Case Studies in Finance

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HOA NGUYEN

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Hoa Nguyen

Introduction

This book contains three short case studies. Cases 1 and 2 illustrate a company's capital structure management and the process of estimating a company's cost of capital using two prominent companies in the ASX200. Case 3 is based on a fictional company.

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Acknowledgement of Country

Deakin University's Acknowledgement of Country

Deakin University is located in Victoria, Australia. We would like to acknowledge the Traditional Custodians of the lands on which our University campuses are based: The Wadawurrung people of the Kulin Nation on whose Country our Geelong campuses are located, the Wurundjeri people of the Kulin Nation on whose Country our Burwood campus is located and the Peek Whurrong people of the Maar Nation on whose Country our Warrnambool campus is located. We pay our respects to elders past and present on whose lands the creation of this resource was undertaken and where many students using this text will be located.

About the Author

Dr. Hoa Nguyen is the Director of Teaching in the Department of Finance, Faculty of Business and Law, Deakin University. She is the Unit Chair of MAF302 – Corporate Finance, a capstone unit in the Bachelor of Commerce in the Finance major.

The author welcomes any comments and feedback on this OER book. Please use this feedback form to contact us.

PART I

BRAMBLES LTD (ASX: BXB) – CAPITAL STRUCTURE

Learning Objectives

- Explain how market imperfections influence the financing decision
- Analyse the impact of a debt or equity issue on a company's balance sheet, profit and loss statement and key financial ratios
- Apply the trade-off theory of capital structure in understanding the different capital structure of different companies in different industries

Introduction

On Monday 25 February 2019, the news hit the market that Brambles (BXB), one of the world's most sustainable logistic businesses, had entered into a binding agreement to sell its IFCO reusable plastic containers (RPC) business to a subsidiary of the Abu Dhabi Investment Authority for a value of **US$2.5 billion**. The sale, a few years in the making, allowed Brambles to focus on its core business and pursue revenue growth in its core markets. Following the receipt of necessary regulatory approval, Brambles closed the deal on 31 May 2019.

The injection of cash from the sale transaction provided Brambles' executives with an opportunity to review its capital structure with a view to create value for shareholders through enhancing Earnings Per Share (EPS). Accordingly, one proposal that was currently being considered by the executive team, led by CEO Graham Chipchase, was to use part of the proceed from the IFCO sale (**US$2 billion**) to repurchase shares. The stock repurchases returned the cash from the sale to shareholders while at the same time had the impact of reducing the number of shares outstanding. Further, to enhance EPS and to take advantage of low interest rates, the executive team also considered the issue of **US$500 million in 15-year medium term note** at an average interest rate of 3.3% per annum to bring the total amount of stock repurchase to US$2.5 billion.

If approved by the board, the stock repurchase would be at **10% discount** to the **30-day volume weighted average price** ending 28 June 2019.



Image by Adam Śmigielski from Unsplash

Company History

Brambles was named after Walter Bramble , the company's original founder, who migrated to Sydney, Australia from England in 1858. In 1875, at the age of 18, Walter Bramble established a butchering business that transported the meat to customers by boat or horse and cart. In the next few years, the business expanded geographically to the port town of Newcastle and operationally to transport and logistics. In 1925, W E Bramble & Sons was formed to deliver transport and logistics services.

Following its listing on the stock exchange in 1954, Brambles bought CHEP (Commonwealth Handling Equipment Pool), a term describing pallets and other transportation assets that the US Army left in Australia after World War II, from the Australian government and officially entered the pooling solutions business. CHEP remained the major brand name that Brambles operated under until this day.

In the next four decades, Brambles expanded globally to Europe, Asia Pacific, South Africa and North America through a number of joint ventures and acquisitions . In December 2006, the company unified its dual-listed company structure between Brambles Industries Limited, listed on the Australian Securities Exchange (ASX), and Brambles Industries plc, listed on the London Stock Exchange (LSX), to form a single Australian holding company, Brambles Limited, that listed on the ASX only.

The dawn of the new millennium marked a shift in the company's strategic direction where the group was streamlined through several divestitures including Cleanaway (waste disposal), Wreckair (equipment hire) and Recall (storage). The completion of the IFCO divestiture in 2019 further streamlined Brambles's operations which now focused on the

company's core pallet and container expertise. Through Brambles Digital, the company also invested in expanding its capabilities in data analytics and innovations in response to increasing customer demands for innovative, sustainable, and cost-effective supply chain solutions.



Image Credit: Brambles Industrial Services

Company Business Model

Brambles's main revenue stream is the provision of pooling equipment to customers for a fee. Pooling is a "share and reuse" model based on the principle of the circular economy where pallets, containers, crates and other transportation equipment are shared and reused within a network of producers, retailers, transporters and service centres.

Operated under the CHEP brand name, Brambles's pooling equipment include pallets, Reusable Plastic Containers (RPCs) also known as Crates, Bins and Intermediate Bulk Containers (IBC) as depicted in **Exhibit 1.**



An interactive H5P element has been excluded from this version of the text. You can view it online here: https://deakin.pressbooks.pub/casestudiesfinance/?p=27#h5p-1

Several fees are charged to customers including issue, transfer, transport and daily hire. The predominant billing structure for these fees is either a bundled upfront fee upon issue of pooling equipment to customers, or a daily hire fee based on the number of days the pooling equipment is used in the field by a customer. Other fees, such as transport and transfer fees, are billed when the activity occurs.

Recent Financial Performance and Capital Structure

In the 5 years period leading to the sale of IFCO, Brambles experienced consistent growth in revenue. As of 30 June 2019, operating revenue stood at almost US$4.6 billion, an increase of 7% from the prior year. Underlying profit from continuing operations was over $US800 million representing a 2% growth year on year. Brambles operated in 60 countries, employed 11,000 people, owned 330 million pallets, crates and containers through a network of more than 750 service centres. The company's 2019 profit and loss statement is detailed in **Exhibit 2**.

In **Exhibit 2**, basic EPS was calculated as net profit attributable to the parent entity, adjusted to exclude costs of servicing equity (other than dividends), divided by the weighted average number of ordinary shares. On the other hand, diluted EPS was calculated as net profit attributable to the parent entity, adjusted for costs of servicing equity (ither than dividends) and preference share dividends, the after-tax effect of dividends and finance costs associated with dilutive potential shares and other changes in revenue or expenses that would result from the dilution of potential ordinary shares. An example of dilutive potential ordinary shares is performance share rights granted under Brambles' share plans.

In the financial year ended 30 June 2019, the weighted average number of shares used in the calculation of basic EPS was **1,593,400,000 shares** while the number of shares used in the calculation of diluted EPS was **1,598,500,000** reflecting an adjustment for share rights of 5,100,000 shares.

