



Brand Analysis

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Executive Summary

Business Description

This upcoming summer I will begin employment with The Hershey Company in a brand management role. Brand Managers often spend a lot of time analyzing data within their respective categories and specifically for their brand. Brand managers are expected to produce weekly and monthly reports describing the health of the business and trends that they find within the category, channel, consumer preference, and competition from a data source known as AC Nielsen. AC Nielsen is a data aggregator that collects scanner sales data points from manufacturers, such as Hershey, MARS, and Nestle, within a category from retailers such as Walmart, Grocery Stores, Sam's Club, and 7 11's. The data analysis brand managers currently do is an extremely manual and cumbersome project. This project is intended to reduce the time that brand managers manually sift through data by automating data analysis and thereby allow these individuals to spend more time in more strategic, value added activities.

System Built

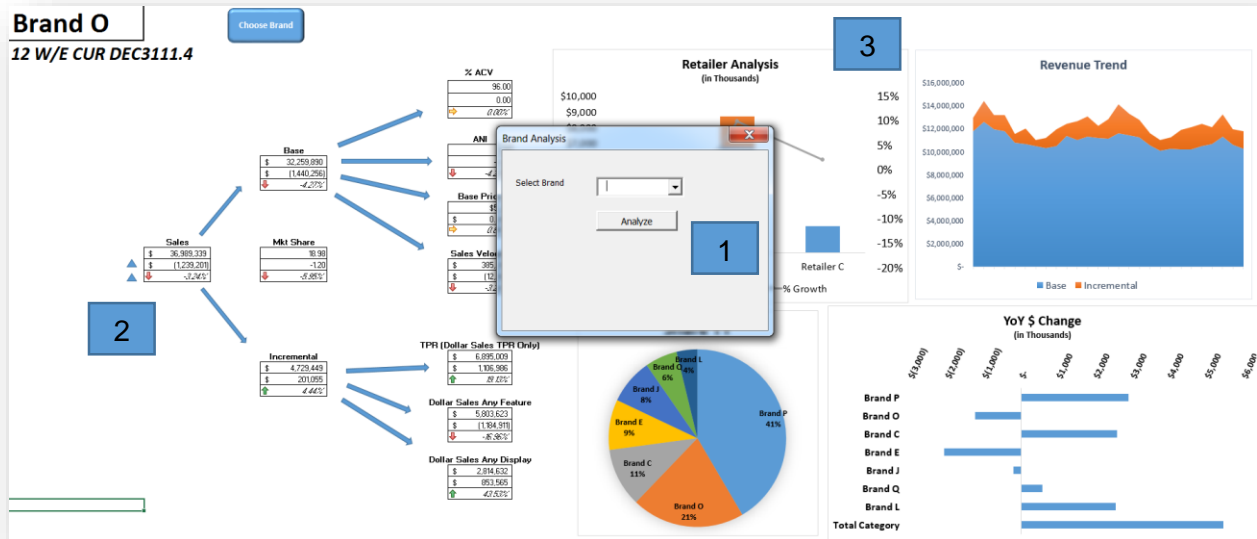
The project I created, "Brand Report", analyzes brand performance within a given time period from AC Nielsen data. "Brand Report" has 5 main points of functionality. The predominant functionality is that it takes a large amount of raw AC Nielsen data and quickly analyzes a brand's performance. Other points of functionality includes importing category trends, doing a competitive analysis, importing trends within a marketing analysis framework known as "PEST", and finally the ability to send the report via email.

Implementation

Step 1 – Analyze Brand Performance

The project, "Brand Report", analyzes raw data and quickly highlights the performance of a brand within a given category. The tab, "Brand Analysis", acts as a reporting dashboard to give the brand manager a quick and easy portal into the health of his/her brand. Here is a summary of how the process works (see Exhibit 3): The way a brand manager recognizes a business problem with his or her brand is by first looking for a change in a brand's volume. Once the manager notices a change in volume, the next question is what is driving those changes in volume. The manager will then look at the volume split between base (when the brand's product is sold at regular volume) and incremental (when the brand's product is sold at a discount). From there a manager would need to consider driver or changes in base and incremental volume. He or she would do this by considering the next level in the chain described in Exhibit 3.

