



Lisbon School  
of Economics  
& Management  
Universidade de Lisboa

# **Master of Science in Finance**

## **Master Final Work Project**

### **Equity Research in Food & Retail Industry TESCO PLC.**

Maria Beatriz Lopes de Moura

October 2021

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#### **Supervisor:**

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October 2021

# Abstract

This Equity Research in the Food and Retail Industry follows the research report format recommended by the CFA Institute. The company under analysis is Tesco PLC and the main goal is to provide an estimation of the company's PT for the end of 2021, considering the close share price on 30<sup>th</sup> June 2021. Events that may have happened after this date were not considered for the valuation.

Tesco PLC is the largest food retailer in the UK and one of the most valuable grocery companies worldwide. The company is listed at the London Stock Exchange, and it is part of the FTSE 100 index. Nowadays Tesco has its stores spread across the UK, Republic of Ireland and in Central Europe, offering a wide range of products.

This project provides an overview of the company including its history, business model, strategy, key performance indicators and the company's corporate governance. Additionally, because Tesco was the first UK retailer to issue an 8.5-year Sustainability Linked Bonds (SLB) of £750m, it was considered important to create an ESG topic as it is incorporated in the company's strategy.

Indicators like GDP growth, unemployment rate, inflation, population growth and levels of disposable income were analyzed on the Economic Outlook topic. The highlight of these macroeconomic indicators was because they directly influence the performance of the food retail industry, both supply and demand, each one in their own way. Moreover, the analysis provides information about Competitive Positioning including SWOT and PESTEL, as well as the identification of Tesco peers' companies using the SARD approach.

After understanding the company's business and projecting all FS, the valuation was conducted applying two approaches: the Absolute Valuation Approach using DCF, APV and DDM method; and Relative Valuation Approach through multiples of the peer group. To evaluate the risks of the company and support the final recommendation, a risk matrix was firstly performed, followed by a sensitivity analysis of the critical variables (kd, rf, MRP and growth) through Monte Carlo Simulation.

Based on PT of 282.86 GBX/share, 2021YE, using the DCF method, an upside potential of 26.87% was reached, against the closing price of 222.95 GBX/share. A medium risk was considered based on: Brexit, a slowdown of the overall macroeconomic indicators and the highly competitive pressure and mature market.

JEL classification: D10; G10; G12; G32; G34; G35.

Keywords: Tesco PLC; Equity Research; Food and Retail Industry; ESG; Supply; Demand; GDP; Mergers & Acquisitions; Valuation; Discounted Cash Flow Method; Multiples;

# Resumo

Esta avaliação de empresa sobre a Indústria de retalho alimentar segue o formato recomendado pelo CFA Institute. A empresa em análise é a Tesco PLC e o principal objetivo é fornecer uma estimativa do preço alvo (PT) da empresa para o final de 2021, considerando a cotação de fecho de 30 de junho de 2021. Quaisquer eventos que possam ocorrer após essa data não foram considerados na avaliação.

Tesco PLC é o maior retalhista alimentar do Reino Unido e uma das mais valiosas empresas neste segmento no mundo. A empresa está cotada na Bolsa de Valores de Londres e faz parte do índice FTSE 100. Hoje em dia a Tesco tem as suas lojas espalhadas pelo Reino Unido, Irlanda e Europa Central, oferecendo uma vasta gama de produtos.

Este projeto fornece uma visão geral da empresa incluindo a sua história, modelo de negócio e estratégia, indicadores-chave de desempenho e modelo corporativo. Além disso, como a Tesco foi pioneira na indústria do retalho alimentar, no RU, a emitir títulos vinculados à sustentabilidade, de 8.5 anos de £750 milhões, foi considerado importante criar um tópico de ESG, uma vez que está incorporado na estratégia da empresa.

Indicadores como o crescimento do PIB, inflação, taxa de desemprego, crescimento populacional e níveis de rendimento disponíveis foram analisados no tópico “Economic Outlook”. O destaque destes indicadores macroeconómicos deve-se ao facto de estes influenciarem diretamente o desempenho da indústria, tanto a nível da oferta como da procura. Além disso, a análise fornece informações sobre o posicionamento competitivo da empresa, incluindo as análises SWOT e PESTEL, bem como a identificação de empresas semelhantes à Tesco, através da abordagem SARD.

Depois de compreender melhor o negócio da empresa e projetar todas as Demonstrações Financeiras, a avaliação foi conduzida aplicando duas abordagens: Avaliação Absoluta usando os métodos dos Fluxos de Caixa atualizados (DCF), Valor Atual Ajustado (APV) e o modelo de atualização dos dividendos (DDM); e uma Avaliação Relativa por meio de múltiplos do grupo de empresas mencionado anteriormente. Para avaliar os riscos da empresa e dar suporte a recomendação final, foi realizada uma matriz de risco, seguida de uma análise de sensibilidade às variáveis consideradas mais críticas (custo da dívida, taxa livre de risco, risco de mercado e taxa de crescimento futura) através da Simulação de Monte Carlo.

Com base no PT de 282.86 GBX/ação obtido através do método DCF, foi alcançada uma potencial valorização de 26.87% comparativamente com o preço de fecho de 222.95 GBX/ação. Foi considerado um investimento de risco médio tendo em conta os seguintes fatores: Brexit, desaceleração dos fatores macroeconómicos e alta pressão competitiva num mercado maduro.

Classificação JEL: D10; G10; G12; G32; G34; G35.

Palavras-Chave: Tesco PLC; Equity Research; Indústria de retalho alimentar; ESG; Procura; Oferta; PIB; Fusões e Aquisições; Avaliação; Método dos fluxos de caixa atualizados; Múltiplos;

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# Abbreviations

**APV-** Adjusted Present Value

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**BoD-** Board of Directors

**BS-** Balance Sheet

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**CAGR-** Compound Annual Growth Rate

**CCC-** Cash Conversion Cycle

**CE-** Central Europe

**CEO-** Chief Executive Officer

**CFO-** Chief Financial Officer

**CFS-** Cash Flow Statements

**COGS-** Cost of Goods Sold

**CPI-** Consumer Price Index

**CR-** Czeck Republic

**CRP-** Country Risk Premium

---

**D-** Debt

**D&A-** Depreciations and Amortization

**DCF-** Discounted Cash Flow

**DDM-** Dividend Discounted Model

---

**E-** Equity

**EBIT-** Earnings Before Taxes Interest

**EBITDA-** Earnings Before Interest, Taxes, Depreciations and Amortizations

**ECB-** European Central Bank

**ESG-** Environmental, Social and Governance.

**EU-** The European Union

**EV-** Enterprise Value

**EVA-** Economic Value Added

---

**FAO-** Food and Agriculture Organization

**FCFE-** Free Cash Flow to the Equity

**FCFF-** Free Cash Flow to the Firm

**FS-** Financial Statements

**FY-** Fiscal Year

**FYE-** Fiscal Year End

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**GBX-** Great British Pence (stocks currency)

**GDP-** Gross Domestic Product

---

**IMF-** International Monetary Fund

**IS-** Income Statement

**IT-** Information Technology

---

**JiT-** Just in Time

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**kd-** cost of debt

**ke-** cost of equity

**KPI-** Key Performance Indicators

**KPMG-** Klynveld Peat Marwick Goerdeler

**ku-** unlevered cost of capital

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**LT-** Long-term

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**M&A-** Mergers and Acquisitions

**MBS-** Managerial Balance Sheet

**MCS-** Monte Carlo Simulation

**MRP-** Market Risk Premium

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**NI-** Net Income

**NLB-** Net Liquid Balance

**NPM-** Net Profit Margins

---

**OECD-** Organization for Economic Co-operation and Development

---

**P-** Poland

**P/E-** Price to Earnings

**PESTEL-** Political, Economic, Social, Technological, Environmental and Legal

**PP&E-** Property Plant and Equipment

**PPI-** Producer Price Index

**P-**Price

**PT-** Price Target

---

**Rf-** Risk free

**ROA-** Return on Assets

**ROE-** Return on Equity

**ROI-** Republic of Ireland

**ROIC-** Return on Invested Capital

**RV-** Relative Valuation

**SARD-** Sum of Absolute Rank Differences

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**S-** Slovakia

**SLB-** Sustainability Linked Bonds

**ST-** Short-term

**SWOT-** Strengths, Weaknesses, Opportunities and Threats

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**TV-** Terminal Value

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**UK-** United Kingdom

**US-** United States

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**WACC-** Weighted Average Cost of Capital

**WC-** Working Capital

**WCR-** Working Capital Requirements

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**YE-** Year End

**YoY-** Year on Year

# Tesco PLC.: Building a stronger business through a difficult year

*Serving shoppers, a little better every day!*

## 1. Research Snapshot



My recommendation for investors of TESCO PLC. is to **BUY**, based on the price target of **282.86 GBX/share<sup>1</sup>, 2021YE<sup>2</sup>**, using the Discounted Cash-Flow (DCF) method, implying an **upside potential of 26.87%**, against the closing price of 222.95 GBX/share, considering a **MEDIUM RISK**, (Table 1). It is important to mention that the financial calendar of Tesco (2021/22 - FY2021) starts in February 2021 and ends in February 2022.

**Modeling price target.** The price target was modeled using DCF (298.87 GBX/share), supported by other models such APV (281.94 GBX/share), DDM (280.81 GBX/share) and RV (393.36GBX/share using EV/EBITDA), (Table 2). Because the company's capital structure changed over the forecasted years, it has obtained different WACC values for each year, changing between 2.9% to 3.15%. The cost of equity was assumed constant (4.85% using CAPM model), and the cost of debt expected to change between 1.25%-1.50%. For the Terminal Value, it was used a perpetuity growth rate of 3.01%.

**Stable and stronger core business in the UK.** Tesco is the largest food retailer in UK and one of the most valuable companies, in the food retail sector, worldwide. Tesco is reinforcing its position in the UK when merged with the biggest wholesaler in the UK, Booker, that allowed the company to access new growing areas, new distribution channels and new products. Additionally, its international business became weaker, when the company started to leave countries that used to have a positive impact on its accounts (Asia and Poland treated as discontinued operations since FY 2021). To face competitive pressure, Tesco's business is backed up by a strong loyalty scheme (ClubCards) and new own label brand with competitive prices. According with the projections made, Tesco will keep delivering value to its shareholders: revenues are projected to grow at a **+1.40% CAGR** with **dividends growing at a 2.16% CAGR** (with a constant payout ratio of 50%) and is expected that the company create economic value (EVA) between **£1539.3m to £1589.1m**, from FY 2022F to FY 2027F, (Figure 1 and Figure 2).

<sup>1</sup> GBX or GBp is a subdivision of pound sterling named penny sterling. This terminology is often used by stock exchanges.

<sup>2</sup> Financial calendar 2021/22 (FY 2021), ends in February 2022

# TESCO PLC.

**BUY**

**Medium Risk**

**Table 1:** Recommendation highlights

RECOMMENDATION	BUY
Close Share Price (30 <sup>th</sup> June 2021)	222.95 GBX or 2.2295p
Price Target (DCF method)	<b>282.86 GBX</b>
Bloomberg code	TSCO: LNLondon
Upside Potential	<b>26,87%</b>
Currency	<b>Penny Sterling</b>
Shares outstanding (#m)	7731,71
Market Capitalization (GBP)	<b>19,967.1M</b>
6-year range (GBX)	139.20 – 266.20

**Source:** Bloomberg; Company data; (Own estimates and analysis)

**Table 2:** Current share price from 30<sup>th</sup> June 2021 versus PT calculated from all methods



**Source:** Author analysis

**Figure 1:** Dividend per share vs payout ratio

	FY 2021	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F
Dividend per share (in pence)	9,15	7,59	7,79	8,23	8,46	8,79	8,94
Payout ratio		50%	50%	50%	50%	50%	50%

**Source:** Author analysis

**Figure 2:** Historical and forecasted Revenues and Net Income (in £m)



**Source:** Author analysis

**Potential business risks caused by Brexit and macroeconomic changes.** The revenues of the company are directly influence by the performance of GDP, inflation, and population growth. Besides the fact that macroeconomic indicators have got worsened in all countries that the company operates (GDP decreased, inflation rate increased, and population growth remained low), Tesco will face more difficulties in its “home country” due to Brexit. In the upcoming years Tesco will have to adapt to the impacts of Brexit once it will affect the stocks movements and agreements with suppliers.

**Impact of Covid-19.** The global pandemic impacted all business. In the food retail business, the company was forced to increase costs (payroll, distribution, and store expenses) to meet demand levels and protecting the health and safety of its workers and costumers. On the other hand, Covid-19 boosted sales growth manly in online channels. It expected online sales to doble in comparison with historical years due to the new shopping patterns. Fuel revenues decreased 42% due to COVID-19 lockdown restrictions but are expected to recover in the forecasted years. Retail Banking and Insurance through Tesco Bank, in the UK, will face considerable losses for the next years, mainly because of the coming financial crisis.

**Establishing its strategy always following the industry trends.** For the upcoming years, the company is committed to build a strong digital platform and online penetration; recover its market share competing with hard discounters; and to reach net zero making its business even more sustainable.

## 2. Business description

### 2.1. About the company

#### Who is Tesco PLC and what it does?

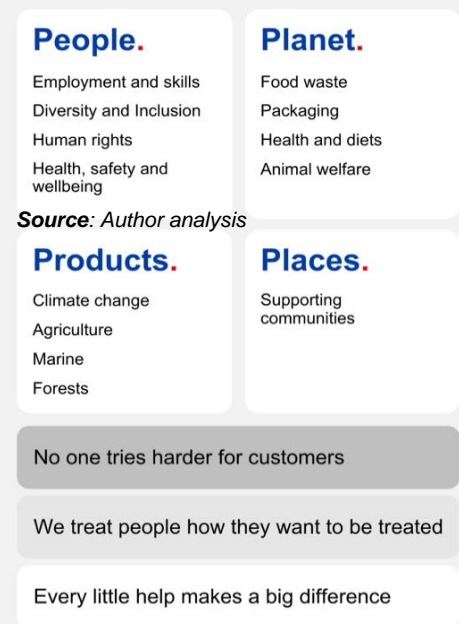
Tesco PLC (**TSCO**) is the largest food retailer in the UK and one of the most valuable grocery companies worldwide. The company is listed at the **London Stock Exchange**, and it is part of the **FTSE 100 index**. The Group consists of the **parent company named Tesco PLC**, and several subsidiaries, joint ventures, and associates held indirectly and directly by the parent company. Most of them complete the company's supply chain and are directly related with the core business, excluding Tesco Bank (a subsidiary totally held by the Group) which provides financial services and is considered a non-operating activity.

The business of the company is driven by its core purpose of “**servicing shoppers a little better every day**” and it is always in accordance with its the values and mission (Figure 3).

Along with Tesco's organic growth, over the years, the company has expanded its business by acquiring new stores, improving its retail services, and creating its own brands. Nowadays the company has its stores spread across the **UK and Republic of Ireland** where the main source of value creation is, and in **Central Europe** (Slovakia, Czech Republic, and Hungary) (Figure 4). The UK and ROI contribute with 93.12% of the total revenues (including fuel, Booker and Tesco Bank) and Central Europe with 6.88% (Table 3). The company offers a wide range of products including fresh and frozen food, bakery, alcoholic beverages, fuel, clothing, and beauty and health products. According with *Grocer Gold Awards*, the company was voted as the favorite supermarket by costumers, in the UK, for five consecutive years.