Exhibit 2 – Consolidated Profit and Loss Statement for the year ended 30 Jun 2019

	2019 (US$mil)	2018 (US$mil)
Continuing Operations		
Sales Revenue	4595.3	4470.3
Other Income	150.4	133
Operating Expenses	-4004.8	-3812.8
Shares of results of joint venture	0	-11.8
Operating Profit	**740.9**	**778.7**
Finance Revenue	15.3	28.3
Finance Costs	-103.8	-131.7
Net Finance Costs	**-88.5**	**-103.4**
Profit Before Tax	**652.4**	**675.3**
Tax expense	-198.3	-121.8
Profit from Continuing Operations	**454.1**	**553.5**
Profit from Discontinued Operations	1013.6	139.2
Profit for the year attributable to members of the parent entity	**1467.7**	**692.7**
Other comprehensive income	-60.9	-85.4
Total comprehensive income for the year	**1406.8**	**607.3**
EPS (US cents)		
Total basic	92.1	43.5
Total diluted	91.8	43.4
Continuing operations – basic	28.5	34.8
Continuing operations – diluted	28.4	34.7

Data Source for table: Brambles 2019 Annual Report

The company's balance sheet as of 30 June 2019 is detailed in Exhibit 3. The reported Reserves primarily related to the unification reserves created when the company unified its

listing structure in 2006. In particular, on unification, Brambles Limited issued shares on a one-for-one basis to Brambles Industries Limited (BIL) and Brambles Industries plc (BIP) shareholders who did not elect to participate in the Cash Alternative. The unification reserve of US$15,385.8 million was established on 4 December 2006 representing the difference between the Brambles Limited share capital measured at fair value and the carrying value of the share capital of BIL and BIP at that date. In September 2011, a reduction in share capital of US$8,223.4 million was applied against the unification reserves resulting in a unification reserve balance of US$7,162.4 million. Other reserves include share-based payments (expense recognized in relation to equity-settled options and share rights issued but not yet exercised) and foreign currency translations.

Like all other businesses, Brambles faced an operating environment that was characterised by increasing competition, macro-economic uncertainties, and ongoing inflationary and cost pressures. Competition in all markets was intense as the customer base adapted to changes in the retailing landscape that included omni-channel proliferation, ongoing growth of e-commerce and automation in the supply chain. Brexit impacted inventory level across retail supply chains in the UK that contributed to lower organic growth in Western Europe while input cost inflation remained high particularly relating to lumber and transport costs.

Exhibit 3–Consolidated Balance Sheet as of 30 June 2019

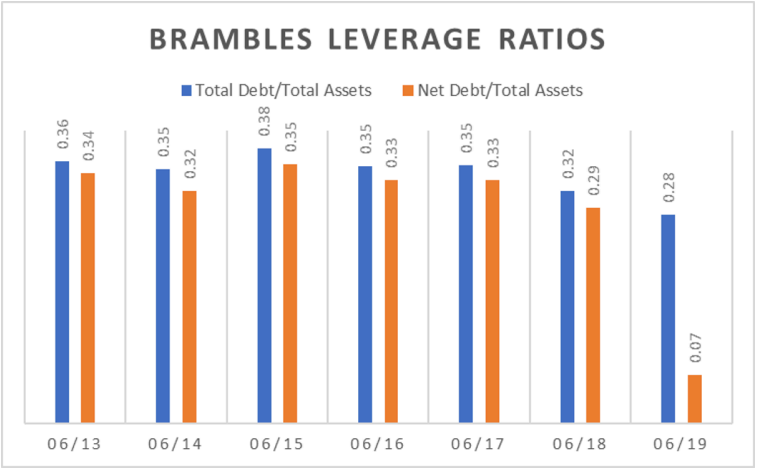
	2019 (US$mil)	2018 (US$mil)
Assets		
Current Assets		
Cash and cash equivalents	1691.3	180.2
Term deposits	411.2	0
Trade and other receivables	768.9	1247
Inventories	59.8	60.3
Other assets	61.5	70.9
Total Current Assets	**2992.7**	**1558.4**
Non-Current Assets		
Other receivables	52.8	50.4
Property, plant and equipment	4313.2	5139.7
Goodwill and intangible assets	286.2	1022.8
Deferred tax assets	73.6	38.2
Other assets	11.8	18.1
Total Non-Current Assets	**4737.6**	**6269.2**
Total Assets	**7730.3**	**7827.6**
Liabilities		
Current Liabilities		
Trade and other payables	1208.5	1954.3
Borrowings	556.8	91.2
Tax payable	31.7	61.8
Provisions	75.5	65.9
Total Current Liabilities	**1872.5**	**2173.2**
Non-Current Liabilities		
Borrowings	1643.4	2397.1
Provisions	14.8	12.6
Retirement benefit obligations	37.3	29.7
Deferred tax liabilities	353.1	434.9
Other liabilities	1	1.7

Total Non-Current Liabilities	**2049.6**	**2876**
Total Liabilities	**3922.1**	**5049.2**
Net Assets	**3808.2**	**2778.4**
Equity		
Contributed Equity	6187.4	6218.5
Reserves	-7322.5	-7253.7
Retained earnings	4943.3	3813.6
Total Equity	**3808.2**	**2778.4**

Data Source for table: Brambles 2019 Annual Report

Despite the challenging operating environment, Brambles continued to invest in digital capabilities and platform innovations with a focus on converting customers to sustainable share and reuse solutions. Accordingly, the company aimed to achieve a sustainable mid-single digit revenue growth in the longer term.When determining its capital structure, Brambles paid special attention to financial risks and considered various factors including expected future cash flows, funding needs for internal investments and external acquisitions, the cost of capital and accessibility to funding sources. As shown in **Exhibit 4,** both the *Gross Leverage Ratio* (Total Debt/Total Assets) and *Net Leverage Ratio* (Total Debt – Cash/Total Assets) for the company ranged consistently between 30% to 40%. In 2019, the Net Leverage Ratio fell significantly to about 7% reflecting the cash balance received from the sale of IFCO. **Figure 1** provides a graphical presentation of Brambles' leverage ratios between 2013 and 2019.

Figure 1 – Leverage Ratios 2013 to 2019



Data source: DatAnalysis Premium

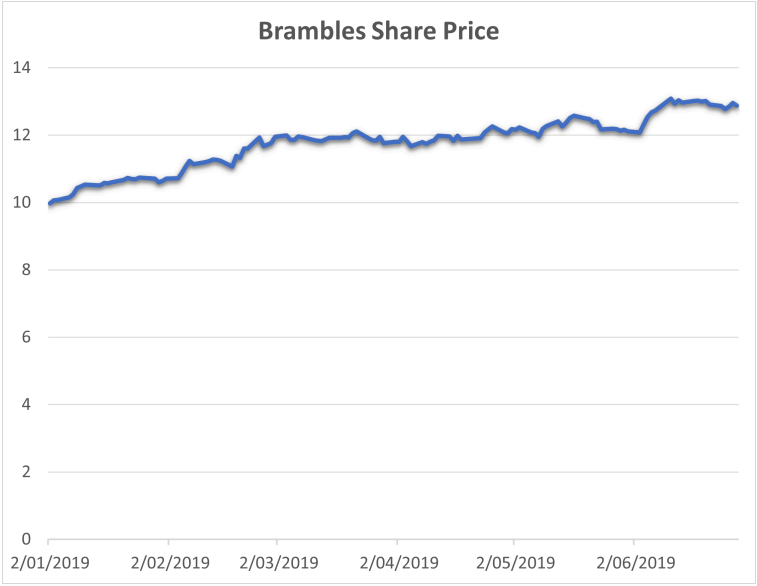
Brambles also actively maintained an investment grade credit rating. As of 30 June 2019, Brambles held investment credit ratings of BBB+ from Standard and Poor's and Baa1 from Moody's. To achieve its desired capital structure, Brambles had several initiatives at its disposal. These included adjusting the amount of dividends paid to shareholders, repurchasing existing shares, issuing new shares, selling assets to reduce debt and managing discretionary expenses. Brambles may also consider modifying the maturity profile of its borrowings to further optimise its capital structure.