Exhibit 1 – Brand Analysis Dashboard



1. The Brand Analysis tab is initiated by a user form that allows the user to select the brand that he/she would like to analyze. This is a simple dropdown button that selects all of the available brand options that an AC Nielsen report would contain. After the user selects the brand, he/she selects "Analyze" to retrieve the data points that the models then generates. Exhibit 1 contains an image of the dashboard.
2. This model is built from a decision tree that many brand managers in the industry use. It is a suggested model from AC Nielsen that helps bring a methodical and systematic approach to large data sets. The decision tree will help the user approach a raw data export such as the one included in Exhibit 2 and will follow the analytic path as shown in Exhibit 3. I designed my "Brand Analysis" dashboard to follow this decision tree.

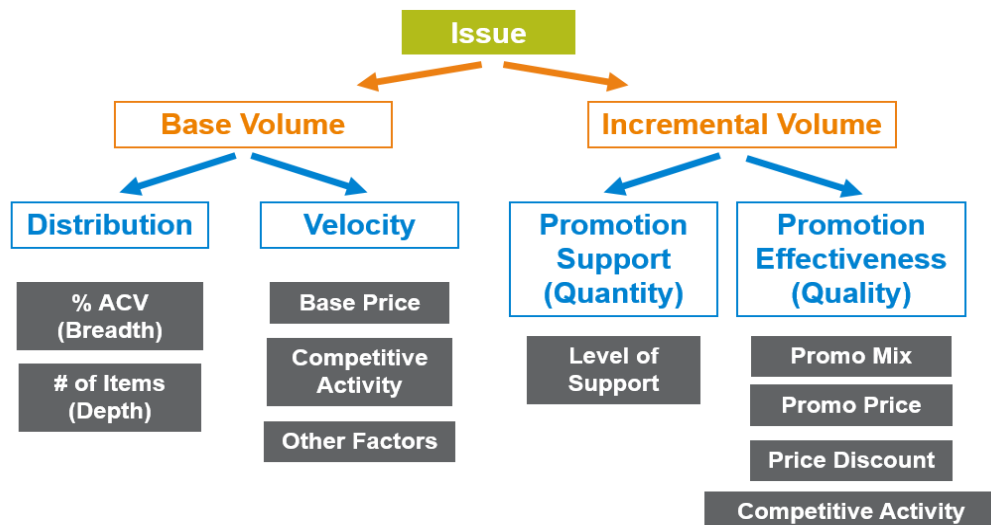
Exhibit 2 – Raw AC Nielsen Data Export

	\$ Volume		Eq Volume		\$ Share		Eq Share		Base Dollars		Incr. \$ Vol	
	12 W/E CUR DEC3111.4	12 W/E YAGO JAN0111.4	12 W/E CUR DEC3111.4	12 W/E YAGO JAN0111.4	12 W/E CUR DEC3111.4	12 W/E YAGO JAN0111.4	12 W/E CUR DEC3111.4	12 W/E YAGO JAN0111.4	12 W/E CUR DEC3111.4	12 W/E YAGO JAN0111.4	12 W/E CUR DEC3111.4	12 W/E YAGO JAN0111.4
Total 5 Channel Retailers												
Total Category	\$ 194,875,567	\$ 189,411,314	\$ 30,906,681	\$ 31,530,947	100.00	100.00	100.00	100.00	\$ 167,879,869	\$ 164,848,096	\$ 26,995,698	\$ 24,563,218
Brand A	\$ 1,182	\$ 1,216	\$ 157	\$ 196	0.00	0.00	0.00	0.00	\$ 1,137	\$ 1,336	\$ 45	\$ (120)
Brand B	\$ 694,756	\$ 768,444	\$ 297,045	\$ 271,019	0.36	0.41	0.96	0.86	\$ 675,175	\$ 754,624	\$ 19,581	\$ 13,820
Brand C	\$ 19,177,472	\$ 16,592,446	\$ 2,694,802	\$ 2,206,017	9.84	8.76	8.72	7.00	\$ 16,440,511	\$ 14,707,582	\$ 2,736,961	\$ 1,884,864
Brand D	\$ 460,869	\$ 452,621	\$ 73,714	\$ 53,761	0.24	0.24	0.24	0.17	\$ 394,842	\$ 388,166	\$ 66,027	\$ 64,455
Brand E	\$ 16,440,032	\$ 18,511,229	\$ 4,405,886	\$ 5,038,081	8.44	9.77	14.26	15.98	\$ 15,497,893	\$ 17,283,970	\$ 942,139	\$ 1,227,259
Brand F	\$ 478,228	\$ 509,213	\$ 42,203	\$ 46,835	0.25	0.27	0.14	0.15	\$ 468,826	\$ 492,637	\$ 9,402	\$ 16,576