In the UK, Tesco's biggest competitors are Sainsbury's, Asda and Morrisons. Also, for the past ten years, Tesco PLC, has been losing market share for the existent hard discounters in the UK. This is because retailers use different strategies to position themselves in the market. Tesco is focusing on differentiation giving the opportunity to have clear position in the market. In contrast, the other competitors like Aldi, Lidl, and Iceland are focusing on a

**Figure 3:** Values and mission of Tesco



**Source:** Tesco annual report, 2021

**Figure 4:** Tesco worldwide businesses



**Source:** Author analysis

**Table 3:** Tesco percentage revenues by segments, FY2020

REVENUES • m	FY 2021
<b>UK and ROI</b>	<b>91,85%</b>
UK	75,58%
Physical Stores	57,23%
Online Sales	10,88%
Fuel	7,47%
Booker	11,64%
ROI	4,64%
<b>Central Europe</b>	<b>6,88%</b>
Fuel in Central Europe	0,21%
Czech Republic	
Physical Stores	2,40%
Hungary	
Physical Stores	2,38%
Slovakia	
Physical Stores	1,89%
<b>Tesco Bank</b>	<b>1,27%</b>
<b>Total Revenues</b>	<b>100,00%</b>

**Source:** Tesco annual report (2021)

cost' strategy by being lower-costs providers. Therefore, to reverse this situation, Tesco created a campaign called “**Aldi price match**” where the company matched its prices of several products against the prices in Aldi, to increase its customer’s portfolio. Currently, the company has **27.2%** of grocery market share in the **UK** and **21.8%** in **ROI**.

### History highlights

The company was founded in 1919 by Jack Cohen, and since the first day his main goal was to put affordable food within the reach of every family (Figure 5).

The first store was opened in 1929, in Burnt Oak, Edgware, north London, selling its first branded product called Tesco Tea, and other goods. In the 1930s, Tesco was a pioneer in warehousing food in the UK and expanded its business across the country.

The 1940’s were characterized by the revolution of the “self-service”, which changed the British shopping experience to a whole new level. After that, in 1947, Tesco stores were floated on the stock exchange with a share price of 25 pence.

Several changes happened in the following years that were crucial for the success of the business: the first supermarket, new products (household goods, clothing, and technology), petrol stations, the concept of sales, the usage of strong marketing campaigns, the launching of Tesco Personal Finance and the internationalization of Tesco stores.

In September of 2014, the company was involved in a financial scandal following an overstatement of Tesco’s expected profits of £263 million – this was due to an accelerated recognition of commercial income and deferral costs. This impacted the company at many levels: shareholders trust, management governance and reputation.

In 2018, Tesco PLC. merged with the biggest wholesaler in UK, Booker. The company saw an opportunity to grow and reinforce its position in the food business. This merge allowed the company to access new growing areas, new distribution channels and new products. This operation brought synergies and benefits for Tesco “£60m in the first year, growing to a cumulative c.£140m in the second year and reaching a recurring run-rate of c.£200m per year by the end of the third year”.

On 7 March 2020, Tesco acquired Best Food Logistics (BFS Group Ltd.) that was accounted as a business combination. BFS Group provides logistic services and a food supply chain to several fast-food companies namely KFC, Burger King, and others. This business combination may reinforce the Group’s position in the market although the impact of this combination in the financial statements is not yet known.

In the same FY the company announced the purpose of selling its business in Asia (Thailand and Malaysia) for a net cash proceeds of £8.0bn, as well as its business in Poland.

## 2.2. Business Model: Operational segments and regions

Tesco PLC operates in **two main businesses: Food retailing** and **Retail Banking** and **Insurance** through Tesco Bank, in the UK. In the FY of 2020/2021, the weight of retail on total sales increased by 0.58% YoY, representing 98.73% of total revenues, while the weight of Tesco Bank operations decreased by 30.94 YoY%, corresponding to only 1.27% of total sales (Table 4).

With more than 100 years of experience, Tesco PLC. has different types of formats of stores in its portfolio, tailored to their customer’s needs, such as: **Tesco Extra shops** (hypermarkets), **Tesco Superstores**, (supermarkets), **Tesco Express** (convenience shops), **One Stop** (smaller than Tesco Express), **Jack’s** (initially launched to compete with Aldi and Lidl), **Tesco Metro** and **Fuel stations** (where it offers diesel and petrol at lower competitive prices), (Appendix 1).

Also, the Group has several subsidiaries: **Booker** (wholesaler), **Tesco Bank** (offering financial services), **F&F** (Florence and Fred, an affordable clothing brand) and **Tesco Mobile** (joint venture with O2). Additionally, the company invested in a loyalty card called “Clubcard” and in an internet shopping service.

### Operating activities: Food retailing

**Figure 5:** Evolution of Tesco’s logos over the years



Source: Author analysis

**Table 4:** Weight of the two main businesses between FY2020 and FY2021, and its evolution

Sales by Businesses	2020	2021	Δ 2020/2021
Retail	98.16%	98.73%	+0.58%
Tesco Bank	1.84%	1.27%	-30.94%

Source: Author analysis

In the past, Tesco expanded its operations to 11 countries over 3 continents. Due to a change in the company's governance, the new CEO decided to change the company's approach regarding internationalization. For this reason, revenues from outside the UK and ROI decreased by **-78.27% CAGR** from 2015 to 2021.

Currently, Tesco's food retail operations are split in two segments worldwide: **UK and ROI** (United Kingdom and Republic of Ireland) and **Central Europe** (Slovakia, Czech Republic, and Hungary), (Table 6). **UK and ROI** account for **91.85%** of total revenues (**+23.84% CAGR**, 2015-21), and **6.88%** come from **Central Europe** (**-59.98% CAGR**, 2015-21). The worst performance in CE was mainly due to COVID-19 incremental costs and Hungarian sales tax. In the FY 2019/2020, the company abandoned its businesses in Asia and Poland, treating them as discontinued operations, (Appendix 2).

### Non-operating activities: Tesco Bank

To support its retail customers in the UK, Tesco has a financial subsidiary named Tesco Bank, being 100% owned by the Group, since 2008, which operates as an individual regulated entity. The bank was founded in 1997, called Tesco Personal Finance, with a joint venture between Tesco PLC and the Royal Bank of Scotland. With this subsidiary it is possible to cross-sell between businesses since customers can accumulate points in their Tesco' ClubCards when they purchase financial services. Tesco Bank provides several services like loans, foreign currency exchange, saving accounts, credit cards, and others. Aligned with technology, in 2014, the bank created its first mobile app to support its core business transactions. In 2021, *MoneyNet Awards* awarded Tesco Bank as the **Credit Card Provider of The Year** and the **Best Credit Card Rewards**, in the UK<sup>3</sup>.

### 2.3. Company Economics: Key performance indicators (KPI's) and drivers of profitability

Tesco has six KPI's to measure the company's business: **sales growth**, improvement of **operational cash flow**, **colleague's recommendation**, **deliver profit**, **costumers' recommendation** and build **trust**, (Figure 6 and 7). In the recent fiscal year, Tesco observed an increase in its sales in what regards its core business by 4.95% YoY (excluding the sales from petrol filling stations). This strong growth, during difficult times, also created opportunities for the company's suppliers to grow with them. On the other hand, COVID-19 impacted retail EBITDA due to incremental costs of £892m, reflecting a lower retail profit. The BoD decided to maintain a flat dividend continuing to deliver profit to its shareholders and believing in a future value creation.

Tesco is a market leader in the UK even though it is facing price pressure across the market thus compromising its margins. Currently, online penetration has been an essential key driver of profitability for Tesco. In the recent FY 2020/2021, the company registered the largest quantum growth in comparison with its competitors in the UK. Tesco's Baa3 rating reflects the company scale, namely as the market leader in the UK, with the number one position in the online grocery and convenience store segments (Moody's, March 2021).

Also aligned with the KPI's are the key drivers of profitability of the company. Macroeconomic indicators like GDP growth, population and inflation directly influence sales growth and retail profitability (both retail and financial services businesses).

**Table 5:** Tesco's number of stores and colleagues by country

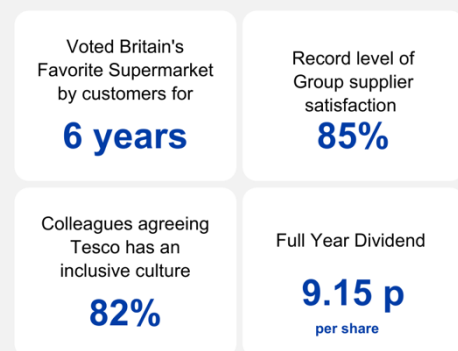
Location	Number of Stores	Number of Colleagues
UK and ROI	3 787	340 000
Central Europe	900	50 000

**Source:** Tesco annual report, 2021

"Tesco has shown incredible strength and agility throughout the pandemic. By putting our customers and colleagues first we have built a stronger business."

- Ken Murphy, Chief Executive

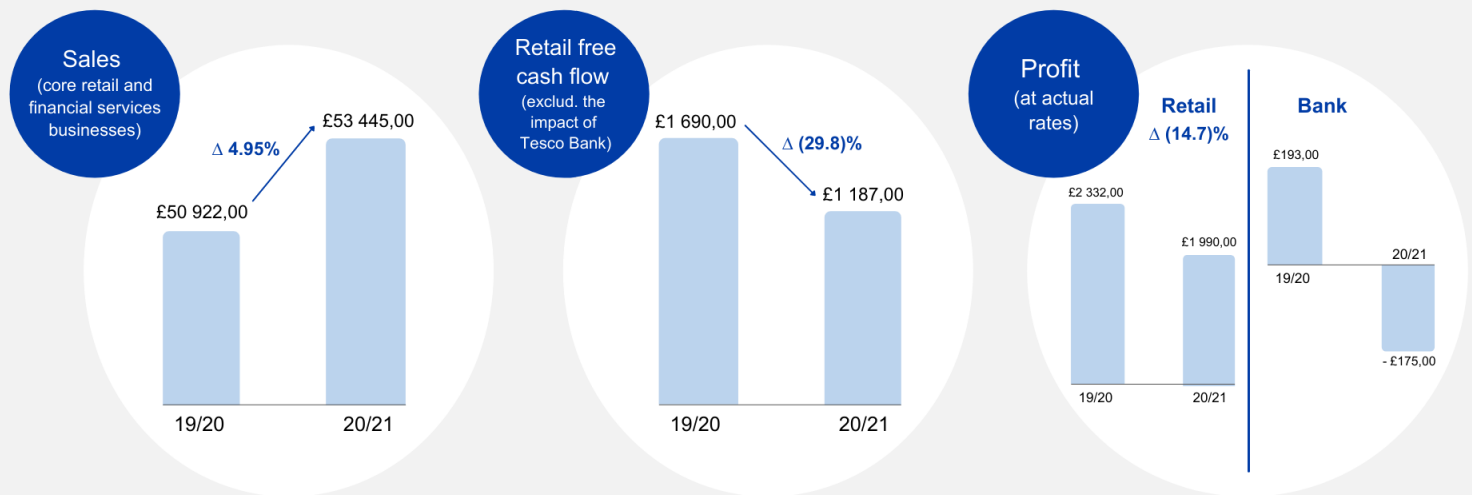
**Figure 6:** Four main KPIs of value creation to stakeholders (FY 2021)



**Source:** Tesco annual report, 2021

<sup>3</sup> Source: <http://www.money.net.co.uk/money.net-awards-2021/>

**Figure 7: Group performance (comparison between FY 2020 and FY 2021)**



Source: Tesco annual report (2021) and author analysis

## 2.4. Strategies followed by the company

A strategic planning and viability statement are reviewed and weighted by the Group over a three-year period. This time frame properly reflects the dynamic of the retail sector and the changing environment of the industry in which Tesco is inserted in.

For the last 5 years, after the financial scandal, the new management teams and CFO's strategy was to transform the company's financial statements by making it stronger and its liquidity and funding position more robust.

After achieving its turnaround goals, Tesco is now currently focused on sustainability and on a profitable growth through technology and innovation. These can be achieved with the support of a diversified portfolio covering food retail, wholesaling, and banking.

### Building a strong digital platform- through ClubCards and online penetration:

Tesco expects to take advantage from digital opportunities through three fundamental pillars: **customers proposition**, **supplier proposition** and the **operational model** used, (Figure 8). To face the pandemic and new shopping patterns, Tesco doubled the size of its online business and is currently improving Tesco's digital customer platform through ClubCards. In the most recent FY, Tesco accounted for more than 5 million active Clubcard app users and increase its online penetration from 9% to 18%.

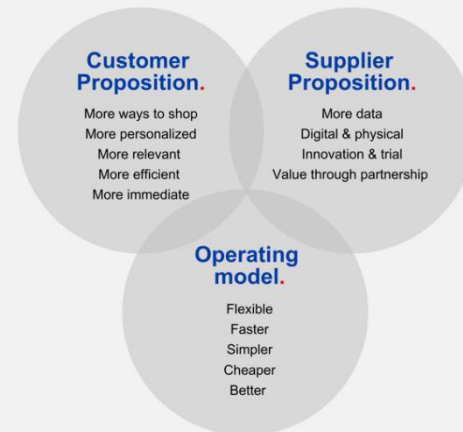
### Sustainability- integral to commercial strategy:

Sustainability is an essential part of Tesco's strategy where the company is currently doubling its efforts to reach net zero deforestation and emissions (Figure 9). Therefore, to reach net zero, Tesco will follow four main areas: reduction of food waste, change its packaging basing it on the 4R's strategy, its home delivery fleet will be fully electric by 2028, thus reducing carbon emissions and, be energy efficient by increasing the usage of renewable energy. Also, in the recent FY, Tesco issued an 8.5-year bond (a total of €750m at an interest rate of 0.375%) linked to **greenhouse gas emissions**, (Appendix 4). Tesco was the first retailer to issue a bond linked to sustainable targets. According to Tesco annual report of 2021, the bond includes a coupon step up of 25 bps for the final three coupon payments, if science-based carbon reduction targets of 60% are not achieved compared to a 2015/16 baseline, (Tesco, 2021).

### Increase market share – competitiveness is key:

Despite being a market leader, Tesco wants to increase its market share through long-term profitable growth, not only via cost's reduction but also through sales. With this strategy, Tesco will be capable to have a more strengthened brand while improving customer satisfaction, (Table 6). Also, to beat its peers, Tesco is committed to offer the best value for money to its costumers (competitive prices), to create long-term relationships with its suppliers based on price and quality standards and to improve its profitability through the usage of new technology.

**Figure 8: Tesco digital platform proposition**



Source: Tesco preliminary results presentations (2021)

**Figure 9: Sustainability integrity to Tesco's commercial strategy**



Source: Tesco preliminary results presentations (2021)

## 2.5. Shareholder's Structure

The Group has currently 7,731,707,820 **ordinary shares outstanding**, traded at the **London Stock Exchange**, and a **market capitalization of £19,967.1 M**. Each ordinary share gives to each shareholder the right of **one vote** in relation to all events at general meetings of the company<sup>4</sup>.