Share buyback plan and additional borrowings

The proposed stock buyback plan was primarily motivated by a desire to return the proceeds from the IFCO sale to shareholders. The executive team also expected that the buyback would serve as a positive signal to the market that Brambles operated transparently, and excess cash was returned to shareholders. An alternative to the share buyback was to invest the US$2 billion in a short-term marketable securities yielding 1.25% per annum as the company assessed future investment opportunities.

Shares could be bought back by the company through on-market transactions or off-market transactions. When the company sought to buy back less than 10% of the total share outstanding within a 12-month period, known as the 10/12 limit, the requirements were less onerous than those over that limit. The most common type of off-market buyback was equal access buyback where all ordinary shareholders had an opportunity to consider the offer to buy back an equal percentage of their shares. Brambles' executive team was considering an on-market buyback as this method of buyback was the most straight forward and required minimum compliance. The plan was to undertake the buyback in early July 2019 and the executive team aimed to buy back the shares at an average price which was equal to **10% discoun**t of the **30-day volume weighted average price** ending **28 June 2019**. Information regarding Brambles' share price and trading volume is provided in **Exhibit 5**. **Figure 2** showed Brambles' share price movement between January and June 2019.

Figure 2: Share Price 2 January 2019 to 28 June 2019



Data source: Yahoo!Finance

Parallel to the on-market stock buyback, Brambles also planned to increase its medium term borrowing through a 15-year note issue to take advantage of low interest rates and create tax shields for shareholders. The note would have an average interest rate of 3.3% per annum on a face value of US$500 million. The proceed from the medium-term note issue, assuming negligible transaction costs, would be used to buy back stock bringing the total size of the stock buyback to $US2.5 billion.



Image by Kanchanara published on Unsplash

Discussion Questions

1. Outline the impact of the medium-term note issue of US$500 million and the stock buyback of US$2.5 billion on Brambles' balance sheet and profit and loss statement assuming all else remains equal.
2. How would the Gross Leverage Ratio (Total Debt/Total Assets), Net Leverage Ratio (Net Debt/Total Assets), Interest Cover Ratio and EPS change following the borrowing and stock buyback?
3. What were the expected total tax savings (tax shield) from the combined borrowing and stock buyback transaction at the corporate statutory tax rate of 30%?
4. In the absence of immediate investment opportunities, would you consider the stock repurchase a better option than keeping the IFCO sale proceed within the company? Explain your response.

PART II

DOMINO'S PIZZA ENTERPRISES LTD (ASX: DMP) – COST OF CAPITAL

Learning Objectives

- Explain the concept of the weighted average cost of capital (WACC) and its application
- Understand the different components in the estimation of the WACC
- Practice the techniques used in estimating the cost of equity, cost of debt and WACC
- Estimate the WACC for a publicly listed company

Introduction

Domino's Pizza Enterprises Ltd (DMP) is the largest pizza chain in Australia in terms of store numbers and network sales. It is also the largest franchisee for the Domino's Pizza brand in the world.

While the Domino's brand is owned by Domino's Pizza, Inc, a listed US company, DMP holds the exclusive master franchise rights for the Domino's brand and network in Australia, New Zealand and a number of European and Asian countries. In 2023, DMP announced its intentions to exit the Danish market, a business acquired in 2019 via receivership after the previous owners breached public trust by failing to meet food safety standards. In the same year, the company strengthened its footprint in Southeast Asia by acquiring stores in Malaysia, Singapore and Cambodia.

As of December 2023, Domino's Pizza Enterprises extended its operations across 12 markets, with more than 3,800 stores and is the leading international Domino's franchise.

In early 2024, DMP experienced a record share price drop of 31.1% to $39.50, the lowest price in almost 5 years. The share price plummeted following a withdrawal of DMP's 2024 outlook and its first half year profit forecast did not meet market expectations due to weak network sales in both Asia and Europe. While the share price slump was primarily due to concerns regarding network sales, it was time for CEO Don Meij and his team to review several performance metrics including the company's cost of capital. Estimates of the company cost of capital were used in many financial analyses within the company including new store acquisition appraisals and other capital budgeting assessments. As the cost of borrowing escalated post-Covid, it was critical for the company to

understand the impact of the changing cost of capital on its operations and valuation.



Image by Igor Ovsyannykov from Pixabay

Company History

Compared to some other companies that were part of the 100 largest ASX listed stocks, DMP had a relatively short history.

Domino's Pizza was a brand name created and owned by Domino's Inc, an US company that traded on the New York Stock Exchange (NYSE) under the ticker of DPZ. The US-based Domino's entered the Australia market in 1984 but eventually sold the local business to an Australian franchisee by the name of Chris Hendry in late 1980s. In the next couple of years, the local Domino's master franchise changed hands a few times. By 1993, it was bought by Competitive Foods, the company behind the launch of the Hungry Jack's chain in Australia and owner of the KFC franchises in WA and NT at the time. Prior to purchasing Domino's, Competitive Foods was already a majority owner of Silvio's Dial A Pizza, the company that first offered pizza delivery in Australia in the early 1980s. A few years after Competitive Foods took ownership of Domino's, a decision was made to convert approximately 60 Silvio's Dial A Pizza outlets to Domino's.[1]

The key to Domino's Australia success under the ownership of Competitive Foods was two-fold. On the one hand, the company benefited from the US parent's operating systems, brand name and store designs. On the other hand, the Silvio's product range was customised for the local market. The Australian company was an exception where it was allowed to develop its own products and marketing strategy including the "wobble boards", the signs Domino's staff waved on the roads.

Three years after Competitive Foods took over the Australian master franchise, Don Meij, a 27-year-old entrepreneur from Rockhampton, purchased his first Domino's franchise. Prior to the purchase, Meij had worked for Silvio's Dial A Pizza in various roles. Within 5 years, he owned 17 stores across the country.

In 2001, Don Meij and another franchise owner, Grant Bourke, reached an agreement to merge their stores and bought a quarter of Domino's Australia. As part of the agreement, Meij took up the chief executive role of the company. The other major shareholder of the company at the time was Jack Cowin, who owned Competitive Foods through his family trust. Meij remained the CEO of Domino's Australia until today while Jack Cowin was the company's current chairman and Grant Bourke, a non-executive director. [2]

An important milestone for the company was the ASX listing in 2005 under the code DMP. The company become the first publicly listed Australian pizza company. The near two decades following the company listing was marked by an aggressive expansion strategy where the company progressively expanded in all Australian states, followed by New Zealand, Europe and Asia. The company was also well known for its effective use of technology in pizza ordering and delivery. Some notable technological achievements included an iPhone application in 2009, GSP driver tracker that allowed customers to track their orders from the store in 2015, voice ordering through Amazon Alexa and Google Assistant in 2018 and 2019 respectively. One of the company's latest technological advances is the New Pizza Chef application that used Augmented Reality to allow customers to customize their favourite pizza from endless flavour combinations.