Brand G	\$ 4,420,069	\$ 4,476,097	\$ 1,326,049	\$ 1,277,813	2.27	2.36	4.29	4.05	\$ 3,769,420	\$ 3,898,907	\$ 650,649	\$ 577,190
Brand H	\$ 1,316,852	\$ 1,287,864	\$ 361,183	\$ 323,086	0.68	0.68	1.17	1.02	\$ 983,240	\$ 1,096,335	\$ 333,612	\$ 191,529
Brand I	\$ -	\$ -	\$ -	\$ -	-	-	-	-	\$ -	\$ -	\$ -	\$ -
Brand J	\$ 14,877,353	\$ 15,089,281	\$ 1,821,712	\$ 1,865,145	7.63	7.97	5.89	5.92	\$ 11,361,272	\$ 11,096,069	\$ 3,516,081	\$ 3,993,212
Brand K	\$ -	\$ 278	\$ -	\$ 11	-	0.00	-	0.00	\$ -	\$ 366	\$ -	\$ (88)
Brand L	\$ 6,795,562	\$ 4,248,003	\$ 676,960	\$ 670,712	3.49	2.24	2.19	2.13	\$ 6,134,016	\$ 3,251,433	\$ 661,546	\$ 996,570
Brand M	\$ -	\$ -	\$ -	\$ -	-	-	-	-	\$ -	\$ -	\$ -	\$ -
Brand N	\$ 180,284	\$ 173,911	\$ 13,417	\$ 12,636	0.09	0.09	0.04	0.04	\$ 179,190	\$ 172,790	\$ 1,094	\$ 1,121
Brand O	\$ 36,989,339	\$ 38,228,540	\$ 7,029,368	\$ 7,325,610	18.98	20.18	22.74	23.23	\$ 32,259,890	\$ 33,700,146	\$ 4,729,449	\$ 4,528,394
Brand P	\$ 74,523,114	\$ 71,620,783	\$ 8,263,732	\$ 8,355,076	38.24	37.81	26.74	26.50	\$ 63,450,429	\$ 62,510,340	\$ 11,072,685	\$ 9,110,443
Brand Q	\$ 10,560,447	\$ 9,984,015	\$ 1,622,148	\$ 1,575,823	5.42	5.27	5.25	5.00	\$ 9,488,211	\$ 9,251,182	\$ 1,072,236	\$ 732,833
Brand R	\$ 2,518,362	\$ 2,354,751	\$ 300,913	\$ 278,155	1.29	1.24	0.97	0.88	\$ 1,680,195	\$ 1,705,019	\$ 838,167	\$ 649,732
Brand S	\$ 3,730,005	\$ 3,380,435	\$ 1,570,300	\$ 1,810,470	1.90	1.37	5.11	5.84	\$ 3,505,060	\$ 3,360,736	\$ 135,035	\$ 130,300

Exhibit 3 – AC Nielsen Decision Tree

Analysis Tip – The Analytic Path

Most issues can be addressed by drilling down this path



- The “Brand Analysis” dashboard also includes data about a brand’s performance over a 52 week period as well as performance within given retailers, such as Walmart, Sam’s Club, Kroger, or 7 11.

Step 2 – Analyze Competitive Activity

Once a brand manager has been given the opportunity to analyze his/her own brand, it is wise to look at the performance of the brand compared to other brands in the category. The Competitive Analysis functionality allows the user to view multiple brands at once in a table format.

