Brand Finance[®]





Food Safety 2018

An independent brand impact analysis report July 2018

In collaboration with:

SMART SENSE

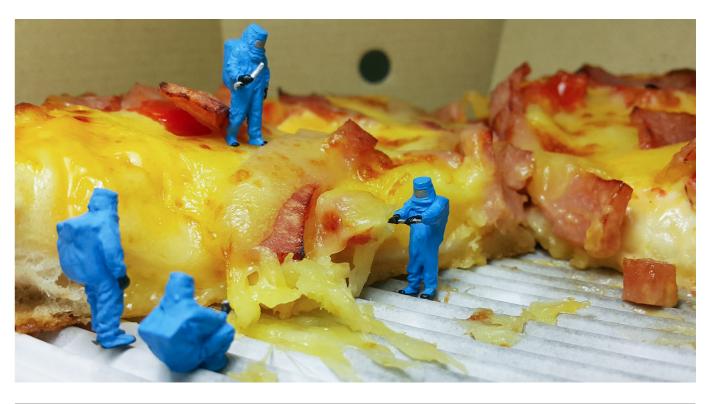
Executive Summary.

Quantifying Brand Risk from a Food Safety Incident

- Restaurants and food service operators are exposed to significant risk emanating from a food safety incident.
- in the Restaurant and Food Services industry.
- Drawing on Brand Finance's annual research study into the world's most valuable and strongest brands, the from the Brand Finance Commercial Services 50 league tables.
- The analysis hypothesizes the potential impact on the brand's Forecast Revenues and Brand Strength Index (BSI). These reflect two key elements that affect the value of the brand.

Business Value at Risk

- represents 19% of the total value of the industry.
- Taking a single case: Darden Group would have up to \$2.4 billion business value at risk if a food incident happened, which equals to about 22% of its total Enterprise Value.
- Darden's BSI score would drop significantly, and its revenue would face an immediate decrease of over 50%, with a recovery period of at least 3 years.



Disclaimer

Brand Finance has produced this study with an independent and unbiased analysis. The values derived and opinions produced in this study are based only on publicly available information and certain assumptions that Brand Finance used where such data was deficient or unclear. Brand Finance accepts no responsibility and will not be liable in the event that the publicly available information relied upon is subsequently found to be inaccurate.

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 exclude allliability to any body, government or organisation.

Financial support for the report was provided by SmartSense by Digi with Brand Finance retaining complete responsibility for its analysis, findings, and conclusions.



• This study provides a research-based approach to measuring the impact of a food safety incident on businesses

analysis includes brands from the 2018 iterations of the Brand Finance Restaurants 25 and food services brands

• The value at risk in the industry is \$104 billion - equivalent to the GDP of Ukraine, Morocco, or Ecuador - which

About Brand Finance.

Brand Finance is the world's leading independent brand valuation and strategy consultancy.

Brand Finance was set up in 1996 with the aim of 'bridging the gap between marketing and finance'. For more than 20 years, we have helped companies and organizations of all types to connect their brands to the bottom line.

We pride ourselves on four key strengths:

- Independence
- Technical Credibility
- Transparency
- Expertise

Brand Finance puts thousands of the world's biggest brands to the test every year, evaluating which are the strongest and most valuable.

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About SmartSense.

SmartSense solutions drive operational excellence in organizations by improving regulatory compliance, increasing quality, and optimizing efficiency through wireless sensors and digital checklists.

SmartSense automates monitoring for food safety, pharmacy safety, product quality, and preventative equipment maintenance. Today, SmartSense has earned the trust of the most critical government, commercial, and non-profit institutions in the world. Our systems enable real-time sensor-driven decisions at over 2,000 organizations in 75 countries.