2024 heralded challenges ahead for Domino's. While post-Covid operating results in Australia and New Zealand were encouraging despite rising costs, the same could not be said for the Asian and European markets. Sales in France were struggling, and Domino's online delivery platform struggled with making sense of apostrophes used regularly in French addresses. The anti-American sentiment was believed to explain weak results in Asia due to America's involvement in the Middle East.

Navigating the company through a competitive

environment characterised by rising costs and disappearing technological advantages would prove a test for Don Meij in his long reign as the company's CEO.



Image by Marcus Reubenstein on Unsplash

[1] Schoebridge, N. 1999, 'Brand-name bravery brings Domino's through the pizza wars', *Australian Financial Review*, accessed 29 January 2024

[2] Margan, M. 2018, "That's some serious dough! How high-flying Domino's boss went from a humble pizza delivery boy to Australia's top nearing CEO and now takes home over $36 million a year", *Daily Mail*, accessed 29 January 2024.

Company Cost of Capital

The cost of capital reflected the average cost of raising funds for the company at a given point in time which fluctuated as the cost of primary sources of finance such as debt and equity changed. The company therefore periodically reviewed its estimate of the cost of capital which was reflective of market conditions.

Cost of debt

Domino's followed several approaches in estimating the company cost of debt. The approach(es) employed was what the analyst team believed most accurately reflect the cost of borrowing for the company in the current market conditions or in the near future based on available information.

1. Historical cost of debt

Where there were material reasons for the team to believe that the cost of borrowing would not change significantly in the future, for example stable macroeconomic indicators and immaterial changes in the company's earnings and debt servicing outlook, the historical cost of borrowing could be used as the basis for the cost of debt estimate. It was also a common practice for the company to consider only the cost of long-term borrowing in the cost of debt projection.

The company's latest balance sheet as of 02 July 2023 was

detailed in **Exhibit 1**. As of this date, Domino's total long-term borrowing was approximately $979 million.

	2023 ($'000)	2022 ($'000)
Assets		
Current Assets		
Cash and cash equivalents	159,891	76,877
Trade and other receivables	176,208	163,591
Other financial assets	36,642	20,892
Inventories	43,120	30,861
Current tax assets	43,370	1,234
Other assets	52,640	45,760
Investment in lease assets	78,179	72,063
Total Current Assets	**590,050**	**411,278**
Non-Current Assets		
Other financial assets	108,934	119,869
Investment in joint venture	1,742	1,709
Property, Plant and Equipment	324,658	273,471
Deferred tax assets	498	–
Goodwill	551,644	485,707
Intangible assets	638,911	450,352
Right of use assets	297,077	306,845
Investment in lease assets	365,934	382,493
Total Non-Current Assets	**2,289,398**	**2,020,446**
Total Assets	**2,879,448**	**2,431,724**
Liabilities		
Current Liabilities		
Trade and other payables	378,992	303,976
Contract liabilities	3,518	3,134
Lease liabilities	141,408	122,304
Borrowings	–	32,035
Other financial liabilities	14,503	140,003
Provisions	31,444	21,559

Current tax liabilities	24,241	17,571
Total Current Liabilities	**594,106**	**640,582**
Non-Current Liabilities		
Borrowings	978,591	612,066
Contract liabilities	12,416	15,775
Lease liabilities	619,937	646,714
Other financial liabilities	18,327	511
Provisions	16,759	8870
Deferred tax liabilities	118,795	85,249
Total Non-Current Liabilities	**1,764,825**	**1,369,185**
Total Liabilities	**2,358,931**	**2,009,767**
Net Assets	**520,517**	**421,957**
Equity		
Issued capital	430,476	264,212
Reserves	-126,109	-136,848
Retained earnings	216,150	294,593
Total Equity	**520,517**	**421,957**

Exhibit 1 – Consolidated Balance Sheet as of 02 July 2023

Source: DMP's 2023 Annual Report

The notes to the 2023 financial statements further revealed that the company's long-term borrowing was in the form of a bank loan that attracted an effective interest rate of 2.08% per annum as shown in **Exhibit 2**. This interest rate reflected a historical borrowing rate.

			2023	
FINANCIAL LIABILITIES	CLASSIFICATION	NOTE	INTEREST RATE %[1]	$'000
Trade and other payables	Amortised cost	15	–	378,992
Other financial liabilities	Amortised cost	25	–	14,551
Bank loans	Amortised cost	23	2.08	983,090
Loans from other entities	Amortised cost	23	–	–
Lease liabilities	Amortised cost	12	1.30	761,345
Put option liability	FVOCI	25	–	–
Contingent consideration	FVPL	25	–	17,336
Interest rates swaps	Derivative financial instrument	25	–	943

Exhibit 2 – Interest rate on Financial Liabilities

Source: DMP's 2023 Annual Report

The implied cost of debt for a particular year could also be estimated using the interest expenses incurred by the company. In this instance, the cost of debt was calculated based on the following formula:

$$Cost\ of\ debt\ (Rd) = \frac{Interest\ on\ loans}{Total\ borrowings}$$

Notes 5 to the financial statements of DMP's 2023 Annual Reports disclosed the interest expense as detailed in **Exhibit 3**. As the company did not carry any short-term debt (i.e commercial bills) as of reporting date, the interest on commercial bills and loans referred to in Exhibit 3 primarily related to the bank loans.

Interest on commercial bills and loans	**16,672**	8,332
Amortisation of borrowing costs	**1,463**	1,505
Interest expense on lease liabilities	**10,075**	8,960
Finance costs	**28,210**	18,797

Exhibit 3 – Finance costs

Source: DMP's 2023 Annual Report

2. The risk-free rate plus a credit spread

While the use of a historical cost of debt as a proxy for the company's current or future cost of debt was a convenient approach, a major issue with this approach was it may not be reflective of current market conditions. When there were material changes in market conditions such as a sharp increase or decrease in the risk-free rate or the credit risk of the company, a different methodology was required.

A common approach to estimating the cost of debt that was

adopted by Domino's from time to time to overcome this issue was the use of a risk-free rate plus a credit spread. The logic behind this approach was that a company's cost of debt was equal to the risk-free rate plus a credit spread that reflected the credit worthiness of the business. The higher the credit rating (i.e the lower risk of default), the lower the credit spread. Hence, businesses with higher credit ratings were able to raise funds at lower costs, other things being equal.

As a reference, as of December 2023, Australian BBB-rated corporate bonds attracted a borrowing cost of 5.43% per annum as shown in **Exhibit 4.** This represented a 0.25% decrease from June 2023.

Indicator rates	Jun-23	Dec-23	Change
Corporate bonds (BBB 10 years)	5.68%	5.43%	-0.25%
Credit spread	1.66%	1.47%	-0.19%

Exhibit 4 – Corporate borrowing rates for 10-year BBB-rated bonds

Source: S&P Capital IQ

3. RBA's business rates

The Reserve Bank of Australia (RBA) compiled business lending rates from banks and registered financial corporations which could also be used as a proxy for the cost of debt. The business rates reported by the RBA were the weighted average interest rates reported by lenders for various business sizes. A small business was defined as having a turnover of less than $50 million and total liabilities of less than $1 million. A medium business had total liabilities of more than $1 million with turnover of less than $50 million. All other businesses with

turnovers of more than $50 million were classified as large businesses.