How it works:

1. The user selects the ability to perform a competitive analysis through the “Brand Analysis” tab in the ribbon and by selecting “Competitive Analysis”.
2. The user is then presented with a user form that allows the user to select as many brands to compare as he/she would like. Once the user has selected the brands that he/she would like to analyze, the “Analyze” button will execute the command.
3. A table then represents the data of all of the selected brands.
4. The buttons on the tab allow the user to edit the brands that were selected for the competitive analysis as well as the ability to return to the “Brand Analysis” sheet.

Exhibit 4 – Competitive Analysis

The screenshot displays the 'Competitive Analysis' interface. At the top, a ribbon contains icons for 'Send Report', 'Trends Analysis', 'Competitive Analysis', and 'PEST Trends'. Below the ribbon, there are two buttons: 'Edit Competitive Analysis' and 'Return to Brand Analysis'. The main area is a table with columns for various metrics across different brands. A dialog box titled 'Select Competitors' is open, showing a list of brands (Brand A through Brand H) and buttons for 'Select All', 'Select-->', '<--Unselect', 'Unselect All', and 'Analyze'.

Brand	\$ Volume	\$ Volume Chang	\$ Volume % Chang	\$ Share	\$ Share Chang	Base Dollar	Base Dollars Chang	Base Dollars % Chang	Incr. \$ Vol	Incr. \$ Vol Chang	Incr. \$ Vol % Chang
Brand G	\$ 4,420,069	\$ (56,028)	-1.25%	2%	-0.10%	\$ 3,769,420	\$ (129,487)	-3.32%	\$ 650,649	\$ 73,459	12.73%
Brand O	\$ 36,989,339	\$ (1,239,201)	-3.24%	19%	-1.20%	\$ (1,440,256)	\$ (1,440,256)	-4.27%	\$ 4,729,449	\$ 201,055	4.44%
Brand P	\$ 74,523,114	\$ 2,902,331	4.05%	38%				1.50%	\$ 11,072,685	\$ 1,962,242	21.54%
Brand L	\$ 6,795,562	\$ 2,547,559	59.97%	3%				88.66%	\$ 661,546	\$ (335,024)	-33.62%

Step 3 – Identify Consumer Trends within the Confection Category

In addition to understanding the performance of a brand within scanner data such as AC Nielsen, brand managers are also expected to “keep a pulse” on industry trends. The “Trends” functionality allows the user to quickly import and recognize industry trends.

How it works:

1. The user selects the ability to import industry trends through the “Brand Analysis” tab in the ribbon and by selecting “Trends”.
2. Through an XML Map, various news articles are brought into the spreadsheet in a fashion similar to an RSS feed. The user is able to see the Title, Link, Description, Category Tag, and Date of publication in the table.
3. The user is able to directly access any article through selecting the “Link” on the corresponding cell of the desired article. Exhibit 6 demonstrates an example of the type of information that would be helpful.