For more information, please visit: **www.smartsense.co**

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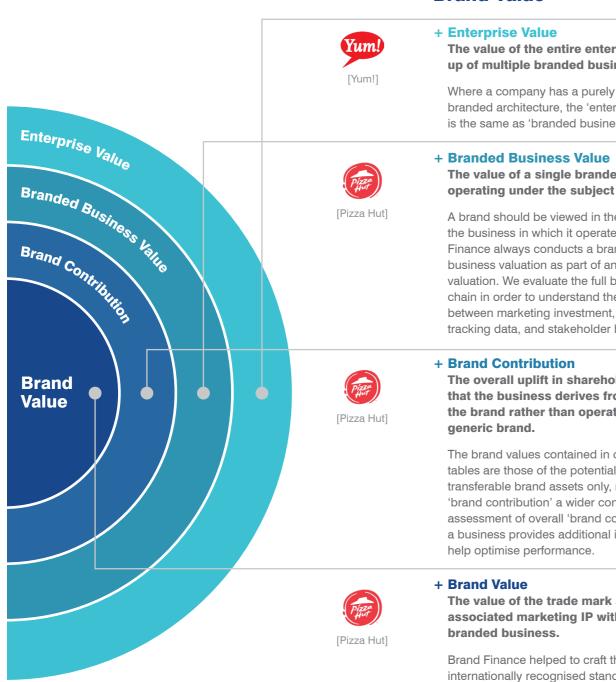
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Definitions.



Brand Value

The value of the entire enterprise, made up of multiple branded businesses. Where a company has a purely monobranded architecture, the 'enterprise value' is the same as 'branded business value' The value of a single branded business operating under the subject brand. A brand should be viewed in the context of the business in which it operates. Brand

Finance always conducts a branded business valuation as part of any brand valuation. We evaluate the full brand value chain in order to understand the links between marketing investment, brandtracking data, and stakeholder behaviour.

The overall uplift in shareholder value that the business derives from owning the brand rather than operating a

The brand values contained in our league tables are those of the potentially transferable brand assets only, making 'brand contribution' a wider concept. An assessment of overall 'brand contribution' to a business provides additional insights to

The value of the trade mark and associated marketing IP within the

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

Brand Strength

Brand Strength is the efficacy of a brand's performance on intangible measures, relative to its competitors.

In order to determine the strength of a brand, we look at Marketing Investment, Stakeholder Equity, and the impact of those on Business Performance.





Each brand is assigned a Brand Strength Index (BSI) score out of 100, which feeds into the brand value calculation. Based on the score, each brand is assigned a corresponding rating up to AAA+ in a format similar to a credit rating.

Analysing the three brand strength measures helps inform managers of a brand's potential for future success.

Widely recognised factors deployed by marketers to create brand loyalty and

Perceptions of the brand among different stakeholder groups, with customers

Quantitative market and financial measures representing the success of the

Marketing Investment

• A brand that has high Marketing Investment but low Stakeholder Equity may be on a path to growth. This high investment is likely to lead to future performance in Stakeholder Equity which would in turn lead to better Business Performance in the future. • However, high Marketing Investment over an extended period with little improvement in Stakeholder Equity would imply that the brand is unable to shape customers' preference.

Stakeholder Equity

• The same is true for Stakeholder Equity. If a company has high Stakeholder Equity, it is likely that Business Performance will improve in the future.

• However, if the brand's poor Business Performance persists, it would suggest that the brand is inefficient compared to its competitors in transferring stakeholder sentiment to a volume or price premium.

Business Performance

• Finally, if a brand has a strong Business Performance but scores poorly on Stakeholder Equity, it would imply that, in the future, the brand's ability to drive value will diminish. • However, if it is able to sustain these higher outputs, it shows that the brand is particularly efficient at creating value from sentiment compared to its competitors.

Methodology.

Brand Finance calculates the values of the brands in its league tables using the Royalty Relief approach - a brand valuation method compliant with the industry standards set in ISO 10668.

This involves estimating the likely future revenues that are attributable to a brand by calculating a royalty rate that would be charged for its use, to arrive at a 'brand value' understood as a net economic benefit that a licensor would achieve by licensing the brand in the open market.