Exhibit 5 illustrated the business lending rates in Australia for different sized businesses in the last 4 years. As of November 2023, the applicable lending rate to large businesses was 5.71% per annum (7.09% per annum for a small business). The data updated monthly, and Domino's considered the use of the most up to date data the best practice.

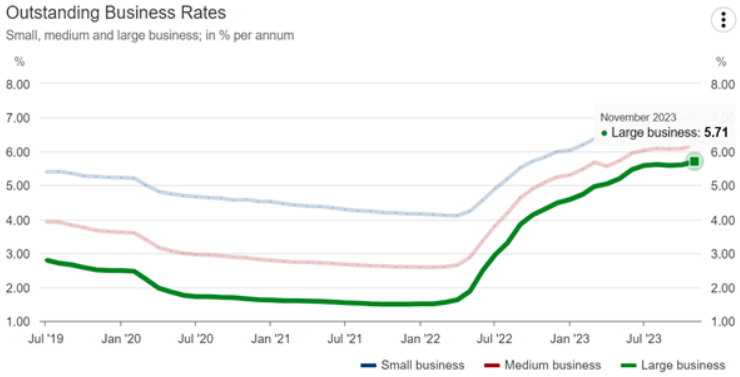


Exhibit 5 – Outstanding Business Lending Rates
Source: Lenders' Interest Rates | RBA

Cost of Equity

To estimate the cost of equity, Domino's used the Capital Asset Pricing Model (CAPM) which was a widely used methodology in the industry. Application of the CAPM required several inputs including: the risk-free rate, the beta and the market risk premium.

1. *The risk-free rate*

The risk-free rate reflected a return that was free of any risk, the most important of which was default risk. For this reason, a common measure of the risk-free rate was the interest rate (or yield) on a long-term government debt security. In Australia, the convention was to use the yield on 10-year Treasury bonds issued by the Commonwealth Government of Australia.

Exhibit 6 presented the yield on 10-year T-bonds for each month in 2023.

Month	Australian Government 10 year bond (% pa)
31/01/2023	3.604
28/02/2023	3.702
31/03/2023	3.468
30/04/2023	3.343
31/05/2023	3.500
30/06/2023	3.916
31/07/2023	4.036
31/08/2023	4.128
30/09/2023	4.211
31/10/2023	4.626
30/11/2023	4.578
31/12/2023	4.188

Exhibit 6: Yield on 10-year T-bonds

Source: Statistical Tables | RBA

2. *Beta*

Beta measured the systematic risk of a company and affected the required rate of return on equity. Domino's measured its beta using regressions from its stock returns and market returns. However, its analyst team was also aware of the shortcomings of this approach that relied on historical data and typically cross-checked the beta obtained from a market model regression against an analyst estimate of beta that also considered the industry beta.

Regression using historical data

To estimate beta using a regression, a series of market returns

and Domino's returns were required. While beta can be time varying depending on the time window over which returns were calculated, it was a common practice at Domino's to use a 5-year window of monthly data. Once the market and Domino's returns were obtained, beta could be estimated using the SLOPE function in Excel.

Exhibit 7 detailed the monthly adjusted close price for Domino's for the 5-year window ending December 2023. The adjusted price considered the effects on stock splits and dividend payments, thus provided a better indicator of total return. Similarly, the S&P ASX200 accumulation index was used to calculate market returns including reinvested dividends. This index tracked the performance of the top 200 companies listed in the ASX.

Date	DMP Adj Close	S&P ASX 200 Accumulation Index
1/01/2019	41.08	60,981.04
1/02/2019	37.24	64,627.01
1/03/2019	39.78	65,101.27
1/04/2019	39.40	66,643.40
1/05/2019	35.84	67,783.66
1/06/2019	34.49	70,291.79
1/07/2019	35.34	72,358.18
1/08/2019	39.19	70,654.10
1/09/2019	43.09	71,954.54
1/10/2019	47.32	71,699.29
1/11/2019	49.00	74,048.83
1/12/2019	48.58	72,445.03
1/01/2020	50.92	76,055.84
1/02/2020	51.56	70,210.11
1/03/2020	47.93	55,711.41
1/04/2020	54.45	60,602.95
1/05/2020	58.46	63,244.36
1/06/2020	64.43	64,892.86
1/07/2020	69.33	65,218.91
1/08/2020	75.74	67,065.85
1/09/2020	74.76	64,608.07
1/10/2020	79.96	65,856.45
1/11/2020	69.85	72,581.26
1/12/2020	81.80	73,459.59
1/01/2021	86.84	73,688.30
1/02/2021	84.89	74,759.47
1/03/2021	91.60	76,585.70
1/04/2021	101.50	79,245.34
1/05/2021	104.97	81,100.22

1/06/2021	114.69	82,932.29
1/07/2021	111.02	83,844.75
1/08/2021	149.17	85,944.45
1/09/2021	153.60	84,351.55
1/10/2021	129.67	84,268.94
1/11/2021	124.18	83,815.62
1/12/2021	112.99	86,117.72
1/01/2022	98.98	80,647.80
1/02/2022	75.58	82,377.32
1/03/2022	84.10	88,049.03
1/04/2022	72.91	87,297.17
1/05/2022	66.63	85,024.90
1/06/2022	65.83	77,568.63
1/07/2022	70.13	82,028.33
1/08/2022	61.52	82,992.41
1/09/2022	50.41	77,868.43
1/10/2022	62.37	82,573.97
1/11/2022	64.94	88,008.95
1/12/2022	64.82	85,188.04
1/01/2023	74.06	90,491.06
1/02/2023	48.88	88,276.24
1/03/2023	49.46	88,137.90
1/04/2023	50.00	89,767.06
1/05/2023	47.91	87,494.78
1/06/2023	46.05	89,031.72
1/07/2023	48.70	91,599.30
1/08/2023	53.60	90,928.22
1/09/2023	53.18	88,349.68
1/10/2023	50.80	85,011.76
1/11/2023	53.80	89,287.59

1/12/2023	58.94	95,767.32
1/01/2024	41.40	95,613.79

Exhibit 7: Monthly adjusted close price for Domino's for the 5-year window ending December 2023

Source: https://au.finance.yahoo.com and https://au.investing.com/

Industry-adjusted Beta

The analyst team at Domino's also referenced their own estimated beta against an industry-adjusted beta that was provided by Morningstar DatAnalysis. Morningstar approach was to calculate a company beta by taking the industry average beta and adjusting it for each company based on its financial leverage (D/E). Morningstar estimates of company betas hence changed as the industry average (supplied by the Centre for Research in Finance at the Australian Graduate School of Management) and/or a company financial leverage changed.

As of 30 December 2023, the estimated beta for Domino's was 0.94 against an industry beta of 1.03.

3. *The equity market risk premium*

The equity market risk premium measured the extra return that investors expected to receive as they invested in a risky market portfolio in excess of the risk-free rate. The market risk premium could be mathematically expressed as Rm – Rf where Rm is the expected return from a market index such as the S&P ASX200 and Rf is the risk-free rate commonly proxied by the yield on the 10-year T-bonds.