Tesco shares are held by different categories of shareholders: **individual insiders (0.02%** with 1 548 688 shares), **public companies (0.03%** with 2 280 928 shares), **State or Government (0.05%** with 3 778 896 shares), **private companies (0.1%** with 10 571 164 shares), **employee share scheme (2.5%** with 191 220 070 shares), **general public (17.9%** with 1 377 179 887 shares) and **institutions (79.4%** with 6 098 471 865 shares).

The company is currently owned by **three major institutional and corporate** shareholders: **BlackRock, Inc.** with 6.64% stake; **Norges Bank** that holds 3.99%; and **Schroders PLC** with 4.99% stake.

### Dividend Policy

In the **FY 2019/2020**, Tesco paid an **interim dividend** of 2.65 pence and a **full year dividend** of 9.15 pence per ordinary share, up 58.66% YoY (including the interim dividend). Dividend per share grew 13.5%, in comparison with the previous FY, reflecting the continued improvement of the business and the robust liquidity and balance sheet of the company. In **FY 2020/2021** the BoD approved a **final dividend** of 9.15 pence (with and interim dividend of 3.20p). The BoD decided to **maintain a flat dividend**, equal to the previous FY, to show its shareholders strength on the business and confidence in future cash flows (Tesco Preliminary Results 2020/21). The company expects to maintain a **dividend payout ratio of 50%** despite last year's exception that would have implied a final dividend of 5.97p, (*Figure 10*).

## 2.6. Stock performance

The rejuvenated competition associated with the financial crisis strictly impacted the company's share performance in **two different periods: 2008/2009** and **2014**.

In **2008 and 2009**, Tesco revealed its worse results since 1990s: the company was forced to cut prices to attract shoppers which led to a reduction of its sales margins. During that year, the shares of the UK' biggest retailer fell sharply, from **£6.23** to **£3.68**, although during this period the company **outperformed the FTSE 100 index** (*Appendix 3*). It is important to notice that the food industry, by itself, is less sensitive to crises in comparison with other retail traders. Even though sales growth slow down during recessions, groceries are essential to consumers despite of the condition of the economy, being the durable goods postponed.

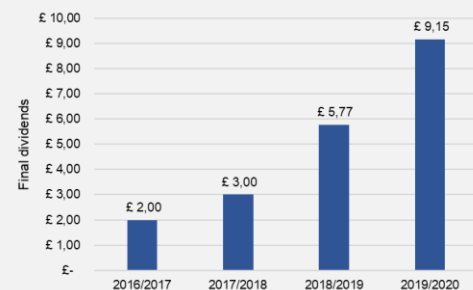
Another important issue that occurred was in the middle of **2014**, when the company was involved in a financial scandal due to an overstatement of Tesco's expected profits of £263 million – this was due to an accelerated recognition of commercial income and deferral costs. Due to this major issue, the board decided to change the management team to redeem the company's image in the eyes of the shareholders and the market. In that period, the shares of the company **underperformed not only in the FTSE 100 index but also its peers**, achieving the lowest value of all times, **£1.91**. After this scandal, the share price never recovered past levels until now, being around **£2.3**. In 2018, with the acquisition of Booker, the biggest wholesaler in the UK, the expectation of shareholders was reflected in a rise of the share price.

**Table 6:** Brand health vs Tesco's competitors in UK

Brand Health (vs last year 2019/2020)	Tesco	vs competitors
Index	+404 bps	+211 bps
Impression	+376 bps	+173 bps
Quality	+374 bps	+182 bps
Value	+484 bps	+347 bps
Reputation	+360 bps	+166 bps
Satisfaction	+497 bps	+235 bps
Recommendation	+333 bps	+162 bps

*Source: Tesco preliminary results presentations (2021)*

**Figure 10:** Historical dividends



*Source: Tesco annual reports and author analysis*

<sup>4</sup> Source: <https://www.londonstockexchange.com/news-article/TSCO/total-voting-rights/14883044>

## 3. Management and Corporate Governance

### 3.1. Governance Model

Tesco Governance model follows the principles of the **UK Corporate Governance Code 2018** (hereafter referred to as "**Code**"). This Code gives flexibility for the companies, in the UK, to implement corporate governance policies that fit better with their businesses models. The framework of the company's corporate governance was built to support the Board to pursue its strategy and have a sustainable growth in the long run. The large size of the business is reflected in a **highly hieratical organizational structure**, not only in the governance of the company as a whole but also at store level.

### 3.2. The Board of Directors (BoD)

Tesco Board is committed to high standards of governance. Its main purpose is to create a long-term sustainable growth while generating value to shareholders, always supported by the company's values and culture.

The Board of Directors (**BoD**) is composed by **14 members**, that include the **CEO** (Group Chief Executive), the **Chairman**, one **Senior Independent Director**, **ten independent Non-executive Directors**. In the FY 2020/2021, the average age of the board members was 4.9 years. Also, the BoD is composed of 31% female members and 69% male members. For the following FY, the Board is committed to changing on diversity levels, by having **one third of female members** in its composition. Regarding the BoD expertise, the areas of specialty of its members are **risk and strategy**, followed by **financial and retail**, (*Appendix 5*). On *Table 7* and *Appendix 6*, it is possible to see the time spent by the BoD in each key area.<sup>5</sup>

### 3.3. Tesco BoD's Committees

Tesco's Committee is composed by Steve Golsby (Chair), John Allan, Byron Grote, Mikael Olsson, Deanna Oppenheimer, and Alison Platt, who are all independent Non-executive Directors, apart from John Allan who is Non-executive Chairman.

There are **five** principal Committee roles that support the BoD: **Audit Committee**, **Corporate Responsibility Committee**, **Nominations and Governance Committee**, **Remuneration** and **Disclosure Committee**. Regarding Tesco Bank, it has an independent remuneration committee, as required by the Financial Conduct Authority. There is a clear division of responsibilities "*between the running of the Board and running the business of the Group, which is supported by the corporate governance framework*"<sup>6</sup>. By looking at the Corporate Governance framework, in *Appendix 7* and *Appendix 8*, it is possible to see that each activity performed by the Board Committee ensure that the BoD gives the right level of attention and consideration to specific matters. By looking at *Table 8*, it is possible to see the time spent by the Committees in each activity.

### 3.4. Board Changes and CEO succession: FY2020/2021

There have been a few changes in the Board and Management Team, in the last years and in the most recent FY. Along the years, changes in CEO have brought new strategies and critical changes in the company. There were three main changes in the Board that defined new important cycles for the company's business.

In **2011**, **Terry Leahy** retired from its position as CEO, after 14 years, being replaced by **Philip Clarke**. Terry Leahy was responsible for the internationalization of the company, expanded the business to 13 countries outside the UK and also, joined new markets such as financial services and online retailing. The new CEO changed the view regarding internationalization and ceased Tesco's operations in the US, Japan, and China.

"It is important to have a diverse board to bring different perspectives, insights and viewpoints in decision-making which ultimately benefits the group's stakeholders through better business performance"

- **Jonh Allan, Chairman**

"The board has overall responsibility for establishing the company's purpose, values and strategy to deliver the long-term sustainable success of the company and generate value for shareholders."

- **Tesco annual report**

**Table 7:** Time spent by the BoD in each key area

Key Areas	Time Spent
Operational Performance	22%
Financial performance and risk	25%
Strategy	27%
Governance (including culture and stakeholder matters)	26%

**Source:** Tesco annual report (2021)

**Table 8:** Committee's key areas of responsibility and the time spent during 2020/21

Focus of Committee Activities	Time Spent
Board composition	22%
Succession planning	24%
Effectiveness	28%
Governance	26%

**Source:** Tesco annual report (2021)

<sup>5</sup> Source: Tesco PLC annual report FY 2020

<sup>6</sup> Source: Tesco PLC annual report 2020

In **2014**, Tesco was involved in a financial scandal and the Board decided to change the management team and ensure that future results would be accounted properly for all commercial income. Unlike the previous management team, the new nominated team had more experience in the retail business. This change was important because drastic measures were imposed immediately by the new CEO and CFO, **Dave Lewis and Alan Stewart**: increase competitiveness, cutting temporary dividends by 75%, close the 43 most unprofitable stores, cut in CAPEX budget by £ 1million (in 2015/2016) and not pay the final dividend in 2014/2015. This new management team continue to cease international operations in Asia (Thailand and Malaysia) and in Central Europe (Poland).

In October **2020**, the Board appointed **Ken Murphy** as the new CEO, to succeed to Dave Lewis, who had been part of the board for five and half years, (*Figure 11*). Whereas the last CEO faced internal challenges, Ken Murphy is now facing external challenges such as the recession of the economy, Brexit and the continuing impact of Covid-19. In the same FY, **Imran Nawaz** was nominated as Tesco's new CFO, on 1 May 2021, after Alan Stewart's retirement. The nominations of the new CEO and CFO are seen as a "new chapter" for Tesco since the financial scandal in 2014.

From 2015 to 2019 the company's strategy was to stabilize the business while rebuilding the brand. After achieving its turnaround goals, the new management team started a new strategic phase converging to cash profitability and earnings growth. The sales of its international business continued with the propose of focusing and simplifying the Group. Common to all management teams was the strategy of **continuing to invest in a strong UK business**.

### 3.5. Sustainability and ESG metrics

The Group has an active role in performing its businesses having into consideration all Environmental Social and Governance (**ESG**) matters. To have an external perspective of the sustainability performance and track the progress, the company uses indices and benchmarks for comparison. Also, the company participates in some of the leading indices that evaluate companies' ESG performance on behalf of investors and stakeholders, (*Figure 12*).

Tesco was assigned an ESG risk score of **18.5**, considered to be a **low risk**, in a scale between 0 to 40+ (assigned by Sustainalytics). Since 2019, the company is included in the **FTSE4Good Index**, which is an index that highlights companies that have high scores in matters related with Corporate Social Responsibility (CSR).

Having in mind the environmental issues, the Board is committed to reducing the levels of plastic and food waste by working with suppliers to remove plastic packaging materials and to combine both knowledge and expertise to bring new solutions to the business. In the recent FY, Tesco was ranked in the **6<sup>th</sup> place**, by Greenpeace in a total of 10 UK's largest supermarkets for its contribution in cutting plastic and food waste. In line with its ESG strategy, Tesco was the first UK retailer to issue an 8.5-year **Sustainability Linked Bonds (SLB)** of £750m, where the coupons are tied to company's sustainability performance in the next years. Other responsible practices like reduction of GHG emissions, the welfare of farm' animals, human rights and respect for the humane force, guide the business strategy of the Group.

## 4. Economic Outlook

### 4.1. Macroeconomic Analysis: Economic outlook

The group operates mainly in the UK, also having businesses in ROI and Central Europe. However, not only did the economies of these countries impact the company but also the global economy once the world is increasingly connected and some suppliers come from different countries with less developed economies. Indicators like **GDP**, **population** and **inflation** influence the performance of the food retail industry, both supply and demand, each one in their own way.

**Figure 11 – Dr. Ken Murphy profile (CEO)**

**Ken Murphy, 53 yo.**



**TESCO - CEO** (since October 2020)

**Tenure:** 0.42 years

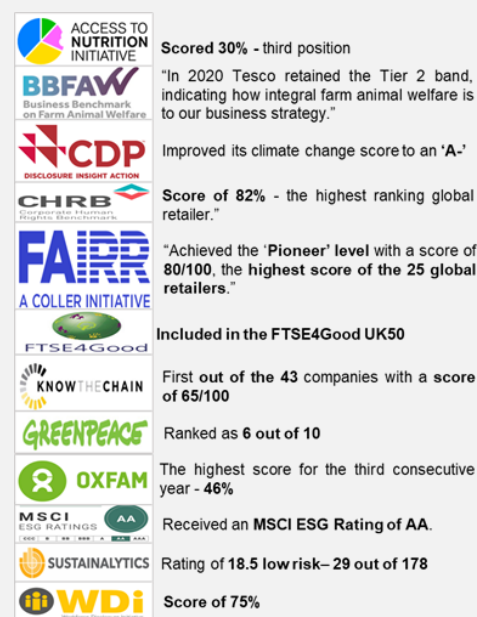
**Education:** Graduated at Harvard Business School

**Career History:** Over 20 years, Ken Murphy has been working in several senior management roles for Walgreens Boots Alliance Inc. In 2014 was appointed Executive Vice President, Chief Commercial. Additionally, in 2016 was named as President Global Brands, until 2019. On October 1<sup>st</sup>, became CEO of Tesco PLC.

**Skills and experience:** deep marketing commercial, and brand experience within retail and wholesale businesses. According with Tesco info, "he has experience in global product brand management, product development, sales and marketing, sourcing, manufacturing and distribution."

**Source:** Tesco annual report (2021)

**Figure 12: ESG indices and benchmarks**



**Source:** Tesco webpage | Sustainability

## World GDP growth

The global economy is currently under recession. The COVID-19 pandemic has frozen the economic activity across the world and, therefore, the latest IMF forecast for global growth was projected at **-4.4% in 2020**. The IMF previews a “V” recovery (Figure 13) with a rebound in the 2021 economic conditions projecting a **5.1% global growth**. The expected recovery is a reflection of unprecedented measures from regulatory authorities and governments around the world, in terms of fiscal and monetary stimulus. After the rebound in 2021, global growth is expected to gradually slow to about **3.5% annual growth rate** into the medium term.

Regarding the **UK**, according to the IMF forecast, the real GDP is expected to recover in 2021 with a projected growth of **6%**, after a negative growth of -9.8% in 2020. For the following years it is expected a decrease in the global growth, reaching the advanced economies’ levels.

## World Population growth

Population growth directly influence the performance of a grocery business: when a company expand its retail space faster than the population growth it can affect the financial results since consumer’s needs are not keeping up with the amount of goods that stores need to sell. “While stores rely on shoppers to be successful, population figures alone aren’t the sole factor that determines whether a retail location will be profitable.”<sup>7</sup> – purchasing power, population ethnicity and its gastronomic differences are some external factors that influence the location of a store.

The world population rose at **1.10% CAGR** between 2015 and 2020, more specifically, from 7,167 million in 2009 to 7,654 million in 2019. For the forecasted years, IMF predicted an estimated **+1% CAGR**, projected to reach 8,043 million of people in 2025. Additionally, according with to IMF forecasts, it is expected a decrease in population growth in all countries (from 2022F to 2026F) in which Tesco operates, in comparison with the forecasted years (Figure 14 and Appendix 9). This growth will not be even around all Europe: it is expected that the UK and ROI grow at a faster growth rate in comparison to Central Europe. The disparity in population growth across different regions is likely to shape the global demand for food.

## World Inflation: average consumer prices

**Taxes, government regulations and inflation** (average consumer prices) can increase costs’ levels and volatility in price changes. According to IMF forecasts, world inflation has remained stable since 2017, being around of **3.5%**, (Figure 15). The same can be observed by looking at the **Commodity Food and Beverage Price Index**, which includes Food and Beverage Price Indices, (Figure 16).