The steps in this process are as follows:

- 1 Calculate brand strength using a balanced scorecard of metrics assessing Marketing Investment, Stakeholder Equity, and Business Performance. Brand strength is expressed as a Brand Strength Index (BSI) score on a scale of 0 to 100.
- **2** Determine royalty range for each industry, reflecting the importance of brand to purchasing decisions. In luxury, the maximum percentage is high, in extractive industry, where goods are often commoditised, it is lower. This is done by reviewing comparable licensing agreements sourced from Brand Finance's extensive database.
- 3 Calculate royalty rate. The BSI score is applied to the royalty range to arrive at a royalty rate. For example, if the royalty range in a sector is 0-5% and a brand has a BSI 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 by estimating a proportion of parent company revenues attributable to a brand.
- 5 Determine forecast 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 Strength Index (BSI) Brand strength

expressed as a BSI score out of 100.



Brand **Royalty Rate**

BSI score applied to an appropriate sector royalty range.

Brand Revenues

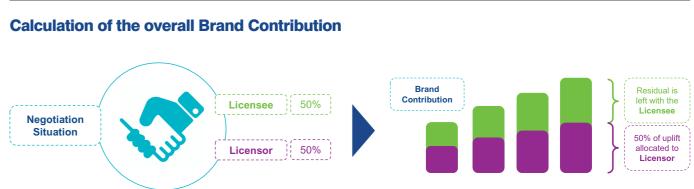
Royalty rate applied to forecast revenues to derive brand value.



Brand Value

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

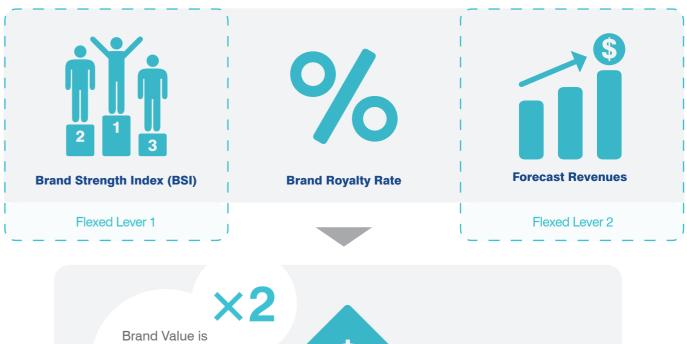
Brand Impact Analysis.



- Brand Contribution assessment is based on the calculated Brand Value.
- for the equivalent Brand Contribution to the licensee.
- Our experience shows that the starting point in licensing negotiations is to split the benefit 50:50 meaning an implied multiple of two is a reasonable assumption for calculating the total Brand Contribution.

Levers flexed to reflect the impact of a food safety incident

Our analysis models the potential impact of a food safety incident on a brand's Brand Strength and Forecast Revenues.



multiplied by two for indicative Brand Contribution values

Brand Value only captures the value of the brand to the Licensor, therefore, this is multiplied by two to account

