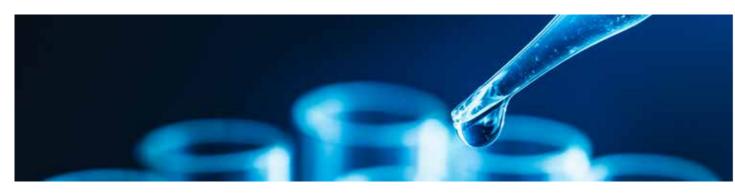
How We Help to Maximise Value



6 Brand Finance Chemicals 10 March 2017 Brand Finance Chemicals 10 March 2017 7

Executive Summary

Chemicals 10



BASF remains the most valuable chemicals brand with a value of US\$6.6 billion. The company made a net profit of US\$729 million in the final quarter of 2016 and recently completed the acquisition of Albemarle's global surface treatment business, Chemetall. BASF is aiming to grow profitably in downstream, innovation and solution-focused businesses. In line with these objectives, its brand identity is intended to signify 'connectedness, innovative solutions and value-adding partnerships'.

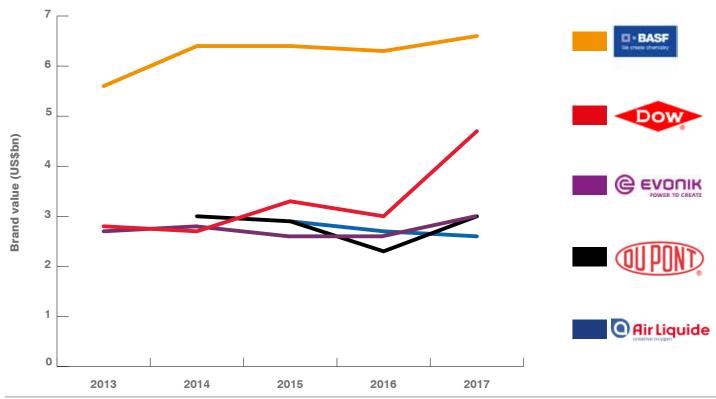
Sustainability is a further theme, borne out by the strapline, "We create chemistry for a sustainable future". BASF, like other brands in the chemicals sector, is able to effect genuine environmental change to support what its branding promises. Just one recent example has been the introduction of a new enzyme (Natuphos E) for agricultural feed to reduce the production of phosphorus, an excess of which can destabilise ecosystems.

Dow, the second most valuable and second fastest growing brand, has a value of US\$4.7 billion after enjoying 57% growth. At the end of 2015, the company announced that it had commenced operations at its new ethylene production facility in Freeport. Dow's Gulf Coast investments will provide a solid foundation for long-term growth whilst bolstering market competitiveness.

value-adding Dow is nearing the end of the regulatory approval process for its upcoming merger with DuPont, whose brand value has grown 29% to US\$3 billion. The US\$130 billion deal could be concluded as early as the second quarter of this year. The aim of the chemicals the mega-merger is to create a stronger agricultural promises. A rebrand or new combined brand could result in 'DowDuPont' topping the league table next year, however given significant anti-trust concerns, keeping the brands separate post-merger could be advisable.



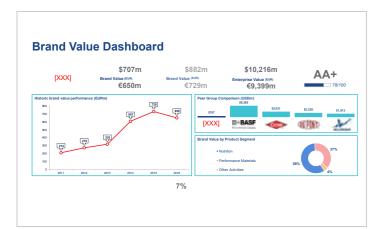
Brand Value Over Time



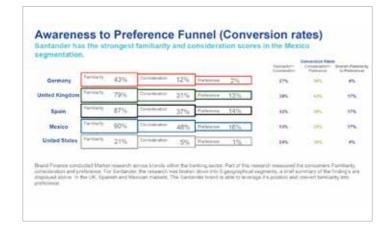
8. Brand Finance Chemicals 10 March 2017

Brand Finance Chemicals 10 March 2017

Understand Your Brand's Value









A Brand Value Report provides a complete breakdown of the assumptions, data sources and calculations used to arrive at your brand's value.

Each report includes expert recommendations for growing brand value to drive business performance and offers a cost-effective way to gaining a better understanding of your position against competitors.

A full report includes the following sections which can also be purchased individually.

Brand Valuation Summary

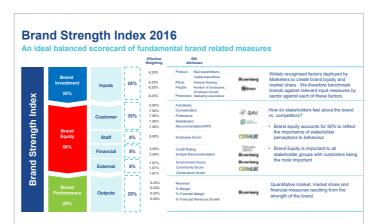
Overview of the brand valuation including executive summary, explanation of changes in brand value and historic and peer group comparisons.