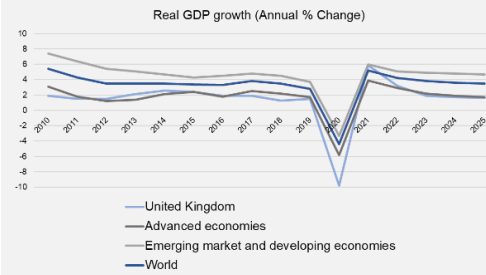
In 2020, Central Europe countries had recorded inflation levels above the target of **2%**. For the following years, a disinflation is expected, reaching the target imposed by the ECB. The UK and ROI were the only countries that registered decrease in 2020, with values well below the target, (Appendix 10). This can be explained by “a slowdown in the economy’s money supply through a tighter monetary policy”<sup>8</sup>, according to the CPI. Both countries, according with IMF, will reach inflation target level of 2%, by 2025.

Even though inflation has remained slightly stable, the recession caused by the pandemic reduced the **trade volume of goods and services** in 2020 by **10.5%**, in comparison with the previous year. For 2021, an increase (in percentage change) of **8.8%** is expected and then it will remain stable, changing positively **4% YoY**.

## 4.2. Demand Drivers

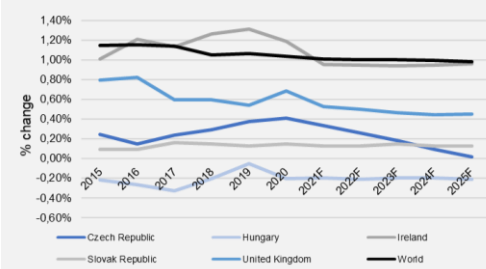
There are several **elements that drive and shape the demand for food around the world**, including population dynamics, urbanization, disposable income, consumer preferences and prices.

**Figure 13: Real GDP growth in UK, World, Advance, and Emerging Economies**



Source: International Monetary Fund (IMF) forecasts (2020/2021)

**Figure 14: Population growth (%) in the countries where Tesco operates**



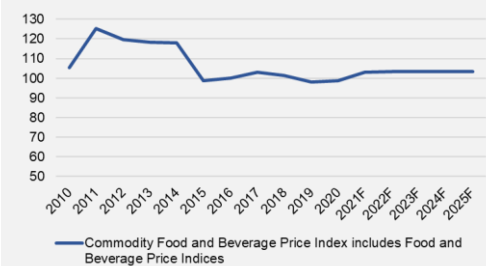
Source: International Monetary Fund (IMF) forecasts (2020/2021)

**Figure 15: World inflation and Trade Volume of Goods and Services**



Source: International Monetary Fund (IMF) forecasts (2020/2021)

**Figure 16: Commodity Food and Beverage Price Index evolution in the world**



Source: International Monetary Fund (IMF) forecasts (2020/2021)

<sup>7</sup> Source: <https://www.grocerydive.com/news/grocery--how-population-growth-impacts-grocery-success/535403/>

<sup>8</sup> Source: <https://corporatefinanceinstitute.com/resources/knowledge/economics/disinflation/>

**Population** is a key driver of total food use. With an expected 11% expansion in the global population until 2029, (round 842 million people), along with a general increase in per capita income across the globe, the total consumption of food commodities is expected to increase 15% by 2029, on a calorie basis (OECD/FAO, 2020). As population rises, an increase in the market value as a whole is expected, same for the **UK grocery market, expected to grow to £213bn by the end of 2022<sup>9</sup>**.

The **level of income** is an important factor of access to a diverse and rich offering of food products. The expected global economic development will have an effect regarding the per capita food expenditure across all income groups, with an expected increase in absolute terms especially on higher value items such as vegetable oils, livestock products and fish. As income rises, the predisposition to spend the extra income on food declines in favor of discretionary items, so the food expenditure share in total disposable income falls. With COVID-19, Europe projects a polarization of demand with consumers trading up (buying more expensive products) or down (buying more of cheaper versions of the same products)<sup>10</sup>. An uptrading trend of European consumers is mainly “due to higher disposable incomes from lower spending in other categories, coupled with the increased importance of cooking at home and healthy eating”, (*A year like no other for European grocery retailers: The state of the industry post 2020*, McKinsey & Company, May 20, 2021)<sup>7</sup>, (*Figure 17 and 18*). In 2021, 30% of European consumers are expected to spend more of their money in sustainable and healthy manufactured goods. On the other hand, consumers that were most affected by the crisis caused by COVID-19 will decrease their spending levels. According to McKinsey & Company, 19% of those consumers have downtraded in comparison with 2019. All countries suffered from changes in consumption levels: some countries exhibited stronger signs of trading up (i.e., **UK, Germany and Netherlands**) and others a strong trend of trading down (i.e., **Portugal, France and Sweden**)<sup>7</sup>. With the upcoming crisis this change in buying behavior will remain for next years.

The **Unemployment rate** is positive correlated with disposable income, and therefore essential to be analyzed. Unemployment is one of the biggest consequences of financial crises and recessions and directly influences the demand. Households around the world reached record levels of unemployment, after the last global financial crisis in 2008, leading to a more **pressure on disposable incomes** and **changing consumption needs**.

Due to the pandemic, the unemployment rate is predicted to increase in all countries where Tesco operates. According to the IMF, in 2021, the UK will be the country with the highest level of unemployment, around **7.4%**, in comparison with the group of countries under analysis, followed by Slovakia and the ROI, with **7.1%** and **6.2%** respectively. For the remaining projected years, a slowdown in the unemployment rate in all countries is expected: in 2025, the lowest values of unemployment of **2.8%** and **3.4%** are predicted for Czech Republic and Hungary. The UK expects to recover at a faster rate in comparison with the ROI, reaching values of **4.2%** and **5.3%**, at the end of the forecasted years. Regarding Slovakia, it is predicted to go through a slow decrease from **7.1%** in 2021 to **6.6%** in 2025, (*Figure 19*).

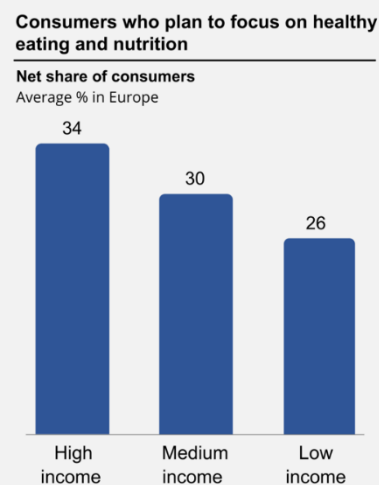
Based on these values, even though COVID-19 is putting pressure on households' income and promoting a contraction in the volume of retail sales, it is possible to continue to observe a positive growth on all households' products (i.e., food and other essentials for day-to-day living). **An increase in unemployment leads to a decrease in expenditure of non-food products:** fuel, clothes, and financial services are the most affected businesses of Tesco, thus allowing the conclusion that sales from non-food stores are more cyclical than food-stores' sales.

The **global food and grocery retail market size** was valued at USD 11.7 trillion in 2019 and it is expected to grow at a **CAGR of 5.0% from 2020 to 2027** (GVR, 2020). The reason around this projection includes a **recover** and **increased on the level of disposable income** and a solid middle-class base in developing countries, as well as brand awareness in important markets such as China and India. For developed regions, the

<sup>9</sup> Source: <https://www.arup.com/perspectives/publications/research/section/understanding-uk-grocery-supply-chain-resilience>

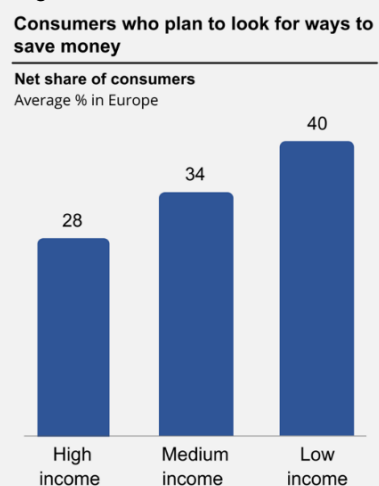
<sup>10</sup> Source: <https://www.mckinsey.com/industries/retail/our-insights/a-year-like-no-other-for-european-grocery-retailers-the-state-of-the-industry-post-2020>

**Figure 17:** New consumer patterns in Europe by level of income: focusing on health eating and nutrition habits



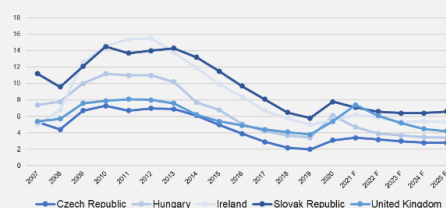
**Source:** *A year like no other for European grocery retailers: The state of the industry post 2020*, McKinsey & Company (May 2020)

**Figure 18:** New consumer patterns in Europe by level of income: increase in savings



**Source:** *A year like no other for European grocery retailers: The state of the industry post 2020*, McKinsey & Company (May 2020)

**Figure 19:** Unemployment rate (%) in the countries where Tesco operates



**Source:** International Monetary Fund (IMF) forecasts (2020/2021)

expected level of household expenditures on food is likely to grow at a stable pace. In Europe, for example, from 2008 to 2018 the expenditure on food and non- alcoholic beverages rose at a CAGR of 1.7% to €1,047 billion, always around a stable 6% of the EU GDP and 12% of total household expenditures (Eurostat, 2019).

### 4.3. Supply Outlook

Grocery supply chain has become increasingly complex and more global. **Globalization** brought many opportunities for retailers, eliminating barriers and allowing them to work more closely, from around the world. **Technological, political, and environmental** factors directly influence the performance and resilience of the food supply chain (Figure 20). In recent years, technological advances have brought incremental improvements in the food supply chain. Also, more than ever, food and logistic security need to be into consideration as well as well as sustainability issues, when discussing supply channels.

The food supply chain can be decomposed in three main segments: **production, processing, and retail**, where retailers complete the selling process. **Farmers, processors, distributors, retailers, and consumers** are the food chain actors. Each segment contributes to the price formation that consumers pay at the end of the cycle.

In the short-run, food prices are expected to change more, usually due to supply side factors, where input costs are the most significant ones for being directly influenced by macroeconomic indicators (i.e., cost inflation) and by the law of supply and demand. Outside of the grocery sector, other factors such **population growth, slowdown of agriculture productivity, weather and trade** influence food prices.

Food supply chains depend on a high level of temporal coordination when it comes to delivering the products from producers to final costumers, based on the principle JiT (just in time). Fresh fruit and vegetables are two examples of goods that need to be delivered in time to the final consumer. According to NatureFood, the UK imports around 84% of fresh products from EU countries, so an efficient supply chain is very important to avoid disruptions (i.e., food waste and deterioration of products). Large retailers are investing in new IT programs to reduce both transportation and inventory costs of grocery products, from the manufacturer to the retailer, that comprise about 12% to 20% of their final value<sup>11</sup>. Electronic Point of Scale (EPOS) is one of the IT systems used by Tesco and by many large food retailers in the EU, that make their supply chain more efficient. EPOS allows retailers to have a broad perspective about their actual sales against the forecasted, enabling them to adapt their orders with their suppliers, evaluating their profitability by analyzing which products are improving their margins (i.e., what products boost or drop the company’s margins) and monitoring warehouse efficiency (i.e., occupation, route planning, vehicles usage). In the next years, we will observe a more connection between the food supply chain and IT programs.

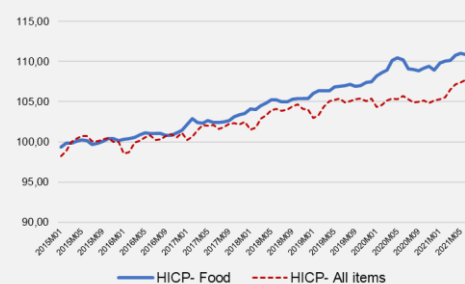
Global **agricultural production** is expected to increase over the coming decade, with the Asian-Pacific region contributing to almost half of global output, whereas Europe, Central Asia and the Americas are responsible for another 45%. According to the IMF (2020), forecasting in the short-term food prices is relatively easy given that the **Food-at-Home CPI shows high levels of correlation with Farm Products PPI and Electric Power PPI**. Based on Eurostat data, between 2015 and 2021, **grocery prices have increased 2% per year**, (Figure 21). By analyzing the **Consumer price index for food and all items**, in Euro area, we can see that food prices grew at a faster rate in comparison with other goods, since 2015, driving up inflation. Increasing inputs prices and price trends in other commodities are likely to have more impact on highly perishable products that suffer minimal processing, such as fruits and vegetables, but for products that are highly processed the effects, at least in the short term, are not immediately visible. This is due to raw materials representing a small percentage of the final cost of the product (asymmetric price transmission).

**Figure 20:** Factors that directly influence the resilience of the supply chain



**Source:** Understanding UK grocery supply chain resilience- Jonathan Han, ARUP (2020)

**Figure 21:** Evolution of Harmonized Index of Consumer Prices – all items and food, in Europe



**Source:** Eurostat (2020)

<sup>11</sup> Source: <http://cws.cengage.co.uk/thompson5/students/cases/tesco.pdf>

## 5. Industry Overview and Competitive Positioning

### 5.1. Food Retail and Distribution: Industry Overview

Food retail and distribution provide an essential service to all populations, and it is one of the oldest industries in the world. It can be defined as the sector which involves large business and individuals that sell products to consumers.

#### Market Segmentation

In the food retail industry, it is possible to identify **four types of products**, such as, **food** (packaged and unpackaged), **drinks**, **tobacco**, and **households' products**. Food products represent **72.8%** of the total market as essential products (Figure 22). The trend will be of growth in the consumption of food products since these are the only ones deemed indispensable in times of crisis.

Also, we can find different types of **distribution channels** with different dimensions like **hypermarkets**, **supermarkets**, and **hard discounters**; **convenience stores** and **gas stations**; **value, discount, and general merchandise retail**; **clubs**; and **others** (Figure 23). Supermarkets and hypermarkets have a higher market share, followed by convenience and grocery stores. Online consumption and distribution are expected to have the fastest growth in the next years when compared with others distribution channels.

According to MarketLine (2020), the global food & grocery retail market value is dominated by Asia Pacific with a total market share of 46.40%, in which India, Japan, China and Indonesia are the key markets. Following Asia Pacific, United States and Europe represent 22.50% and 20.90%, respectively.

#### Industry Structure

The food and retail sector includes three fundamental pieces: **farmers and ranchers** (production), **manufacturers** (processing the raw materials), and **wholesalers and retailers** (provide the final goods to consumers). The Food and Retail industry is characterized as an **Oligopoly**, being composed by a small set of large players that dominate regional markets with lower prices and efficiency of logistics and scale. The industry is at a **mature stage** given that it complies with the usual conditions of this stage, little or no growth (Appendix 11), consolidation and high barriers to entry.

#### Industry Trends: E-commerce and Sustainability

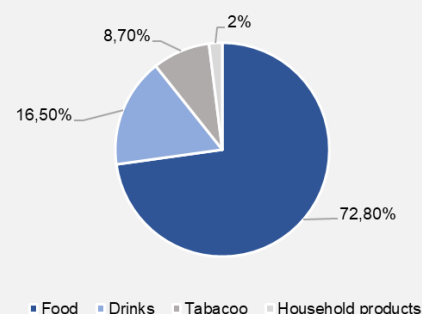
**Sustainability** and **E-commerce** are two major trends for the next years in the retail business.