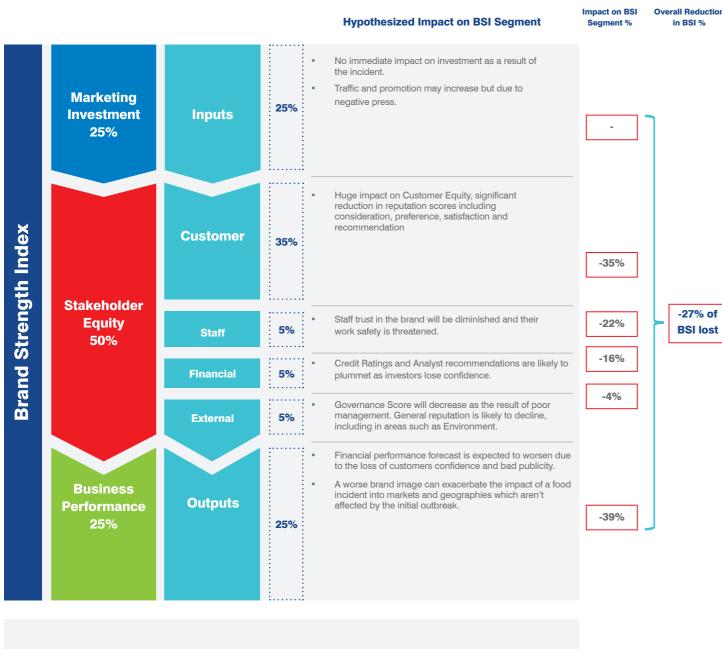


Brand Contribution

Business value at risk is calculated as the total Brand Contribution loss

Impact on Brand Strength.

Case study: impact of the 2015 food safety incident on the Brand Strength Index (BSI) score of Chipotle



Overall Before After **Reduction in** 76 -20 56 incident incident **BSI /100**

Impact on Forecast Revenues.

The modeled assumptions are based on two major food safety incidents: Chipotle (2015) and Jack in the Box (1993)

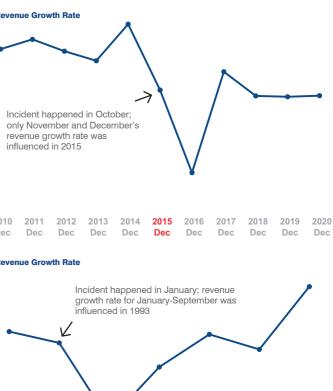
	(PO)														
Chipotle		30.0%	Revenue Growth Rate												
	Prican gat	25.0%					\wedge								
 In October 2015, at least 22 people were reported 		20.0%				\checkmark									
to have gotten sick after eating at several different	15.0%				•		\backslash		~						
	Chipotle locations.	10.0%													
 By December 2015, 177 cases across 10 states were confirmed, but the company was unable to locate the source of the outbreak. 	5.0%	las													
	0.0%		Incident happened in October; only November and December's												
٠	Chipotle is used as a case study to analyze the			revenue growth rate was influenced in 2015											
	impact of a food incident on Brand Strength and Forecast Revenues	-10.0%				\mathbf{V}									
	Forecast Revenues.	-15.0%						¥							
		-20.0%													
			2010 Dec	2011 Dec	2012 Dec	2013 Dec	2014 Dec	2015 Dec	2016 Dec	2017 Dec	2018 Dec	2019 Dec	2020 Dec		
Ja	ck in the Box	20.00%	Revenue Growth Rate												
	In January 1993, Jack in the Box outbreak	15.00%	Incident happened in January; revenue												
·	occurred; 73 restaurants across America were affected.	10.00%	growth rate for January-September was influenced in 1993												
•	732 people were infected. 4 children died and 179 other victims were left with permanent injury.		× ×												
•	The company lost an estimated \$160 million in the following 18 months.	-5.00%													
•	Jack in the Box is used as a case study to analyze	-10.00%				\mathbf{i}									
	the impact of a food incident on Forecast Revenues only.	-15.00%				\mathbf{V}									
		-20.00%													
			199: Sep		1993 Sep	19 Se		1995 Sep		996 Jep	1997 Sep		1998 Sep		
A th wi	odeled Assumptions for the Industry food safety incident will immediately shrink e company's revenue forecasts, however, th mitigating actions, these can be				Ir	ndustry	Foreca	ast Rev	enue G	rowth I	Rate				
re	covered over time.	10.0%			,	~									
٠	Revenue forecast growth rate has been modeled	5.0%	4.09	6	4.5	%	4.0	1%	3.7	%	3.4	%	3		

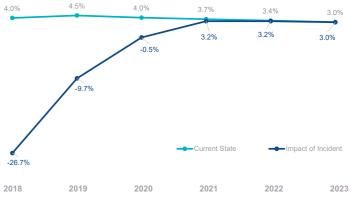
-20.0%

-25.0%

-30.0%

- Revenue forecast growth rate has been modeled based on the case study of Chipotle's food safety incident in October 2015 and Jack in the Box in January 1993.
- Revenue forecast reduction in growth rate is defined by comparing the average 5 years revenue growth rate before the incident and the revenue growth rate after the Incident. All data is sourced from Bloomberg.
- The immediate damage to a branded business is immense – revenue growth rates are predicted to fall from 4% to about -27%.
- This impact can be minimized over the years through mitigating actions, the success of which is however uncertain.