Domino's estimated the market risk premium from their own data as well as using a common industry market risk premium. For example, both KPMG[1] – a global audit and advisory company and Leadenhall[2] – a leading Australian independent corporate advisory firm recommended an equity market risk premium of 5.5% as of December 2023.

[1] Source: https://kpmg.com/nl/en/home/topics/equity-market-risk-premium.html

[2] Source: https://www.leadenhall.com.au/market-discount-rates-december-2023/

The Capital Structure and Corporate Tax Rate

The capital structure

The adopted capital structure affected the cost of capital. Domino's followed the best practice in estimating the cost of capital and used, where possible, market value of debt and equity. The market value of equity was determined using the number of shares outstanding and the market share price at the time of estimate. The market value of debt, however, was not as easily observable as many of the company's debt was not tradeable. Accordingly, the company used the book value of debt as a measure of the market value of debt.

The corporate tax rate

As the interest expenses were tax-deductible, the cost of debt was typically estimated on an after-tax basis. The most accurate tax rate to use was the effective tax rate calculated as tax expenses divided by taxable income. Where the effective tax rate was not significantly different from the statutory corporate tax rate, Domino's used the statutory tax rate in its estimate of the cost of capital.



Image by Scott Graham on Unsplash

Discussion Questions

1. Outline the importance of the cost of capital in a company. How is the estimate of the cost of capital used in Domino's Pizza Enterprises Ltd?
2. Using various outlined approaches, estimate the cost of debt for Domino's Pizza Enterprises Ltd as of December 2023.
3. Using various outlined approaches, estimate the cost of equity for Domino's Pizza Enterprises Ltd as of December 2023.
4. What is your recommended cost of capital for Domino's Pizza Enterprises Ltd as of December 2023?
5. If Domino's plans to acquire new stores in China, would it be appropriate for Domino's to use the cost of capital recommended in Part 4 as a discount rate in the capital budgeting evaluation. Why or why not?

PART III

PURE BOTANICA SKINCARE - SUSTAINABLE CAPITAL BUDGETING

Learning Objectives

- Explain the key concepts and fundamentals of capital budgeting
- Describe and apply the Net Present Value (NPV) and Internal Rate of Return (IRR) methods as two popular capital budgeting methods
- Examine the tools used to address project risk including payback period, sensitivity analysis, scenario analysis and Monte Carlo simulation.
- Appreciate the role of non-financial or strategic considerations in financial decision making

Introduction

Pure Botanica Skincare was founded in 2010 by Dr. Emily Lawson, a former biochemist with a deep passion for combining science with nature to create innovative skincare products. Emily, with her strong background in dermatological science and biochemistry, started the company out of her desire to offer safe, effective skincare solutions for sensitive skin types. Having worked in the pharmaceutical industry for over a decade, Emily grew frustrated with the lack of transparency in skincare products and the overuse of harsh chemicals that often caused skin irritation.

Driven by her belief in the power of botanical ingredients and scientific innovation, Emily launched Pure Botanica with a mission to deliver natural, science-backed skincare solutions that were both gentle and highly effective. Her vision was to create products that harness the potency of natural ingredients while ensuring they were formulated with the precision and rigor of scientific research.



Image by tihomirlphotography from Pixabay

Brief history of growth

Pure Botanica Skincare started with just a small line of products, including moisturizers, cleansers, and soothing serums aimed at those with sensitive skin. Emily sourced many of her ingredients from the Adelaide Hills region, including botanical extracts and essential oils, where she established relationships with local farmers. The products were well-received, thanks to their transparency about ingredients and their hypoallergenic formulations. Word-of-mouth recommendations helped the brand establish a loyal customer base in Australia.

As her brand gained momentum, Emily expanded Pure Botanica's product line to include more advanced formulations, such as anti-aging treatments and SPF-infused skincare, bringing her background in biochemistry to the forefront of product development. Seeking the best natural active ingredients, Emily partnered with suppliers in Japan and Korea, two regions known for their cutting-edge innovations in skincare ingredients like fermentation-based extracts and marine botanicals. This move helped Pure Botanica tap into the rising demand for K-beauty trends while maintaining its commitment to high-quality, natural products.

Recognizing the shift toward online shopping, Pure Botanica launched its own e-commerce platform in 2016 and expanded its reach by partnering with global marketplaces like Amazon. The company's E-commerce capabilities were built using capital injections from Greenleaf Capital, a private equity fund that specializes in healthcare and skincare businesses. By 2019, the company had achieved considerable success, especially in North America, Japan, and South Korea, where Emily's scientifically-backed formulations resonated with consumers looking for results-driven, natural skincare. The brand's

products were also featured in beauty magazines and reviewed positively by skincare influencers, further boosting its growth.

Seeing the increasing demand for sustainable beauty products particularly after the Covid-19 pandemic, Emily began to explore more sustainable sourcing and packaging options for Pure Botanica, initiating efforts to transition to a fully eco-friendly supply chain. The company's vision is to introduce biodegradable packaging, a line of refillable skincare products to promote reduced waste and environmental responsibility. By 2023, Pure Botanica had reached $10 million in annual revenue, with a strong presence in Australia and Asia, but faced growing pressure from both consumers and investors to adopt more sustainable practices. Figure 1 provides a visual presentation of the company growth history.

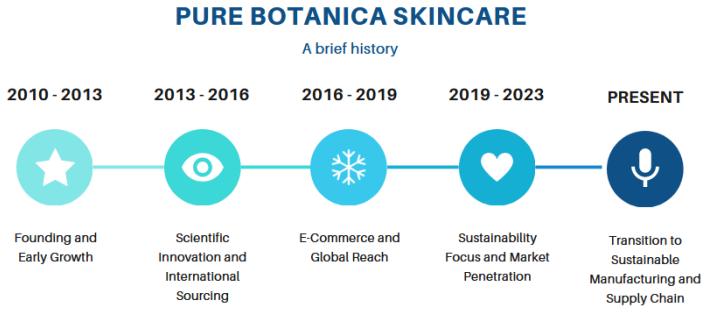


Figure 1 – A brief history of growth

A more sustainable future

Although the company has gained a loyal customer base through its commitment to purity and efficacy, it is now under pressure to adopt more sustainable supply chain practices. A combination of external factors—ranging from regulatory demands to shifting consumer preferences—has made it clear that sustainability is no longer optional, but essential for long-term success.

Regulatory and Policy Pressures

One of the primary drivers behind Pure Botanica's shift towards sustainability is the increasing stringency of government regulations aimed at reducing environmental impact. Governments, particularly in Australia, Japan, and Korea—regions where Pure Botanica sources its ingredients—are enacting legislation that compels companies to reduce their carbon emissions and waste.

For Pure Botanica, this means rethinking its sourcing, manufacturing, and packaging strategies to ensure compliance with these new regulations. Additionally, Pure Botanica is poised to benefit from government subsidies and tax incentives aimed at businesses that embrace renewable energy and sustainable manufacturing practices, further reducing the financial burden of this transition.