**The change in the sustainability paradigm:** retailers have a big role in the carbon emission and usage of plastic. According to Barema Bocoum, Partner – C&R, KPMG in France, “consumers are driving the companies to change ethically – find ways to bring sustainability right from sourcing, processing, packaging, distribution and even in marketing while reaching out to their consumers. Hence, while doing M&A, this is a must have ingredient in targets for long-term success.”<sup>12</sup>

**The boom of the online-grocery market:** the evolution of digitalization and e-commerce is the future for retailer companies with a lot of room for penetration. The investment in online grocery has many underlying costs because companies need to cover costs associated with technology, warehousing, transportation, and delivery. With COVID-19, consumers shift their consumption to online platforms. This new way of consumption creates opportunities for grocery retailers to pool their margins and improve profitability.

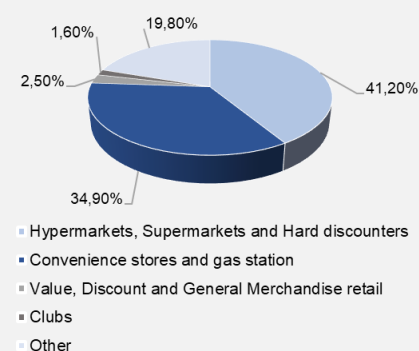
Asia-Pacific and North America lead the e-commerce market with \$ 2.448,3 billion and \$ 749.00 billion, respectively (see Figure 24). According to the Global Market Insights

**Figure 22:** Global food & grocery retail market category segmentation: % share



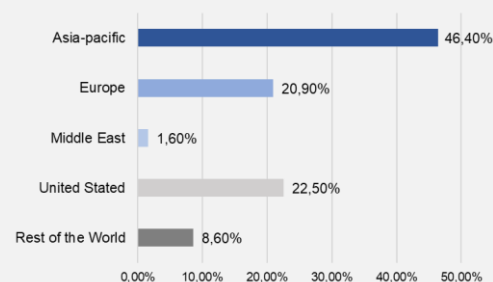
**Source:** MARKETLINE "Global Food & Grocery Retail", (2020)

**Figure 23:** Global food & grocery retail market distribution by distribution channels: % share



**Source:** MARKETLINE "Global Food & Grocery Retail", (2020)

**Figure 24:** Retail Ecommerce Sales worldwide, by region, 2020 (in billions)



**Source:** eMarketer, May 2020

“Shifts like online, health, sustainability and value existed before, but the speed and magnitude has significantly changed.”  
**- Disruption and Uncertainty - The State of Grocery Retail 2021: Europe, McKinsey & Company, May 20, 2021.**

<sup>12</sup> Source: <https://home.kpmg/xx/en/home/insights/2020/02/achieving-growth-in-sustainableeconomy.html>

(2020) *Online Grocery Market Share*, Europe accounted for more than 30% of global grocery market share, in 2020, with the UK, followed by Germany, Spain, France, and Italy, as leading countries. The United Kingdom is considered to have the most developed online-grocery market in Europe, and Tesco PLC its the biggest player. E-commerce news says that, in Europe, online-grocery market is expected to grow about 66% until 2023<sup>13</sup>.

### M&A activity

For the past five years, global retail M&A value has been increasing despite all challenges created by the pandemic. In 2020, according with JD Supra, M&A deals increased 15% YoY, representing US\$66.1bn. despite the increase in M&A transactions, there has been a reduction in volume of 152 deals, in comparison with the previous year. The reduction in the number of M&A deals, in 2020, can be justified by an increase in the concern with maintaining solid operations and not looking for strategic plans. The United States is the biggest bidder, with 23.29% and 30.73% of total M&A deals and value, followed by the United Kingdom with 8.08% of total global M&A deals in the food and retail sector. China is the second bidder by value with 10.26% with only 4.68% of global deals.

## 5.2. Key Drivers of Industry Profitability

The behavior of some demographic indicators such as population growth, GDP, and inflation, affect the performance of both revenues and costs of the food retail industry. Also, there are other drivers of revenues and costs that retailers must consider. There are **four essential factors for the success of a retailer**: good store location/accessibility, large product range to satisfy all different customers, product availability (quickly stock replacement) and competitive prices (highly correlated with controlling costs efficiently).

### Key Drivers of Revenues

The increase of spending power and food consumption patterns are two important factors that support the growth of revenues.

Also, the increasing investment in e-commerce sites with competitive prices is given more strength for companies with higher market share. It is expected that the food retail business continues to grow for many reasons: the purchase of food is essential for the day-to-day living, the growth of population's worldwide, and because price inflation remains around the target levels. For the past 10 years, both **gross and operating margins** of the industry have been decreasing, never higher than 26% and 5% respectively, enhancing the low margins and the great competitiveness of this type of business, (Figure 25).

### Key Drivers of Costs

**Labor/Personnel costs, customs costs** related to stock movements and **property rental rates** in major cities are the most relevant key drivers of costs in food retail industry. Considering the median of all European peer group of Tesco in the industry of Food Retail, personnel costs have been increasing, at a 1.29% CAGR, representing around 12% (as a % of sales), (Figure 26). Nevertheless, food retailers' resort to **advertising** and incur many costs to attract new customers and increase revenues. Also, when considering major players, with higher market share, that usually operate in different currencies and control different channels of distribution, they are exposed to volatile exchange rates and commodity prices, thus bringing larger risks to the businesses. **Taxes, government regulations** and **inflation** can increase costs' levels and volatility in price changes.

## 5.3. COVID-19: impact on the retail sector and on Tesco

The year of 2020 brought new challenges and opportunities to the global economy. COVID-19 forced companies, around all sectors, to re-evaluate their business strategies,

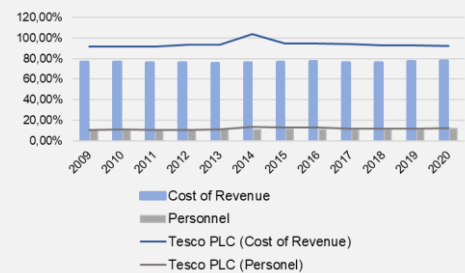
<sup>13</sup> Source: <https://ecommercenews.eu/uk-leads-europe-in-embracing-online-grocery-shopping/>

**Figure 25: Margins (median values of European peer group list of Food Retailers)**



Source: Bloomberg (2021), BI European Food Retailers Principal Peer Group

**Figure 26: Costs as a % of Sales (median values of European peer group list of Food Retailers)**



Source: Bloomberg (2021), BI European Food Retailers Principal Peer Group

**Figure 27: Changes in shopping behavior in Europe (%)**



Source: The State of Grocery Retail 2021: Europe - McKinsey & Company

once the unexpected pandemic has exposed how vulnerable some businesses models were. The pandemic has accelerated existing shifts more than created new trends in the food retail business: unexpected shifts happened in **local demand**, **customer channels** and in **supply chain**.

There are strategic **innovations** that retailers will be forced to implement pos-COVID-19, which are interconnected like **strengthening the supply chain**, by investing in security to ensure that continues in times of crisis, **hedging against substitutes** and **investing in new products** and **private brands**. Companies will have to consider in their strategies new shopping behaviors, since costumers are trading down for value and shifting to mindful shopping (Figure 27 and 28).

Despite the long-term impacts of COVID-19 and the global recession, it is expected that investment activity continues, consequently increasing in M&A in this and other sectors. The health and liquidity of a company as well as the growth outlook, are two warrant areas that need to be more analyzed during the due diligence. This strategy will be a key driver of the economic recovery, mainly in small businesses like convenience stores, which have a high probability of going bankrupt in times of crises. For the next years, companies will be focusing on liquidity and profit margins which will enable the strongest retailers to reinforce their positions in the industry.

#### 5.4. UK and Brexit: retail in the UK and impact of Brexit on the retail sector

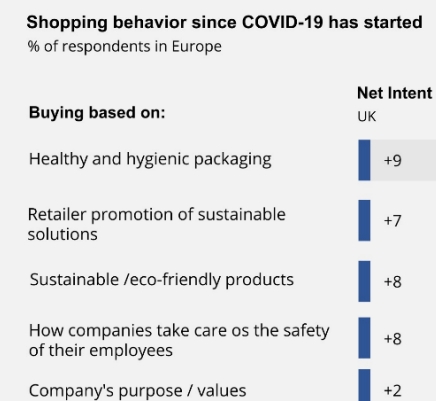
According to a study provided by ARUP (Jonathan Han, 2019), "UK grocery market as a whole was valued at £185bn in 2017 **and forecast to increase by 15% to £213bn by 2022** as population growth rises (IGD, 2017)".

In the UK, the Food & Grocery market is very saturated with low room for penetration. The four biggest players in the industry (Tesco, Sainsbury's, Asda and Morrisons) have been suffering, losing market share for hard discounters like Aldi, Co-op, and Lidl, (Figure 29).

According to ONS, due to the pandemic and the restrictions imposed by the British government, the volume of general retail sales decreased by 1.90% YoY in 2020. On the other hand, food stores registered a strong YoY growth of 4.4%. After a slow start, **online grocery** sales are expected to be worth around €20.5bn, representing a total growth of 41% in five years, by 2024. Food stores recorded the biggest increase for online sales of 79.3%, in comparison with 2019, representing 34% of the total food and grocery sales<sup>14</sup>. The biggest players in the online grocery market in the UK are Tesco followed by Asda and Ocado<sup>15</sup>.

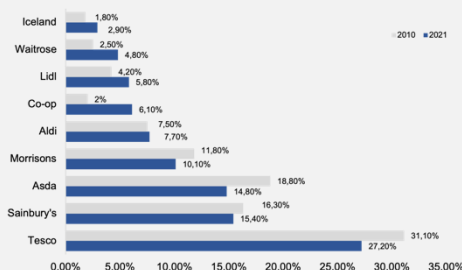
**Brexit** is a serious risk for the company, in the food retail sector. The increase in bureaucracy and costs associated with the movements of stock from country to country as well as a weaker Sterling, are some of the challenges that Tesco will face that will directly impact the results and investors' instability. Studies say that 91% of retailers expect some disruption on their supply chains since the UK is leaving the EU, although only half of them have contingency plans, (ARUP (2019) *Understanding UK grocery supply chain resilience*). Since UK imports more goods than exports, is essential that UK retailers reinforce their supply channels by establishing strong agreements with their suppliers. Regarding UK's suppliers, this situation may benefit them and increase the productivity of the agricultural sector of the country. The uncertainty caused by Brexit and all the constraints that arise from it are expected to increase prices, thus directly affecting British consumers.

**Figure 28: UK consumers' behavior change, since COVID-19 (net intend)**



**Source:** *The State of Grocery Retail 2021: Europe - McKinsey & Company*

**Figure 29: Grocery market share in UK, 2010 vs 2021**



**Source:** KANTAR, (2021)

<sup>14</sup> Source: <https://ecommercenews.eu/ecommerce-in-uk-to-reach-e222-billion-in-202>

<sup>15</sup> Source: <https://www.globenewswire.com/news-release/2020/11/18/2129514/0/en/UK-Online-Grocery-Market-Analysis-by-Quarter-2017-2020-Tesco-the-First-Retailer-in-the-UK-to-Fulfill-1M-Online-Grocery-Orders-in-a-Week-due-to-the-Impetus-from-COVID-19.html>

## 5.5. PESTEL

### Political: Political influence and Government regulations

There are many political factors that impact the food retail industry. Governments around the world influence the food industry with their exhaustive regulatory frameworks. Raise of **taxes** and **regulations** influence prices levels and therefore consumption habits, leading to changes in sales profit. Also, the political environment of the country such as protests, imposition of lockdowns and restrictions of circulations, disrupt the supply chain of food and services globally. The decision of leaving European Union by UK Government, will affect the entire supply chain and many businesses.

### Economic

Healthy economies usually create opportunities for businesses to grow. Factors like, **increase in GDP**, **growth of disposable income** and **increase in labor factors**, directly influence the performance of the food and retail businesses. A recovery of economies around the world is expected, with this being a good sign to all consumers, retailers, and suppliers.

### Social

Society shape shopping habits and create trends. Also, demographic and social factors like, population growth, age, race, gender, and level of education affect consumer's preferences. The discrepancy between developed and developing nations reflect different consumption patterns, not only in what people buy but also how they acquire their products. Countries that are more socially developed have consumers who are more aware of health issues and highly educated, and therefore more capable of changing their shopping patterns and adhere to e-commerce.

### Technological

In a world that is increasing changing, technology helps businesses to improve their sales and change consumers' shopping patterns. In the recent years, consumers have been observing the development of e-commerce platforms in selling and delivering food products. Ecommerce stores allowed many retailers around the world to survive during the pandemic and lockdown restrictions. Data analytics is an instrument that help companies to better understand their customers and therefore, helping retailers to improve their profitability.

### Environmental

There are several environmental factors that affect this industry. All players in the food retail chain and the activities that they carry out to reach consumer's needs affect the environment. The **excessive production and usage of plastic** (for transportation and sale of packaged products) and **emissions of CO<sub>2</sub>** in the production and distribution of goods to stores, are two of the major factors that harm the environment. Also, climate change and potential impacts on agricultural output and commodity prices come from bad practices and lack of sustainability in the supply chain. Around the world, the biggest retailers are trying to change their businesses to be more environmental responsible.

### Legal

Retailers operate in accordance with the legal environment of the countries in which they operate. **Competition law** and **restrictive practices law**, **consumer protection laws** and the **compliance with health standards** and **ensuring food quality** are legal factors imposed by governments that conduct the day-to-day business of retail companies.

## 6. Competitive Positioning

### 6.1. Peers identification and Strategy

The peer group was chosen based on multiple approaches and criteria. The base sample was taken from Bloomberg, and it was selected the European peers list (with 17 securities) instead of the global peers' list since the company has increasingly moved away from the international market.

**Table 9:** Value drivers of Tesco's peer group

Peer Group	Size (£m)	ROE	ND/EBIT
CARREFOUR SA	10 648.1	10,25%	3,36
WM MORRISON SUPERMARKETS	4 298.9	7,08%	19,21
SAINSBURY (J) PLC	5 460.9	5,39%	7,05
ICA GRUPPEN AB	7 218.3	11,70%	3,41
KESKO OYJ-B SHS	8 351.7	17,78%	4,07
TESCO PLC	17 353.8	7,27%	14,73

**Source:** Bloomberg and author analysis

To select the final peer group, **SARD** (Sum of Absolute Rank Differences) **approach** was applied. The SARD approach can account for an infinite number of proxies for profitability, growth, and risk while remaining independent of industry classifications, (Jens Overgaard Knudsen, Simon Kold, and Thomas Plenborg, 2017) (Table 9 and Figure 30).

The value drivers used for proxies, beyond the industry classification, were: **ROE** (profitability), **size/market capitalization** (captures the idea that stocks of large companies are more liquid than smaller companies which are traded at lower multiples) and, **Net Debt/EBIT** (risk). After calculating the rank differences between each firm in the base sample and Tesco PLC, and finding the companies with the lowest SARD, we reached the final peer group, with **five companies**, that will be used in the Multiples Valuation, (Table 10 and Appendix 12).