1

Exhibit 5 – Import Industry Trends

Send Report Trends Competitive Analysis PEST Action Selections

Return to Brand Analysis

2

Title	Link	Description	Category	Date
Demand for 'natural' drives Europe's food colouring growth	Link	Growing demand for natural food colourings by manufacturers and consumers will continue t	Ingredients	Mon, 13 Apr 2015
Report and industry clash over artificial sweeteners' role in childhood obesity	Link	A new research report has said that artificial sweeteners may not help reduce obesity in child	Ingredients	Mon, 13 Apr 2015
What does 'responsible innovation' really mean?	Link	Many food firms talk about the need for 'responsible innovation', but what does this buzzwor	R&D	Mon, 13 Apr 2015
Wrigley to boost Africa business with \$63m Kenya factory	Link	The Wrigley Company is constructing a \$63m plant in Kenya, which global president Martin Ra	Markets	Mon, 13 Apr 2015
Beer flavoured chocolate on its way, says Mintel	Link	Latest innovations in the global chocolate market include beer and yogurt flavoured products	Markets	Mon, 13 Apr 2015
Hotel Chocolat withdraws products on allergen fears	Link	Rosh chocolate manufacturer and retailer Hotel Chocolat has withdrawn its 'Milk Free Milk' c	Regulation & Safety	Fri, 10 Apr 2015
Bitter chocolate: Primates wiped out in many Côte d'Ivoire areas – where illegal cocoa farmi	Link	Illegal cocoa farming is an increasing threat on primate populations in Côte d'Ivoire's protect	Commodities	Fri, 10 Apr 2015
Crisis, what crisis? Brazil's biscuit and industrialized cakes industry reports double-digit growt	Link	Brazil's biscuit, pasta and industrial cake and bread industry has seen annual sales increase 11,	Markets	Fri, 10 Apr 2015
Food labels: Using emoticons better than using colour?	Link	Emoticons on nutritional labels could have stronger impacts on perceptions of snacks than co	Regulation & Safety	Thu, 09 Apr 2015
Confectionery: the perfect marriage of art and science?	Link	Chemistry and art would be good subjects for aspiring confectioners to study – as well as dev	Manufacturers	Wed, 08 Apr 2015
How has social media changed food marketing?	Link	The rise of social media has led to a shift in the way consumers view food brands – and the w	Markets	Wed, 08 Apr 2015
Mars Drinks strikes deal with Taylors of Harrogate	Link	Mars Drinks has sealed an agreement with Taylors of Harrogate to include its premium coffe	Markets	Wed, 08 Apr 2015
Machu Picchu Foods scoops Peruvian rival to enter the wafer cone market	Link	Machu Picchu Foods (MPF), a Peruvian cocoa processor/exporter and chocolate manufacure	Manufacturers	Wed, 08 Apr 2015
Wrigley UK eyes new chewing occasions with refreshed Extra gum	Link	Wrigley UK hopes to tap into new eating and drinking occasions with its reformulated and rep	Manufacturers	Tue, 07 Apr 2015
Who is responsible for battling the big issues in food?	Link	From obesity to malnutrition and water scarcity, the world is facing an ever-growing number o	Manufacturers	Tue, 07 Apr 2015
Slump in sugar prices driving down overall food prices: FAO	Link	A sharp drop in sugar prices is the main factor behind a fall in overall global food prices, says t	Ingredients	Tue, 07 Apr 2015
What exactly is chocolate? Stricter definition of chocolate debated in Brazilian Senate	Link	Authorities in Brazil are planning to ramp up the quality of chocolate products sold in the cou	Regulation & Safety	Tue, 07 Apr 2015
Nestlé files patent for cocoa extract allergy treatment	Link	Nestlé has filed an international patent for cocoa polyphenols as a treatment or prevention o	R&D	Fri, 03 Apr 2015
Easter baskets 2015: Innovations from the top confectioners	Link	R&D teams at Mars, Nestlé, Hershey and Mondelez have developed a series of new products	Manufacturers	Fri, 03 Apr 2015
Directly source fine flavor cocoa to expand premium chocolate segment, says Duffy's	Link	Chocolate companies should buy fine flavor cocoa directly from growers and pay greater prei	Commodities	Thu, 02 Apr 2015

Exhibit 6 – Industry Trend Example



Step 4 – Identify Political, Economic, Social, and Technological Drivers in the Macro Economy

During my internship with The Hershey Company, I was asked to perform an analysis of the confection category for the 2013 Halloween season. Of the many frameworks I wish I had known about during that time, the PEST framework is one of them. PEST is a systematic approach to understanding macro-economic impacts that Political, Economic, Social, and Technological items are having on an industry.

How it works:

1. The user selects the ability to import PEST trends through the “Brand Analysis” tab in the ribbon and by selecting “PEST Trends”.
2. In a manner very similar to the “Trends” functionality, this acts as a news aggregator to provide a quick, easy view into macro-economic impacts on an industry.