- + Internal understanding of brand
- + Brand value tracking
- + Competitor benchmarking
- + Historical brand value

Brand Strength Index

A breakdown of how the brand performed on various metrics of brand strength, benchmarked against competitor brands in a balanced scorecard framework.

- + Brand strength tracking
- + Brand strength analysis
- + Management KPI's
- + Competitor benchmarking









Royalty Rates

Analysis of competitor royalty rates, industry royalty rate ranges and margin analysis used to determine brand specific royalty rate.

- + Transfer pricing
- + Licensing/ franchising negotiation
- + International licensing
- + Competitor benchmarking

Cost of Capital

A breakdown of the cost of capital calculation, including risk free rates, brand debt risk premiums and the cost of equity through CAPM.

+ Independent view of cost of capital for internal valuations and project appraisal exercises

Trademark Audit

Analysis of the current level of protection for the brands word marks and trademark iconography highlighting areas where the marks are in need of protection.

- + Highlight unprotected marks
- + Spot potential infringement
- + Trademark registration strategy

For more information regarding our League Table Reports, please contact:

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10. Brand Finance Chemicals 10 March 2017 11.

How we can help

1. Valuation: What are my intangible assets worth? Valuations may be conducted for technical purposes and to set a baseline against which potential strategic brand scenarios can be evaluated. Branded Business Valuation Trademark Valuation Intangible Asset Valuation Brand Contribution

4. Transactions: Is it a good deal? Can I leverage my intangible assets?

Transaction services help buyers, sellers and owners of branded businesses get a better deal by leveraging the value of their intangibles.

- M&A Due Diligence
- Tax & Transfer Pricing
- Franchising & Licensing Expert Witness

FINANCE

+ Branded Business Valuation

+ Intangible Asset Valuation

+ Market Research Analytics

+ Brand Contribution

+ Brand Governance

+ Brand Audit

+ Trademark Valuation

We help marketers to connect We provide financiers and auditors with an independent their brands to business performance by evaluating the assessment on all forms of return on investment (ROI) of brand and intangible asset brand based decisions and valuations. strategies.

- + Branded Business Valuation
- + Brand Contribution
- + Trademark Valuation
- + Intangible Asset Valuation
- + Brand Audit
- + Market Research Analytics
- + Brand Scorecard Tracking + Brand Scorecard Tracking
- + Return on Marketing + Return on Marketing Investment Investment + Brand Transition
- + Brand Transition
- + Brand Governance

+ Franchising & Licensing

- + Brand Architecture & + Brand Architecture & Portfolio Management Portfolio Management
- + Brand Positioning & + Brand Positioning & Extension Extension
 - + Mergers, Acquisitions and Finance Raising Due Diligence
 - + Franchising & Licensing
 - + Tax & Transfer Pricing
 - + Expert Witness

2. Analytics: How can I improve marketing effectiveness?

Analytical services help to uncover drivers of demand and insights. Identifying the factors which drive consumer behaviour allow an understanding of how brands create bottom-line impact.

- Market Research Analytics Brand Audits
- Brand Scorecard Tracking Return on Marketing Investment

3. Strategy: How can I increase the value of my branded business?

Strategic marketing services enable brands to be leveraged to grow businesses. Scenario modelling will identify the best opportunities. ensuring resources are allocated to those activities which have the most impact on brand and business value.

Brand Transition

Brand &

Business Value

- Brand Architecture & Portfolio Management
- Brand Positioning & Extension
 - **LEGAL**

We help brand owners and fiscal authorities to understand the implications of different tax, transfer pricing and brand ownership arrangements.

TAX

We help clients to enforce and exploit their intellectual property rights by providing independent expert advice inand outside of the courtroom.

- + Branded Business Valuation
- + Brand Contribution
- + Trademark Valuation
- + Intangible Asset Valuation
- + Brand Audit
- + Market Research Analytics
- + Franchising & Licensing + Tax & Transfer Pricing
- + Expert Witness
- + Branded Business Valuation + Brand Contribution
 - + Trademark Valuation

 - + Intangible Asset Valuation
 - + Brand Audit
 - + Tax & Transfer Pricing
 - + Expert Witness

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The opinions and financial analysis expressed in the report are not to be construed as providing investment or business advice. Brand Finance does not intend the report to be relied upon for any reason and excludes all liability to any body, government

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For further information on Brand Finance®'s services and valuation experience, please contact yo

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12 Brand Finance Chemicals 10 March 2017 Brand Finance Chemicals 10 March 2017 13.

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