**Figure 30: Strategies of Peer group**



**Table 10: Financial highlights of Tesco' Peers from FY2021**

Name	P/E	EV/EBITDA	EV/Sales	Price to Sales	Price to Book	NPM	Operating M.	ROA	Net Debt	ROE
CARREFOUR SA	10,95	5,58	0,34	0,17	1,17	0,91%	3,07%	1,29%	7305,00	10,25%
WM MORRISON SUPERMARKETS	12,56	6,71	0,43	0,24	1,03	0,55%	1,74%	1,30%	3169,00	7,08%
SAINSBURY (J) PLC	20,55	5,7	0,35	0,19	0,64	-0,96%	2,44%	0,97%	6469,00	5,39%
ICA GRUPPEN AB	20	8,96	0,76	0,66	2,36	3,30%	4,62%	4,10%	19910,00	11,70%
KESKO OYJ-B SHS	24,63	11,29	0,99	0,91	3,78	4,06%	5,32%	6,40%	2310,00	17,78%
Median	20,00	6,71	0,43	0,24	1,17	0,91%	3,1%	1,30%	6 469,00	10,25%
Average	17,74	7,648	0,574	0,434	1,796	1,57%	3,4%	2,81%	7 832,60	10,44%
<b>Tesco PLC</b>	<b>11,75</b>	<b>6,87</b>	<b>0,51</b>	<b>0,29</b>	<b>1,41</b>	<b>10,62%</b>	<b>6,85%</b>	<b>1,80%</b>	<b>13 160,00</b>	<b>49,87%</b>

**Source: Author analysis**

## 6.2. Porter's 5 forces

### Porter's 5 forces: Grocery retail and Tesco PLC

By analyzing Porter's 5 forces, the biggest threat to the industry and to Tesco PLC is the competitive rivalry. The scores were assigned based on all segments included in the food retail & distribution and Tesco PLC business, (Figure 31)

#### Bargaining Power of Suppliers: Industry (Low – 2) Tesco PLC (Very low -1)

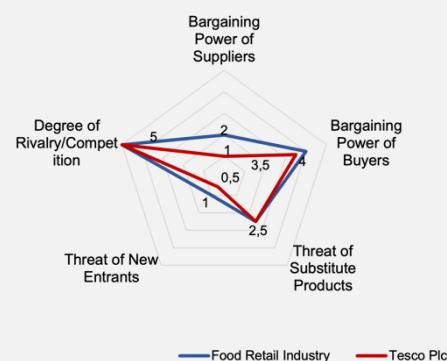
In the food retail industry, the bargaining power of suppliers is **low (2)**. There is a wide range of suppliers, but only a few of them have the power to negotiate and decrease the margins of grocery retailers. Therefore, numerous suppliers enable to secure stability and protect retailers from price fluctuation, even though more suppliers mean less power. Big international suppliers dominate but small/local producers are key for independent retailers. On the other hand, backward integration is possible and represents an advantage for large and small retailers – private label products.

**How Tesco PLC deals with Bargaining Power of Suppliers?** For Tesco, the bargaining power of suppliers is **very low (1)**. Tesco has an efficient supply chain where it operates with multiple suppliers in the UK and worldwide. Suppliers cannot exert any significant power since there are many suppliers that can replace them, and they fear to lose their business contracts with large retailers like Tesco. A lower level of supplier bargaining power increase the overall profitability of the company, which is why Tesco negotiates very hard with its suppliers.

#### Bargaining Power of Buyers: Industry (Medium/Hight - 4) Tesco PLC (Medium/Hight-3.5)

Consumers are the most important players in this industry, as their behavior dictates the overall performance of the supply chain. For that reason, the bargaining power of buyers is considered **medium/high (4 and 3.5)** for both industry and Tesco. In an industry that operates in an oligopoly market, where products are very homogenous and companies try to differentiate, switching costs becomes very low in this industry. With the evolution of

**Figure 31: Porter's 5 forces of Grocery retail and Tesco PLC**



online grocery shopping, consumers can easily compare prices and switch from one retail to the other in order to pay the less.

**How Tesco PLC deals with Bargaining Power of Buyers?** Tesco has been building a large base of customers by creating schemes that secure costumers loyalty (i.e., ClubCards). These initiatives decrease the bargaining power of buyers and allows the company to optimize its production process and sales. Also, by having its own label products creates brand loyalty. In the last year, Tesco created the “Aldi price match” campaign to compete not only with the biggest retailers but also with the hard discounters.

#### **Threat of substitute products:** Industry and Tesco PLC (**Medium – 2.5**)

The threat of substitutes in the grocery retail industry is low for food items, as these are essential goods, and medium for non-food items. In this industry, the products are very homogeneous and standardized. It this therefore essential for retailers to invest in product differentiation and advertising since there are several other suppliers with the same product. For this reason, it becomes difficult to control the available switching options when buyers try to change from one retail to another. The main substitutes for large retail chains are often small/local shops (i.e., convenience/local stores, organic stores, and online retailers).

**How Tesco PLC deals with threat of substitute products?** Tesco has several store formats to face this problem, namely Espresso Stores located in towns and in city centers. One other strategy followed by the company is trying to be service-oriented instead of product-oriented, which distinguishes them from the rest of the retailers. Tesco has in its stores its own brands at lower prices to substitute more expensive similar products, thus avoiding that customers change to another retailer.

#### **Threat of New Entrants:** Industry (**Very Low – 1**) Tesco PLC (**Very Low- 0.5**)

The threat of new entrants is **very low (1)** since there are high barriers to entry and the existent retailers that already play in the market to consider, like Tesco. It is very difficult to enter in a market that this very saturated, and it would be necessary to invest many resources to determine their presence in the market. The dominant retailers are large scaled and well established that benefit from economies of scale, and that can apply aggressive pricing strategies that cannot be matched by smaller retailers.

**How Tesco PLC deals with threat of new entrants?** Tesco already controls the market, in the UK, and benefit from economies of scale while having its own core competencies. Also, the company is constantly innovating in new products and services, therefore creating more pressure to new entrants.

#### **Degree of Rivalry/Competition:** Industry and Tesco PLC (**Very High – 5**)

The level of competition in this market is **extremely high**, therefore, retailers use price strategies and differentiation to survive. The biggest retailers benefit from economies of scale and aggressive pricing strategies that small retailers cannot match. To successfully enter in this market, companies can only do it through acquisitions. Strategic agreements for mergers/acquisitions to expand the businesses is one the biggest successful strategies for small companies to survive in a such competitive market.

**How Tesco PLC deals with threat of its competitors?** Tesco is the leader in the market although it has been losing market share to hard discounters like Aldi and Lidl. For that reason, Tesco has created pricing strategies and is opening new store formats to compete not only with the biggest retailers, but also with these emerging retailers that offer the lowest prices.

## 6.3. SWOT: Tesco PLC

SWOT: Tesco PLC

SWOT: Retail

Figure 32 – SWOT Analysis: TESCO PLC

Strengths.	Weaknesses.
<p><b>Financial strength</b> <b>High market share</b> 27,2% of grocery market share in UK <b>Biggest grocery retailer in UK</b> <b>Innovation and adaptability</b> Tesco has been optimizing its delivery scheme giving response to COVID-19 lockdown and new shopping patterns <b>Sustainability</b> <b>Diversified store formats and own brand</b></p>	<p><b>Leadership change</b> In the recent FY Tesco change its CEO meaning new strategies and changes for the company <b>Reduction of its international market</b> For the past FY Tesco has been leaving its markets worldwide losing opportunities to expand its business</p>
Opportunities.	Threats.
<p><b>Growth of e-commerce sales</b> Tesco has been invested in its online channels being one the biggest retailers selling its products online <b>Club-Card</b> Tesco invested in the Club Card reinforcing customer's loyalty <b>M&amp;A with Booker</b> Tesco merged with the biggest wholesaler in UK giving the possibility to access new growing areas, new distribution channels and new products</p> <p><b>Source:</b> <i>Author analysis</i></p>	<p><b>Brexit</b> Tesco started stockpiling and negotiated with its suppliers due to Brexit. It is expected an increase in bureaucracy and costs associated with the movements <b>Competition</b> Tesco and other bigger retailers in UK have been losing market share for hard discounters <b>Health concerning trends</b></p>

## SWOT: Banking and Financial Services

Since the sales of the Group also depend on the performance of Tesco Bank, it is important to analyze the strengths and weaknesses of providing financial services, and at the same time take advantage of opportunities and mitigate threats (*Appendix 13*).

## 7. Investment Summary

Considering a **medium risk investment**, through the **DCF method** using **FCFF** approach, my recommendation stands for **BUY**, with an **upside potential of 26.87%** translating in a final PT of **282.86 GBX**, for **2021YE**. The closing price of 222.95 GBX on 30<sup>th</sup> June 2021, was used against the final PT. This date seemed to be more accurate because after that, the company's PT increased due to rumors of a possible takeover of the second largest retailer in UK, Sainsbury with Apollo (US Private Equity fund). Also, Shore Capital Group (an independent investment group) affirmed that Tesco is not too big to become a takeover target as well. However, these events were not considered under the analysis since the shares of the biggest retailers in the UK increased significantly due to the excitement and speculation of investors, not reflecting the intrinsic value of the company.

Tesco has a stable and stronger core business in the UK, after the sale of its businesses in Poland and Asia. The confidence on its business is backed up by a successfully loyalty programme through the ClubCards, and the creation of Tesco own brand products, that can easily compete with the ones from hard discounters.

The current undervaluation of the company can be explained by the following: the uncertainty caused by Brexit once it will affect the stock movements and agreements with suppliers; the slowdown of all macroeconomic indicators; due to COVID-19, that directly impact the performance of the business; and the recent loss of market share for hard discounters like Aldi and Lidl.

Tesco has always established its strategy by following the industry trends. For the upcoming years, the company is committed to the following: building a strong digital platform through ClubCards and online penetration with **online revenues growing at 3.15% YoY**, between FY 2022F to FY 2027F; recovering its market share; reaching net zero by making its business even more sustainable. To support this, Tesco became the first UK retailer to issue an **8.5-year sustainable linked bond, with a total of €750m at an interest rate of 0.375% (linked to greenhouse gas emissions)**.

Additionally, Tesco has showed good financial health and encouraged its shareholders by following its payout policy very strictly for the past 6 years (**50% of Tesco's net income**), only creating an exception for the singular year of 2020, and deciding to maintain the previous FY dividend of **9.15p**. Tesco revenues are projected to grow at a **+1.40% CAGR** and the company is expected to create an economic value (EVA) between **£1539.3m and £1589.1m**, from FY 2022F to FY 2027F.

## 8. Valuation Methods

### 8.1. Valuation Methods

To reach a reasonable Price Target (PT) for Tesco, firstly it was made a forecast of the three fundamental financial statements (FS): Income Statement (IS), Balance Sheet (BS) and Managerial BS (MBS), and Cash Flow Statement (CFS) (*Appendix 14, Appendix 16, Appendix 17*). For the valuation and forecast a time frame of **6-years** was made, from FY 2022F to FY 2027F. Additionally, the current price used to evaluate a possible upside/downside potential was of **30<sup>th</sup> June 2021**. After understanding the company's business and projecting all FS, the valuation was conducted using **two approaches**: the **Absolute Valuation Approach** considering only Tesco's financials and its intrinsic value; and the **Relative Valuation Approach** through multiples of the peer group.

### Absolute Valuation Approach: DCF, APV and DDM

On the Absolute Valuation, **three methods** were computed to reach Tesco's PT: the Discounted Cash Flow Method (**DCF**) using the **FCFF**, the Dividend Discounted Model (**DDM**) and the Adjusted Present Value (**APV**).

#### Discounted Cash Flow Method: Free Cash Flow to the Firm using WACC

The **DCF** was calculated using the FCFF method. Because Tesco's capital structure changed over the historical and forecasted years, the FCFF method seemed to be more suitable to evaluate the company's intrinsic value than the FCFE. For that reason, different discount rates were obtained for each forecasted year. Also, according to Pinto, Henry, Robinson; Stowe and Wilcox (2020), the cost of equity (**ke**) is more sensitive to change in capital structure in comparison with the Weighted Average Cost of Capital (**WACC**). That said, the DCF yielded a **2021YE PT** of **282.86 GBX** (pound sterling), translating in an **upside potential** of **26.87 %**, considering Tesco green policy (*Table 11*). By introducing Tesco's Sustainability Linked Bonds (SLB) in the valuation, an increase in PT of 2.14% was achieved, representing an additional 4.77 GBX in the final PT (*Appendix 24*).

#### Adjusted Present Value (APV)

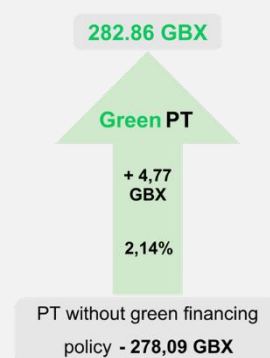
The APV was performed as an alternative of the DCF model, replacing WACC as the discount rate. This method is composed by the value of the company, considering that it is entirely financed with equity (discounted at  $k_u$ ) plus the present value of all financial side effects, such interest tax shield (discounted at  $k_d$ ). That said, the APV method yielded a 2021YE PT of **281.94 GBX** (pound sterling), translating in an upside potential of **26.46 %**, (*Table 12 and Appendix 25*).

#### Dividend Discounted Model (DDM)

Tesco has been following its payout policy very strictly for the past 6 years, except for FY 2021 (*Figure 33*). In FYE 2021 the BoD made an exception in its dividend policy and

**Table 11:** PT based on FCFF method (considering Tesco's Sustainability Linked Bonds)

FCFF Method (in millions of GBP)	
NPV @ WACC	18 024,12
Terminal Value	2 546 838,22
PV (Terminal Value)	2 180 763,35
<b>Enterprise Value</b>	<b>2 198 787,47</b>
(+) Cash	2 639 ,29
(-) Debt	14 447,93
(-) Minority Interest	- 18,00
<b>Equity Value</b>	<b>2 186 996,83</b>
Shares outstanding (m)	7 731,71
<b>Price Tag (in GBX)</b>	<b>282,86</b>
<b>UPSIDE POTENTIAL</b>	<b>26,87%</b>
Increase in upside potential with ESG	2,14%
Increase in PT with ESG (in GBX)	4,77



Source: Author analysis

"APV is exceptionally transparent: you get to see all the components of value in the analysis. None are buried."  
- Timothy A. Luehrman - Using APV: A Better Tool for Valuing Operations, Harvard Business Review

**Table 12:** PT based on APV method

APV Method (in millions of GBP)	
NPV @ $k_u$	17 983,32
Terminal Value	2 551 391,20
PV (Terminal Value)	2 184 689,19
<b>Unlevered intrinsic EV</b>	<b>2 202 672,51</b>
PV of Tax Shield	1 333,18
PV (Terminal Value) tax shield	- 12 329,49
<b>Intrinsic EV</b>	<b>2 191 676,</b>
(+) Cash	2 639,29
(-) Debt	14 447,93
(-) Minority Interest	- 18,00
<b>Equity Value</b>	<b>2 179 885,56</b>
Shares outstanding (m)	7 731,71
<b>Price Tag (in GBX)</b>	<b>281,94</b>
<b>UPSIDE POTENTIAL</b>	<b>26,46%</b>

Source: Author analysis

proposed a final dividend equal to the previous FY to give confidence to its shareholders, since it was an exceptional year. Since the dividend policy (**50% of Tesco's net income**) is very clear, the DDM seemed to be a good model to evaluate the company. Although Tesco is a mature company, the single stage model (Gordon Model) is too general and unrealistic, since the company is facing competition pressure and slowing margins due to market saturation. That said, the **Two-Stage DDM model**, thought the **H model** for a smoother transition for the mature phase, by Fuller and Hsia (1984), **with two different rates** seemed to be a better model:

**1)** for the first stage, by using a shorter period rate (**g<sub>s</sub>**) of **4.43%** (based on PRAT model);

**2)** for the second stage, by using a longer period rate (**g<sub>L</sub>**) of **1.63%** (an average of: proxy of GDP growth and inflation growth based on Tesco' sales by country and the growth obtained from the stable growth rate model);

**3)** for the H (half-life in years of the high-growth period), by assuming a period of 5 years, consistent with the time frame of a potential future financial crisis and properly reflecting properly the dynamic of the retail sector, and the changing environment of the retail industry.