Exhibit 7 – PEST Trends

1			
Send Report	Trends Competitive Analysis	PEST Trends	
2			
Return to Brand Analysis			
Political		Economic	
Title	Description	Title	Description
Millennials in Adulthood	Link Racially diverse, economically stressed and politically liberal	The Changing Profile of Student Borrowers	Link In 2012, a record 69% of the nation's new college graduates h
A Survey of LGBT Americans	Link An overwhelming share of America's lesbian, gay, bisexual	Young Adults, Student Debt and Economic Well-Being	Link Student debt burdens are weighing on the economic fortune
Second-Generation Americans	Link Chapter 1: Overview Second-generation Americans—the 20	The Rising Cost of Not Going to College	Link For those who question the value of college in this era of so
After a Highly Partisan Election Year, Survey Finds Less Gro	Link After a divisive presidential campaign that focused on such	Breadwinner Moms	Link A record 40% of all households with children under the age o
Where the Public Stands on Government Assistance, Taxes	Link When the national conversation focuses on class, the socia	A Rise in Wealth for the Wealthy; Declines for the Lower 93	Link During the first two years of the nation's economic recovery,
Millennials: Confident, Connected, Open to Change	Link A new national survey focuses on American teens and twer	Young Adults After the Recession: Fewer Homes, Fewer Cai	Link After running up record debt-to-income ratios during the bu
Republicans: Still Happy Campers	Link Despite the imploding stock market, the looming recession	Second-Generation Americans	Link Chapter 1: Overview Second-generation Americans—the 20
Revisiting the Mommy Wars	Link Who makes better candidates — moms or dads? And more	The Sandwich Generation	Link With an aging population and a generation of young adults s
Men or Women: Who's the Better Leader?	Link When it comes to honesty, intelligence and a handful of ot	A Bipartisan Nation of Beneficiaries	Link As President Barack Obama negotiates with Republicans in C
A Portrait of Generation Next	Link The cohort of young adults who have grown up with perso	More Americans Worry about Financing Retirement	Link Despite a slowly improving economy and a three-year-old st
Social		Technology	
Title	Description	Title	Description
How Americans and Japanese see each other	Link We asked people in both countries if they associated partic	DSM named 'Company of the Year' by the Islamic Food and	Link The Islamic Food and Nutrition Council of America (IFANCA)
Americans split over whether businesses must serve same-	Link A new Indiana religious freedom law has sparked national	Only 20% of India's farmers are insured, with many unawar	Link Fewer than one-fifth of India's farmers are insured, a practic
Where Christian churches, other religions stand on gay mar	Link In the last two decades, several religious groups have mov	General Mills nears goal of 100% sustainably sourced palm	Link Through partnerships with small farmers, non-governmental
How do Americans stand out from the rest of the world?	Link Americans are set apart from people in other nations we su	Brewla 'craft-brewed' ice pop founders: 'We've sold more i	Link While their sophisticated flavor profile and branding might s
Americans are still divided on why people are gay	Link Four-in-ten Americans said being gay or lesbian is "just the	Food & beverage entrepreneurs to watch: From chickpea p	Link From the purveyors of banana flour to chickpea pasta, barrel
Among LGBT Americans, bisexuals stand out when it comes	Link Compared with gay men and lesbians, bisexuals have a diff	Could the water lentil be the next big thing in plant-based	Link A new form of non-GMO plant-based protein boasting an am
What LGBT Americans think of same-sex marriage	Link Nearly all LGBT Americans support same-sex marriage, but	Report and industry clash over artificial sweeteners' role in	Link A new research report has said that artificial sweeteners ma
2015 is shaping up to be a significant year for religion at the	Link Here's a rundown of the Supreme Court's busy docket, whic	Flavors & fragrances giant IFF strikes deal to acquire Henry I	Link New York based International Flavors & Fragrances (IFF) has
5 facts about abortion	Link January 22, 2015 is the 42nd anniversary of Roe v. Wade, th	SFA outgoing chairman: The lines between meals & snacks	Link According to the March 2015 report of the Dietary Guidelines
On MLK Day, a look at black and white America	Link Nearly 47 years after Martin Luther King Jr.'s assassination,	Moody microbes? Gut bacteria found to play key role in sei	Link Our gut microbiota may play a vital role in driving our mood

Step 5 – Send a Copy of the Brand Report via Email

The user can email the selected brand's performance from the "Brand Analysis" sheet by selecting the "Send Report" button on the "Brand Analysis" tab. This allows the brand manager to send the performance of a brand to any stakeholder in the organization.

How it works:

1. The user selects the "Brand Analysis" tab in the ribbon and selects "Send Report".
2. The user is then presented a user form to enter the email address of the recipient. The email feature will work with any Gmail account. The email is distributed from an account named vbabrandanalysis@gmail.com. As shown in Exhibit 9, the user will receive an email with the attached report and the message, "Hello, Please find the attached Brand Analysis report. Feel free to contact me with questions. Best Regards."