Consumer Demand for Sustainable

Products

Another significant factor pushing Pure Botanica towards a sustainable supply chain is the evolving preferences of its customer base. Consumers, especially those in the beauty and skincare market, are becoming increasingly eco-conscious. They are looking for products that not only deliver results but also align with their personal values of environmental responsibility. Market surveys conducted at major department stores such as Mecca and Sephora show that consumers are willing to pay a premium for products that are organic, cruelty-free, and sustainably packaged. For Pure Botanica, adopting a sustainable supply chain is not just about compliance—it's about meeting the expectations of a new generation of conscious consumers.



Image by trealon from Pixabay

Investor and Financial Market Pressure

As global investment trends shift towards ESG (Environmental, Social, and Governance) criteria, companies like Pure Botanica face increasing pressure from investors to adopt sustainable business models. ESG investing has seen significant growth, with investors prioritizing companies that demonstrate strong commitments to environmental responsibility and ethical governance. This shift is particularly relevant in the beauty industry, where sustainability is becoming a key differentiator.

While Pure Botanica is currently privately owned, sustainable supply chain practices would be appealing to prospective investors when the company needs to access the financial market for additional funding. The company's main lender, the Commonwealth Bank of Australia, has also indicated that they would offer up to a 50 basis-point discount on a loan to finance new "green projects" that involves sustainable ingredient sourcing and packaging.

Industry Trends, Competition and Brand Loyalty

The beauty and skincare industry is increasingly being shaped by sustainability-driven innovation. Leading brands are already capitalizing on the demand for eco-friendly products by investing heavily in sustainable packaging, organic ingredients, and carbon-neutral manufacturing.

The company has observed that many competitors are gaining market share by promoting their commitment to sustainability. These competitors are building consumer loyalty by offering products that are marketed as both effective and environmentally responsible.

Capital Budgeting Practice

At Pure Botanica, the capital budgeting process traditionally focused on assessing projects based on quantifiable financial metrics, such as the net present value (NPV), internal rate of return (IRR), and payback period. The company prioritized projects that promised a high rate of return and short payback periods. The decision-making process emphasized measurable financial benefits, such as cost savings, revenue growth, and profit margins, with minimal attention given to non-financial factors like environmental or social impact.

However, with the rise of sustainability as a core business value, Pure Botanica has recently shifted its capital budgeting approach to account for non-quantifiable factors, particularly those related to environmental impact and social responsibility. The company now recognizes that investments in sustainable practices—such as renewable energy, sustainable sourcing, and eco-friendly packaging—can bring significant long-term value, even if not immediately reflected in traditional financial metrics.

To adapt to this new focus on sustainability, Pure Botanica has made several key changes in its capital budgeting process including:

- Lower required rate of return for sustainable projects
- Incorporating non-financial benefits such as environmental impact, alignment with consumer demand for sustainability, and risk mitigation related to future environmental regulations.
- Longer payback periods for sustainable investments recognizing that the benefits of these projects may take

longer to materialize.

The PureVitalis Product Range

For the last 12 months, in conjunction with the product development team at Pure Botanica, Emily has been working relentlessly on the PureVitalis product range. This product range was born out of comprehensive market research, which highlighted the increasing consumer demand for anti-aging products that are both effective and sustainable. The global beauty industry has seen a surge in the demand for clean beauty, with consumers seeking products that not only provide visible results but also use natural, safe ingredients. The formulation process for the PureVitalis range centred around sourcing natural, bioactive ingredients that provide effective anti-aging benefits. These ingredients include:

Peptides and collagen boosters, which help improve skin elasticity and reduce wrinkles.

Fermented botanical extracts from Japan and Korea, which are known for their high antioxidant content and ability to rejuvenate the skin.

Hyaluronic acid, a key ingredient for intense hydration and plumping of the skin.

The formulation team focused on creating products that are free from parabens, synthetic fragrances, and harsh chemicals, aligning with the brand's commitment to providing gentle yet potent skincare solutions.

The PureVitalis range underwent extensive clinical testing to ensure the efficacy of its anti-aging benefits. The R&D team worked closely with dermatologists and skincare scientists to validate the performance of key active ingredients, such as collagen boosters and botanical extracts. These tests not only confirmed the anti-aging effects but also provided insights into

how bioactive ingredients interact with the skin, reinforcing the brand's commitment to science-backed skincare.



Image by dungthuyvunguyen from Pixabay

Sustainability Considerations

Apart from product development, incorporating sustainable supply chain practices is considered important in the introduction of this new range of products which reflects the company's commitment to a more sustainable and decarbonised future. However, investing in a more sustainable supply chain practices requires significantly higher capital investment and may hamper short term sales and profit. After numerous meetings, the compliance team in collaboration with the product development team has identified a few key sustainability strategies that can be implemented in the introduction of the PureVitalis range to the market. These sustainability considerations are highlighted in **Exhibit 1**.

Exhibit 1 Approach to a sustainable supply chain

Area of Focus	Sustainability Approach	Benefits
Sustainable Ingredient Sourcing	Source certified organic ingredients. Prioritize fair-trade, ethically sourced materials. Use local ingredients where possible to reduce transportation emissions.	Reduces environmental impact from synthetic chemicals. Supports ethical supply chains. Lowers carbon footprint.
Eco-Friendly Packaging	Use biodegradable and recyclable packaging. Explore refillable packaging options. Partner with sustainable packaging suppliers.	Reduces plastic waste and environmental degradation. Aligns with consumer demand for eco-friendly products.
Renewable Energy Use	Install solar panels and storage solutions for manufacturing facilities. Incorporate energy-efficient equipment. Explore wind energy options.	Lowers carbon footprint. Reduces long-term energy costs. Positions the company as a leader in decarbonization.
Water and Waste Management	Implement water recycling systems. Adopt a zero-waste policy for manufacturing. Ensure packaging can be recycled or composted.	Reduces water consumption. Minimizes waste production and landfill impact. Enhances eco-friendly brand image.
Sustainability Certifications	Pursue ISO 14001 for environmental management. Obtain LEED Certification for manufacturing plants	Reduces water consumption. Minimizes waste production and landfill impact.' Enhances eco-friendly brand image.

Emily and her executive team face a dilemma in choosing between the traditional supply chain and the sustainable supply chain for the launch of the PureVitalis range. The traditional supply chain offers lower upfront costs, quicker market entry, and established processes, which could result in higher short-term profitability. However, it may fall short of aligning with the growing consumer demand for sustainability and could expose the company to future regulatory risks. On the other hand, the sustainable supply chain involves higher initial investments in renewable energy, eco-friendly packaging, and sustainable sourcing, leading to longer payback periods but aligning with the brand's sustainability values and positioning the company for long-term market growth. This decision weighs the immediate financial benefits against the long-term value of environmental responsibility and brand differentiation.

Financial Projections

When comparing the financial projections for the two PureVitalis projects—one employing a traditional supply chain and the other utilizing a sustainable supply chain—the differences in cost structures and long-term profitability are notable. The traditional supply chain has a lower initial capital expenditure (CapEx) focusing on conventional manufacturing and packaging processes. Operating costs remain lower initially, but the long-term growth in consumer demand for sustainable products and potential regulatory pressures limit future revenue potential.