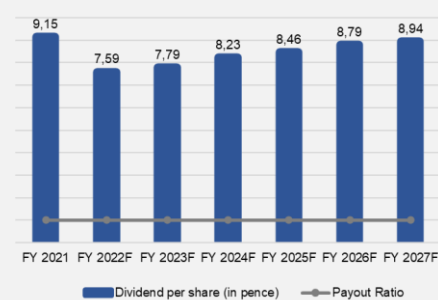
That said, a final **PT** of **280.81 GBX** (pound sterling) was estimated for FYE 2021, reflecting an **upside potential of 25.95%**, (Table 13 and Appendix 26).

Pinto et al. (2020) state that the relative stability of dividends may make DDM values less sensitive to short-run fluctuations in underlying value than alternative DCF models. Analysts often view DDM values as reflecting the long-run intrinsic value<sup>16</sup>.

### Relative Valuation Approach: Peer group' Multiples (EV/Sales, EV/EBITDA, EV/EBIT, P/Sales)

To complement the previous valuation methods, the Relative Valuation Approach was performed by using the peer group's multiples<sup>17</sup>. The data used was taken from Bloomberg and from the companies' annual reports. To perform the valuation the Enterprise Multiples used were EV/Sales, EV/EBITDA and EV/EBIT. All three EV multiples attained higher R square values. EV/Sales (**317.65 GBX /share, R<sup>2</sup> 92.52%**) with an **upside potential of 42.48%**, EV/EBITDA (**393.36 GBX/ share, R<sup>2</sup> 98.14%**) corresponding to an **upside potential of 76.43%**, and EV/EBIT (**315.59 GBX/ share, R<sup>2</sup> 85.83%**) also with an **upside potential of 41.55%** (Appendix 27 and Table 14).

**Figure 33:** Forecasted dividends considering a stable payout ratio (50%)



Source: Author analysis

**Table 13:** PT based on DDM model

DDM Method	
Price Target (in GBX)	280,81
UPSIDE POTENTIAL	25,95%

Source: Author analysis

**Table 14:** Relative Valuation

TESCO	Based on EV/Sales	Based on EV/EBITDA	Based on EV/EBIT
Enterprise Value	24 571 618 623,10	30 424 983 374,46	24 412 483 757,88
Debt of Tesco	15 670 000,00	15 670 000,00	15 670 000,00
Cash of Tesco	2 510 000,00	2 510 000,00	2 510 000,00
Net Debt	13 160 000,00	13 160 000,00	13 160 000,00
Equity Value	24 558 458 623,10	30 411 823 374,46	24 399 323 757,88
Shares outstanding	77 317 100,00	77 317 100,00	77 317 100,00
Equity Value per share (in pence, GBX)	317,63	393,34	315,57
UPSIDE TOTAL	42,47%	76,42%	41,55%

Source: Author analysis

<sup>16</sup> Source: Pinto, J.; Henry, E.; Robinson, T.; Stowe, J.; Wilcox, S. (2020), Equity Asset Valuation. 4<sup>th</sup> edition, CFA Investment Series. John Wiley & Sons, Inc

<sup>17</sup> Peer group defined in Chapter 6

## 8.2. Forecast Assumptions and Analysis

### 8.2.1 Revenues: Business segments performance by channel and geography

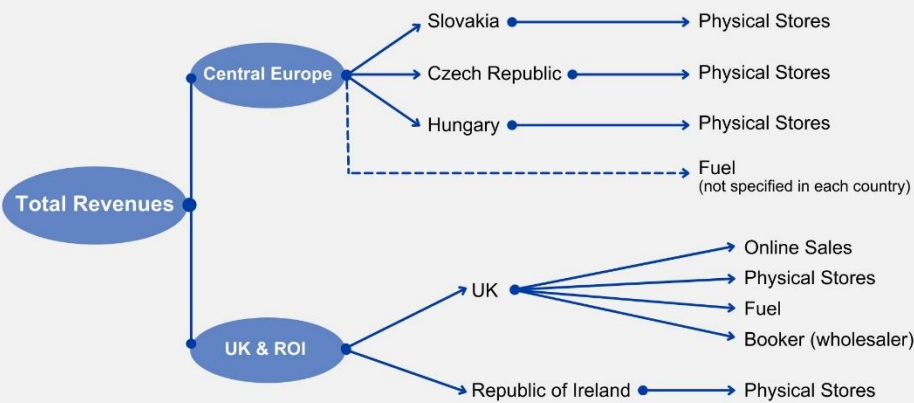
Tesco's total revenues are the sum of all business segments and countries in which the company operates. Therefore, revenues of Tesco were split by **geography** (UK, ROI and, Central Europe comprising Czech Republic, Slovakia, and Hungary) (Figure 34).

Additionally, because Tesco has other businesses besides selling food in physical stores, revenues were split in channels depending on each location/country: **1) Central Europe (CE)** has its revenues split into **food in physical stores** and **fuel**; **2) In the UK**, as Tesco's home country, the company has different channels and services beyond selling food in physical stores. For that reason, the UK revenues were divided into **online sales, food retail in physical stores, fuel, and financial services** (Tesco Bank), (see Appendix 21\_a and Table 15).

**Historical revenues** can be divided into **two periods: FY2015 to FY2017** where revenues decreased due to the financial scandal and change in the company's strategy, and **FY2018 to FY2021** where revenues started to recover but were impacted by COVID-19 and the pandemic crisis.

Based on the forecast performed, the total revenues are expected to grow at **1.40% CAGR** between **FY 2022F to FY 2027F** (Figure 35). It is important to mention that the accuracy of the forecast is highly dependent on the macroeconomic behavior/recovery and sector trends.

**Figure 34:** Detailed segmentation of Tesco revenues by country and business segment



Source: Author analysis

**1) Food retail revenues** were forecasted based on macroeconomic indicators of each country, such as **GDP growth, inflation rate** and **population growth**. The rationale behind it is justified with the following: more population means more people eating; an increase in GDP leads to more consumption through an increase on disposable income, and changes in inflation can increase costs' levels and volatility in price changes. All indicators are forecasted data made by the IMF for the years between 2022 to 2027. The formula used to reach the YoY revenues for each country was calculated using revenues of the previous year multiplied by the growth rate (YoY) of each of the three macroeconomic indicators (i.e.,  $UK\ revenues\ in\ physical\ stores_{2021} * (1+UK\ GDP\ growth_{2022}) * (1+UK\ population\ growth_{2022}) * (1+UK\ inflation\ growth_{2022})$ ).

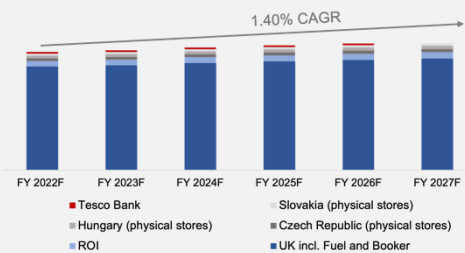
**Central Europe** countries are expected to grow at **2.44% CAGR**, (FY 2022F-FY 2027F), with Slovakia growing at the higher rate of **2.62%**, followed by Hungary and Czech Republic at **2.61%** and **2.51% CAGR**, respectively. Assuming that none of these businesses are sold, it is expected that CE will represent **7.02%** of Tesco's total revenues. In what regards **ROI**, the same approach was used and a growth at **3.11% CAGR** is expected due to better macroeconomic conditions. In the UK, revenues in physical stores are expected to represent around **55.24% of total revenues** (FY 2022F to FY 2027F) and

**Table 15:** Average % of total revenues by segment (FY 2022F – FY2027F)

Revenues by Segments/Channels and Geography	Average % of total revenues (FY 2022F to FY 2027F)
<b>UK and ROI</b>	<b>91,80%</b>
<b>UK incl. Fuel and Booker</b>	<b>87,00%</b>
Physical stores	55,24%
Online Sales	10,56%
Fuel	9,82%
Booker	11,38%
<b>ROI</b>	<b>91,80%</b>
<b>Central Europe</b>	<b>7,02%</b>
Fuel in Central Europe	0,37%
<b>Czech Republic (physical stores)</b>	<b>2,38%</b>
<b>Hungary (physical stores)</b>	<b>2,37%</b>
<b>Slovakia (physical stores)</b>	<b>1,90%</b>
<b>Tesco Bank</b>	<b>1,23%</b>
<b>Total Revenues</b>	<b>100,00%</b>

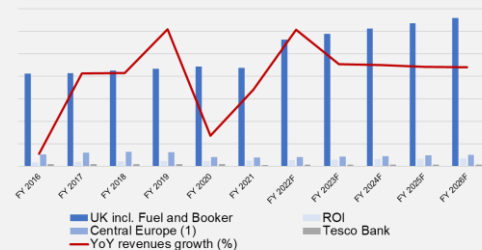
Source: Author analysis

**Figure 35:** Forecasted revenues by country



Source: Author analysis

**Figure 36:** Evolution of Tesco TOTAL revenues by country, and overall YoY growth (%)



Source: Author analysis

to **grow at the rate of 1.37% CAGR**, lower than CE and ROI, due to the uncertainty caused by Brexit (*Figure 36*).

**2) Online sales** are important to highlight separately, since in FY 2021 Tesco doubled the capacity of its online grocery. Since the online grocery market in the UK is expected to grow 41%, from 2020 to 2024, this is an average of 8,2% per year. Because Tesco has 30,7% of market share in online grocery, an increase of online sales of around 3% YoY (30,7% times 8,20%) is expected. For the remaining forecasted years after 2024, the same growth rate was assumed (i.e.,  $UK\ online\ revenues_{n-1} * (1+8.2\%*30.7\%)$ ). In the future, online revenues are expected to represent **10.56% of total revenues** in the forecasted years, growing at a **2.62% CAGR**.

**3) Booker's** revenues were forecasted using the same approach of sales in physical stores. The wholesaler belongs to the food distribution chain since 2019, and is influenced by the same macroeconomic indicators (GDP, inflation, and population growth). Since the wholesaler operates in the UK, UK macroeconomic indicators were used for the forecast (i.e.,  $Booker\ revenues_{n-1} * (1+UK\ GDP\ growth_n) * (1+UK\ population\ growth_n) * (1+UK\ inflation\ growth_n)$ ). Booker's sales have been increasing and are expected to represent around **11.5% of total revenues**, until 2027.

**4) To forecast fuel revenues**, the **average fuel revenues** were used as base to reach the value of the forecasted years. Due to the pandemic, fuel revenues decreased drastically due to lockdown restrictions and, for that reason, FY2021 was excluded from the average revenue's sample. Tesco sells fuel in the **UK** (representing **12.33%** and **7.5%** of total revenues, in 2020 and 2021 respectively) and in **CE** (representing **only 0.42%** and **0.21%** of total revenues, in 2020 and 2021 respectively). Due to lack of information and not being the core business, two approaches were used: **1)** fuel revenues in the UK were forecasted based on the **world historical average price of gasoline and diesel**, the **percentage of type of cars/fuel used** in 2020/2021 in the UK, the **inflation growth**, and the **GDP growth** (i.e.,  $Average\ Fuel\ revenues\ excl.\ FY2021 * (1+UK\ GDP\ growth_n) * (1+UK\ inflation\ growth_n) * (1+world\ av.\ gasoline\ price\ \Delta*62.7\% \ users\ of\ gasoline\ in\ UK)*(1+world\ av.\ diesel\ price\ \Delta*19.7\% \ users\ of\ diesel\ in\ UK)$ ); **2)** in CE, since it only represents 0,2% of total revenues, it was assumed to be constant for all forecasted years using an average of the historical years, and excluding FY2021.

**5) Financial Services** were forecasted considering only **GDP growth** and **inflation growth**. In 2021, Tesco Bank was severely affected by the pandemic due to an increase in unemployment and lower levels of GDP that resulted in credit losses and a reduction on trading activity. According to Tesco's annual report, FY 2021, the pace and scale of recovering the bank's profitability is highly correlated with the UK's economic outlook, (Tesco 2021).

### 8.2.2. Cost Of Goods Sold (COGS)

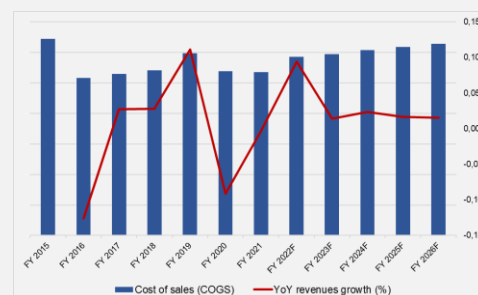
From 2015 to 2021, **COGS** have been having a huge impact on the IS since it represents an average of **95.11% of total revenues** (*Figure 37*). According to Tesco's FY 2021 annual report, "to maintain our competitive position in such a recessionary environment, further investment in our value proposition will be required, putting pressure on margins". That said, with an unstable macroeconomic environment due to the instability caused by Brexit and COVID-19, and an increased pressure caused by the hard discounters (i.e., Aldi and Lidl), margins will become narrower. Despite considering these adverse scenarios, a slight increase in GMs is expected due to extraordinary costs that happened because of the pandemic that will not be replicated.

For the forecasted years, since Tesco does not disclose any detailed information about its COGS on annual reports, this line will be growing at revenues growth (% YoY) since they follow the same path (when revenues increase, COGS increase in similar amounts) (*Appendix 21*).

### 8.2.3. Capex and D&A

Over the latest years, Tesco has invested on its **ongoing business activities** across the Group (UK & ROI, Central Europe, and Tesco Bank) with the main purpose of **maintenance/refresh** of its stores and **opening** new spaces and businesses. With the decision of leaving its businesses in Asia and Poland, **88.35% of the capital**

**Figure 37: COGS following YoY revenue growth for the forecasted years**



**Source:** Author analysis

"While we expect some of the additional sales volumes, we have gained this year in our core UK market to fall away as COVID-19 restrictions ease, we expect a strong recovery in profitability and retail free cash flow as the majority of the additional costs incurred as a result of the pandemic in the 2020/21 financial year will not be repeated."

- Tesco annual report, 2021

**expenditures**, in FY2021, have been used to reinforce Tesco's market position **in the UK** and face the hard discounters with new store formats and campaigns.

Additionally, due to COVID-19, the company was forced to invest intensively in **IT/productivity**. To face the pandemic, **11.65%** of total CAPEX was used to double the size of Tesco's online business and to reinforce its digital customer platform through ClubCards. The overall CAPEX is expected to grow at a **1.53% CAGR**, between FY 2022F to FY 2027F, from **£1.9bn to £2.1bn** (see Appendix 22\_a and Table 16).