Exhibit 8 – Send Email

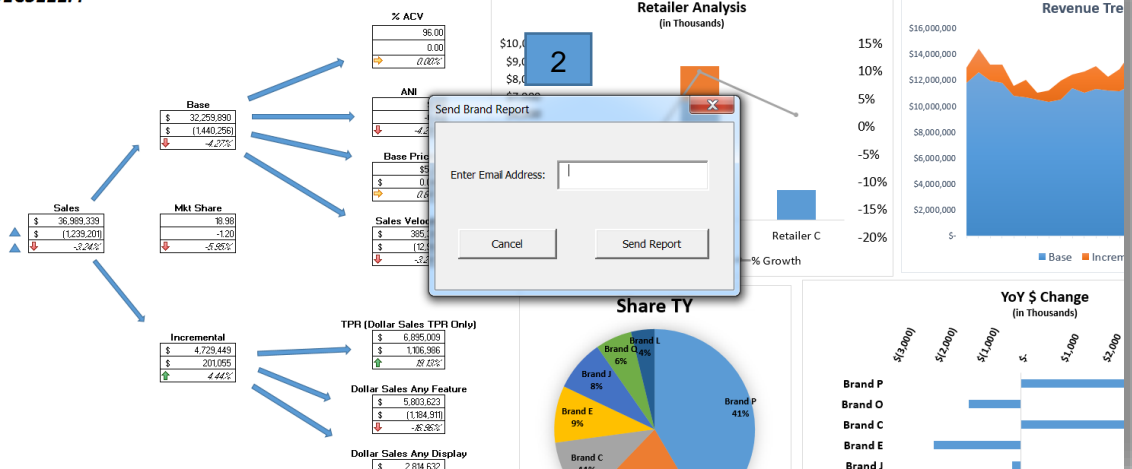
1



Brand O

12 W/E CUR DEC3111.4

Choose Brand



2

Exhibit 9 – Email Example

Brand Analysis Report

Inbox x



vbabrandanalysis@gmail.com

to me

Hello,

Please find the attached Brand Analysis report. Feel free to contact me with questions.

Best Regards.



Learnings and Conceptual Difficulties

I learned more than I ever thought possible during this project. I believe that the greatest thing I learned, however, was the ability to find a solution via free resources. I was able to make progress on challenging portions of this assignment by looking “Googling” what I was looking for. This has given me much more confidence about being able to solve problems with VBA in perpetuity.

A few specific key points I learned were:

- Leveraging VBA and Excel Formulas
 - As I began the project, I initially tried to do everything through code. I was attempting to do simple calculations and I realized that it was redundant and not efficient. Once I found the balance in which I could use Excel formulas, and then automate with code, I found that I was making significantly more progress, and was leveraging synergies between the two.
- XML Map
 - XML Maps were something that I was not familiar with prior to this project. They are, however, an extremely easy way to import and aggregate key data points that allows the user to quickly and efficiently use their time looking for relevant news sources.
- Sending Emails with Attachments
 - I struggled figuring out how to send an email with an attachment of the brand report. Dr. Allen helped me understand how the report could be saved to my local drive and then referenced via code and attached to a given email.

Conceptual Difficulties:

- Ideally, I would have liked the ability to connect the functionality of this macro directly to The Hershey Company’s AC Nielsen connection. As that is not currently feasible, I designed the project to work independent of a database connection.

Assistance

I received assistance from a few key folks throughout this project.

- Austin Johansen – Austin is a VBA veteran as was able to coach me through the logic flow of a project such as this. He did an excellent job of helping me understand the conceptual design and then I would try and figure out what type of code will help me achieve that. I am particularly grateful for his mentorship through this project.
- Dr. Allen – Dr. Allen helped me understand how to attach a sheet to an email. He was fantastic in helping me understand the logic flows to execute code to do that.
- Homework assignments, Book, and Google. Throughout this assignment, I referenced much of the material that we reviewed in class and via homework to help me continue making progress. When I got stuck, I found assistance through the book and via Google searches.