Case Study – Darden Restaurants Group.

live

Garden

Yard House

Eddie V's

World's largest full-service restaurant group

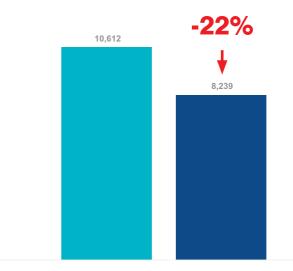
- Darden is a restaurant company featuring a portfolio of differentiated brands that include Olive Garden, LongHorn Steakhouse, Cheddar's Scratch Kitchen, Yard House, The Capital Grille, Seasons 52, Bahama Breeze and Eddie V's.
- As the world's largest full-service restaurant group, Darden has more than 1,700 restaurants and over 175,000 employees (Annual Report, 2017).
- Darden cites food safety as its top priority with a • commitment to best-in-class food safety and total quality programs.

If a food safety incident happened, over a half of current annual revenue and a third of Darden Restaurants Group's Brand Strength would be at risk.



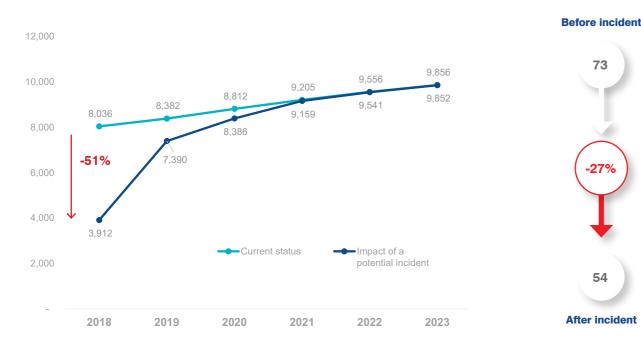
Business Value at Risk - Darden Restaurants Group

Potential losses of Darden Restaurants Group would amount to 22% of their Enterprise Value if a food safety incident happened.



Enterprise Value

Forecast Revenue (USD m)



DARDEN.

-VLONGHORN

Cheddars

FRESH GRILL 22

Overall Reduction in BSI /100

Business Value at Risk in the Industry

Businesses in the Restaurant & Food Services industry face a risk of losing up to 19% of their Enterprise Value as a result of a food safety incident.



Enterprise Value





SMART SENSE

Brand Finance Services.

Brand &

Business Value

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 JALUATION 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?

4. TRANSACTIONS 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
- + 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 allows an understanding of how brands create bottom-line impact.

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

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 Governance +
- Brand Architecture & Portfolio Management +
 - Brand Transition +
 - Brand Positioning & Extension +

MARKETING

We help marketers to connect their brands to business performance by evaluating the return on investment (ROI) of brand-based decisions and strategies.



We provide financiers and auditors with an independent assessment on all forms of brand and intangible asset valuations.



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1931VHIS

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



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



Drive operational excellence with wireless sensors and digital checklists



Simple Risk Mitigation

Gain real-time insights into safety checklist compliance and easily compare site performance to quickly identify at-risk sites for immediate remediation. Real-time monitoring provides instant alerts for temperature excursions.



Effortless Compliance Management

SmartSense's digital food safety solution enables you to gain real-time visibility into all your locations. Take control over regulations for efficient management of compliance logging and incident management workflow.

Improved Productivity Optimization

Replace paper processes with an intuitive task management system that provides visibility across your enterprise. Remotely publish and manage operational checklists to improve efficiency.

14. Food Safety July 2018

BY **DIGI**

Digital Food Safety

Brand Finance®



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