In contrast, the sustainable supply chain option comes with a higher initial outlay, driven by investments in renewable energy (e.g., solar panels), sustainable packaging, and eco-certified ingredients. However, these higher upfront costs are offset by long-term benefits, such as reduced energy expenses and

premium pricing opportunities in the eco-conscious market. The sustainable project is also expected to have a higher revenue potential due to consumer demand for eco-friendly products, brand differentiation, and operational savings from sustainability initiatives. The sustainable option, while more capital-intensive initially, can offer a higher return and aligns with market trends favouring environmentally responsible projects.

Another important consideration is a government grant that can significantly enhance the financial viability of the sustainable supply chain option for the PureVitalis project. Provided by the Australian government to cover 30% of the capital expenditure related to renewable energy infrastructure, such as solar panels and sustainable packaging, the grant aims to encourage small businesses to reduce carbon emissions and adopt more sustainable manufacturing practices.

The projected initial outlays associating with the two manufacturing options: Traditional Supply Chain and Sustainable Supply Chain is detailed in **Exhibit 2.**

Exhibit 2 PureVitalis Product Range Initial Outlay

	Initial Outlay ($'000)		
Category	**Taditional Supply Chain**	**Sustainable Supply Chain**	**Sustainable Supply Chain (Net of Government Grant)**
CapEx: Manufacturing Equipment	2,000	4,500	3,150
CapEx: Packaging Machinery	1,000	2,500	1,750
CapEx: Solar Panels, Energy Storage and Renewable Energy	0	5,000	3,500
R&D: Formulation, Testing, Compliance	2,500	3,000	3,000
Marketing & Launch Costs	1,500	2,000	2,000
Initial Working Capital	900	1,160	1,160
Total Initial Outlay	**7900**	**18,160**	**14,560**

The Finance team at Pure Botanica estimates that the initial revenue for the sustainable option is projected to be lower because it typically takes more time for products with a higher price point to gain market acceptance. Consumers may initially be hesitant to adopt the product due to the premium pricing, which reflects its eco-friendly formulation and sustainable packaging. The cost of goods sold (COGS) is also higher for the sustainable option due to the use of organic, eco-certified ingredients and biodegradable packaging, which are more expensive than traditional alternatives. Furthermore, operating expenses are also higher, driven by increased marketing costs

needed to educate consumers about the benefits of the sustainable product and to build awareness around its environmentally responsible practices. Based on the above understanding of the product range and the product market, a set of key projections are derived at as presented in **Exhibit 3**.

Exhibit 3 PureVitalis Product Range Key Projections

Item	Traditional Supply Chain	Sustainable Supply Chain
Project life	10 years	10 years
Sales in Year 1	400,000 units at an average price of $20	220,000 units at an average price of $30
Revenue growth	5% in the first 5 years then 4% in the next 5 years	5% in the first 5 years then 7% in the next 5 years
COGS	30% of sales	40% of sales in the first 5 years then 35% of sales
Operating expenses	25% of sales	30% of sales in the first 5 years then 25% of sales
Long term growth rate	2.50%	4.00%
Required rate of return	8.50%	8.00%
Depreciation	Straight line method	Straight line method
Tax rate	30%	30%
Capital Expenditure	Required for maintenance	Required for reinvestment in new technology

The lower required rate of return for the launch option that involves a sustainable supply chain reflects the recent shift in the company's capital budgeting philosophy and policy. The

lower required rate of return is the result of lower cost of capital (for example, cheaper loan for green projects)

Based on key data presented in Exhibit 3, the Finance team has prepared the forecasted profit and loss statement as well as projected on going capital expenditure and working capital requirements for the two investment options in **Exhibits 4 and 5.**

Exhibit 4 PureVitalis Traditional Supply Chain – Forecasted Profit and Loss Statement

$ in thousand	1	2	3	4	5	6	7	8	9	1
Revenue	8,000	8,400	8,820	9,261	9,724	10,113	10,518	10,938	11,376	1
COGS	2,400	2,520	2,646	2,778	2,917	3,034	3,155	3,281	3,413	3
Gross Profit	5,600	5,880	6,174	6,483	6,807	7,079	7,362	7,657	7,963	8
Operating Expenses	2,000	2,100	2,205	2,315	2,431	2,528	2,629	2,735	2,844	2
EBITDA	3,600	3,780	3,969	4,167	4,376	4,551	4,733	4,922	5,119	5
Depreciation	550	550	550	550	550	550	550	550	550	5
EBIT ($'000)	3,050	3,230	3,419	3,617	3,826	4,001	4,183	4,372	4,569	4
Taxes (30%)	915	969	1,026	1,085	1,148	1,200	1,255	1,312	1,371	1
Net Profit	2,135	2,261	2,393	2,532	2,678	2,801	2,928	3,061	3,198	3
Capital Expenditure	1500	1500	1500	1500	1500	1500	1500	1500	1500	1
Working Capital	900	945	992	1,042	1,094	1,149	1,206	1,266	1,330	1

Exhibit 5 PureVitalis Sustainable Supply Chain – Forecasted Profit and Loss Statement

$ in thousand	1	2	3	4	5	6	7	8	9	10
Revenue	6,600	6,930	7,277	7,640	8,022	8,584	9,185	9,828	10,516	11,2
COGS	2,640	2,772	2,911	3,056	3,209	2,575	2,755	2,948	3,155	3,3
Gross Profit	3,960	4,158	4,366	4,584	4,813	6,009	6,429	6,879	7,361	7,8
Operating Expenses	1,188	1,247	1,310	1,375	1,444	1,502	1,607	1,720	1,840	1,9
Energy Savings (net of solar credits)	150	150	150	150	150	150	150	150	150	150
EBITDA	2,922	3,061	3,206	3,359	3,519	4,657	4,972	5,310	5,671	6,0
Depreciation	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,140	1,14
EBIT ($'000)	1,782	1,921	2,066	2,219	2,379	3,517	3,832	4,170	4,531	4,9
Taxes (30%)	535	576	620	666	714	1,055	1,150	1,251	1,359	1,4
Net Profit	1,247	1,344	1,446	1,553	1,666	2,462	2,682	2,919	3,172	3,4
Capital Expenditure	2250	2250	2250	2250	2250	2250	2250	2250	2250	225
Working Capital	1,160	1,218	1,279	1,343	1,410	1,480	1,555	1,632	1,714	1,8

Discussion Questions

1. Compare and contrast the business case (pros and cons) for the Traditional Supply Chain and Sustainable Supply Chain projects. What project has a more compelling business case?
2. Estimate the payback period, NPV and IRR for the two projects using the provided financial data. What recommendations do you make to the Pure Botanica team based on these estimates?
3. Identify major sources of risk that are not currently captured in the financial projections. Perform a sensitivity analysis to address the risks that you identified.
4. Outline non-financial considerations that may impact the final decision. What is your final recommendation?

Versioning History

This page provides a record of changes made to this textbook. Each set of edits is acknowledged with a 0.01 increase in the version number. The exported files for this toolkit reflect the most recent version.

If you find an error, please contact opened@deakin.edu.au.

Version	Date	Change	Details
1.01	February 2024	Initial publication	Included Case Studies 1 and 2
1.02	February 2026	Additional content and platform change	Case Study 3 published and resource moved to Deakin Open eBooks