For the forecasted years, the CAPEX was divided into two main segments: **PP&E new business/space** and **Maintenance/Refresh of PP&E** in which it was considered appropriate that the CAPEX grew based on **YoY sales growth** (from £1709.45m to £1857.48m); and **IT/productivity** for intangible assets, that was assumed to grow based on **YoY online sales growth** (from £211.19m to £246.57m). In what regards the D&A rate, the approach used was forecast as a percentage of CAPEX using historical D&A as a guide, since there was no detailed information about it.

**Table 16: CAPEX assumptions**

CAPEX ASSUMPTIONS/FORECAST	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F
<b>CAPEX (£m)</b>	<b>1 920,64</b>	<b>1 950,96</b>	<b>1 998,92</b>	<b>2 035,50</b>	<b>2 070,52</b>	<b>2 104,05</b>
CAPEX (PP&E- New business space and Maintenance/refresh)	1 709,45	1 733,13	1 774,24	1 803,75	1 831,47	1 857,48
CAPEX Intangibles (IT/productivity)	211,19	217,83	224,69	231,76	239,05	246,57

**Source:** Author analysis

## 8.2.4. WACC Assumptions

Between FY 2022F to FY 2027F, it is expected that WACC changes over time due to changes in the company's capital structure, between **2.875%** and **3.1525%**, (Table 17 and Appendix 23\_h). There are **four** fundamental pieces in WACC formula: **cost of equity (ke)**, **cost of capital (kd)**, **capital structure (E/EV and D/EV)** and **tax rate**.

**Table 17: WACC assumptions**

	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F
ke	4,85%	4,85%	4,85%	4,85%	4,85%	4,85%
E/(E+D)	0,47	0,49	0,51	0,53	0,55	0,56
kd	1,50%	1,35%	1,25%	1,25%	1,27%	1,30%
(1-t)	74,00%	74,00%	74,00%	74,00%	74,00%	74,00%
D(E+D)	0,53	0,51	0,49	0,47	0,45	0,44
<b>WACC</b>	<b>2,875%</b>	<b>2,892%</b>	<b>2,927%</b>	<b>2,997%</b>	<b>3,098%</b>	<b>3,152%</b>

**Source:** Author analysis

**1) Cost of Equity (ke):** the ke was calculated using the CAPM model comprising four inputs (**risk free rate**, **beta**, **market risk premium** and **country risk premium**) resulting in a constant ke of **4.85%**, from FY 2022F to FY 2027F.

**1.1) Risk Free rate (Rf):** for the Rf it was assumed a constant rate of **1.17%**, for all the forecasted years, using the UK Gilt 10 Year Yield (last 5-year monthly average yield), from the Bank of England (Appendix 23\_a).

**1.2) Beta ( $\beta$ ):** two different methodologies were taken into consideration when calculating the final beta: the **Pure-play Method** and the **Regression model** (Appendix 23\_b). The Pure Play Method resulted in a **0.51 beta** as a result of the median of the betas from Tesco's group of peers (explained in the topic "Peers' identification and Strategy"), from the last six years (2016 to 2021). The Regression model resulted in an **adjusted beta** of **0.54** as an estimate of the future beta, where Tesco's closing prices, from July 2016 to July 2021 (monthly data from the last 5 years with 60 observations) were regressed against the FTSE 100 Index returns. The second methodology seemed to be a better model in comparison with the Pure-Play since it has a higher R<sup>2</sup> (**98.10%**). Therefore, even though the two methods have been taken into consideration, the beta used for the DCF method was the one from the regression methodology.

**1.3) Market Risk Premium and Country Risk Premium (MRP and CRP):** the final MRP and CRP were extracted from Damodaran's database and Fernandez et al. (2021), for each country in which the company operates. Then, based on each country average percentage of sales (from FY 2022F to FY 2027F) it was obtained a **final MRP** and **CRP** of **5.66%** and **0.64%**, respectively, (i.e.,  $MRP_{UK} * \%Sales$  (incl. Tesco Bank)  $_{2022-2027} + MRP_{ROI} * \%Sales$   $_{2022-2027} + MRP_S * \%Sales$   $_{2022-2027} + MRP_H * \%Sales$   $_{2022-2027} + MRP_{CR} * \%Sales$   $_{2022-2027}$ ) (*Appendix 23\_c*).

**2) Cost of debt (kd):** the final **kd** is predicted to differ in every forecasted year, from **1.501%** to **1.296%** (FY 2022F to FY 2027F). For each **kd** three methods were considered: **credit default spread and synthetic rating**, **effective tax rate** (considering note rate and bond rate for ST debt and LT debt), and the **weighted average of Tesco bonds' coupon yield** that are currently traded with different maturities. Additionally, to have a sense of the impact of Tesco's SLB in kd, two scenarios were performed: kd including green bonds and kd without. That said, a reduction was observed in kd in all forecasted years (*Appendix 23\_d and Table 18*).

**Table 18: Cost of debt**

Average kd based on the methods applied	1,504%	1,354%	1,253%	1,273%	1,303%
Average kd based on the methods applied (incorporating ESG policy)	1,501%	1,352%	1,250%	1,268%	1,296%

**Source:** Author analysis

**3) Tax rate (t):** it is expected that the marginal tax rate increases around **26%** in the medium term caused by an increase in the UK corporation tax rate, (Tesco 2021).

**4) Capital Structure (D/(E+D) and E/(E+D)):** the capital structure ratios will vary between the forecasted years, with an increase of equity and a decline of debt, being likely that in FYE 2027F, the EV is composed of **0.56 equity** and **0.44 debt**.

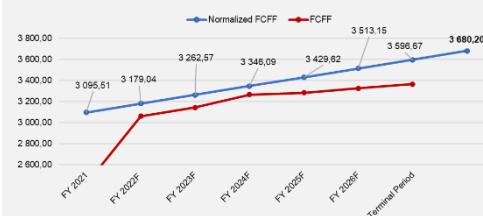
### 8.2.5. Terminal Value (TV) and Long-term Sustainable Growth-rate

During the historical years many factors impacted both positively and negatively the company's earnings like changes in BoD, a financial scandal, changes in the company's strategy, mergers and acquisitions, extraordinary sales of international businesses and so on. Even though Tesco is a mature company, to avoid applying the long-term sustainable growth to the TV, to prevent misleading results and minimize the business cycle effects, the **normalized FCFF** was applied to the TV. For that reason, to adjust these extraordinary/temporary events in the future cash flows, for the TV of the FCFF, it was used a **normalized FCFF of 3680.20 (£m)** over the forecasted years, (*Figure 38 and Appendix 23\_f*). For the **LT sustainable growth rate** three methods were computed: the **PRAT model** (Higgins 2007), the **sustainable growth rate** and a terminal growth thought **macroeconomic indicators** (nominal growth) (*Appendix 23\_e*). With the PRAT model, a higher growth of **4.43%** was obtained. The sustainable growth rate model gave an average negative growth of **-1.13%**, mainly because of the negative changes of the NWC. On the other hand, using the macroeconomic approach, a growth of **3.01%** was reached, adjusted to inflation and GDP growth of all countries where Tesco operates, which is in accordance with the assumption used to forecast the company's revenues. For that reason, it seemed that 3.01% was more suitable to use as the terminal growth rate.

### 8.2.6. Dividend Policy

The BoD has an ongoing concern to give confidence to its shareholders about their future cash-flows. For the past years, Tesco has kept its policy of a **payout-ratio of 50%** of earnings. In the FY 2021F, as truly exceptional year due to COVID-19, the BoD did not carry out this policy and decided to keep the dividend flat (9.15pps) to reinforce its commitment to shareholders. Therefore, due to the recent year being considered an outlier, the forecasted dividends followed the payout-ratio of 50% of final earnings. From FY 2022F to FY 2027F an increase, YoY, of the dividends distributed is expected.

**Figure 38: Normalized FCFF**



**Source:** Author analysis

### 8.2.7. Debt: Borrowings and leasing

Tesco bank has its debt mixed in three currencies (dollar, euro, and pounds) and all repayments are detailed in the report's notes. Therefore, for the forecasted years, the repayment of all instruments was assumed (loans, bonds, bank notes) in each redemption date (see Appendix 22\_c). Between FY 2021 to FY 2027F, the overall debt is expected to decrease from £14447.93m to £12518.28m, in the same period. In all historical years, the total debt never registered values neither higher than £19000m nor lower than £12000m.

## 9. Financial Analysis

Since FYE 2015, the management team announced their strategy to stabilize the business, rebuild the company's brand and improve growth. In FYE 2020, Tesco achieved its turnaround growth and started to focus on cash profitability, earnings growth, and positive cash flow. FY 2021 was a truly exceptional year, being impossible to achieve 100% of these new goals. For the forecasted years, a new turnaround growth and cash profitability are expected, while maintaining its leader position in the market (Appendix 28).

### 9.1. Financial Strength

**Liquidity and Cash Conversion Cycle: continuously generating cash and strong focus on the operating cycle**

From a liquidity point of view, it was observable that the **current ratio** and **cash ratio** are always **less than one**. For the forecasted years, an improvement is expected on both liquidity ratios. The most recent figures, such as FY 2027F (last forecasted year), the company will have 0.94£ of current assets to sustain its short-term obligations, for every pound of current liabilities.

These may not be a problem for Tesco since there are items such as, longer credit terms with its suppliers, well managed inventories, and very low credit extended to its customers, that can mislead the Balance Sheet's information. Regarding the **WCR**, it is **negative in every year** of analysis, meaning that Tesco's operating cycle is a source of cash. Large supermarkets like Tesco, usually have an operating cycle by which, they collect from customers before paying to suppliers. In all years under analysis, **NLB was always positive**, suggesting that long term capital is sufficient to fund fixed assets. To reinforce these results, a **Cash Conversion Cycle (CCC) in days of sales is negative** in all years, **never higher than negative 43 days**, in the forecasted FYs. Due to COVID-19, the BoD decided to reduce its payment terms to small suppliers to support their businesses. It is important to mention as, a market leader in the UK, Tesco always benefits from credit terms. In line with the liquidity analysis, it is important to mention that Tesco has a **conservative financing strategy** that extends over the forecasted years, (Figure 39).

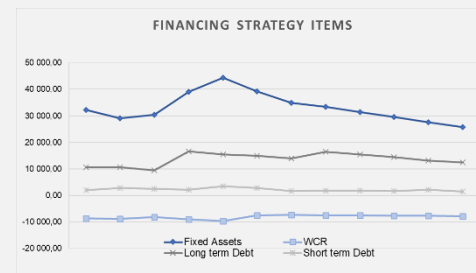
### 9.2. Profitability, Solvency and Value Creation

**NPM, ROE and other profitability measures: always creating and delivering profit**

In terms of Net Income Margin (NPM), from FYE 2015 to FYE 2021, it rose from -9.26% to 10.62%, where FY 2015 was the lowest value that was influenced by the financial scandal, and FY 2021 the highest due to the extraordinary profit of selling Thailand and Poland businesses. For the forecasted years, it is expected that the NPM will normalize and be around 2%. Although low margins are a characteristic of food retail industry, Tesco has its NPMs above the average of its peer group (1.57%) (Graph T).

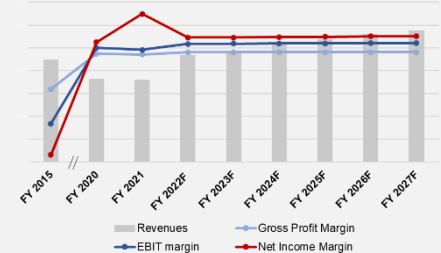
Regarding **ROE**, based on the DuPont analysis, it **rose from 1.50% to 7.28% between FY 2016 and FY 2020**, and is expected to reach the highest value of **8.54% in FY 2027F** (excluding the extraordinary year of 2021). In **FYE 2021, ROE was 49.87%**, the highest value from Tesco's historical data set, largely affected by the Equity Multiplier. Also, **ROIC** and **ROCE** are expected to follow a **smooth upward trend** in the forecasted years, with a **3% and 5% CAGR**, respectively (Figure 40 and Figure 41).

Figure 39: Tesco's financing strategy



Source: Author analysis

Figure 40: Tesco margins and profitability



Source: Author analysis

## Solvency and Capital Structure: trustworthy debt repayment capability

By analyzing Tesco's solvency, the **Interest Coverage Ratio** has been improving since **FY 2015 to FY 2021**, from **-10.14x to 1.85x**, and is expected to be around **3.40x** in **FYE 2027F**. This big improvement reflects Tesco's turnaround growth since the financial scandal, in 2015. Also, **Net Debt to EBITDA** improved in the historical years, from **-4.97x to 3.32x**. In 2015, the negative value was not because of an excess of cash but due to a negative EBITDA.

For the forecasted years, a **continuously improvement of ND/EBITDA ratio** is expected, reflecting a stronger liquidity and the possibility for better credit conditions. The **Debt ratio** has been **stable over the years and never higher than 53%**, expected to be **39%** at **FYE 2027F**. Additionally, it is expected that the **estimated repayment of debt to be less than 3 years**, between **FY 2022F to FY 2027F**. Overall, Tesco shows good financial health (Figure 42).

## Economic Value Added (EVA): always creating value

According to Hawawini and Viallet (2011), the firm's capacity to create value is driven by the combination of three factors: ROIC, WACC and self-sustainable growth. The **Return Spread** (ROIC minus WACC) is projected to be always positive, being an indicator of value creation since ROIC is higher than the cost of financing those investments. Between **FY 2022F to FY 2027F** Tesco will always create economic value (EVA) between **£1539.3m** and **£1589.1m**.

# 10. Investment Risks

## 10.1. Risk Matrix

### Regulatory and Political situation | Brexit (RP 1)

**Brexit** is a serious risk for the company, in the food retail sector. The increase in bureaucracy and costs associated with the movements of stock from country to country (more trade friction between UK and Ireland) and the possibility of a weaker Sterling are some challenges that Tesco will face and that will directly impact the results and investor's stability. Additionally, the probability of failure to adapt to the new trading relationship with the EU, and the future development of farther agreements and/or political impositions, can impact not only Tesco's business but also the ability to supply its clients with the products and prices that they are used to expect (i.e., cost inflation). Although this is one of the main risks that the company is facing, it is mitigating with the new UK-EU Trade and Cooperation Agreement (TCA) on 1 January 2021, that sets out the terms for tariff-free trading with the EU, which consequently removes the uncertainty of a no-deal Brexit, (Tesco annual report, 2021).<sup>13</sup> For that reason, it was considered that Brexit has a **harmful impact with highly likely probability to happen** (Figure 43).

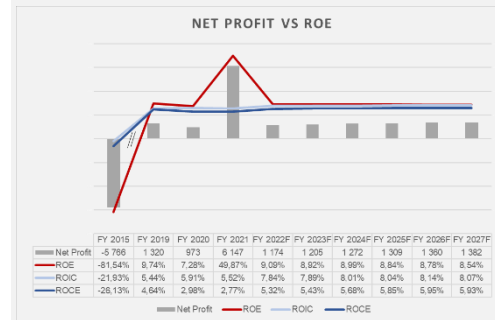
### Regulatory and Political situation | Geopolitical risks (RP 2)

Tesco operates in three CE countries, beyond Ireland and the UK, depending on the strength and stability of their economies. Even though these countries are regulated by the EU, each one has its own regulations, laws, and taxes about every type of products. Depending on the behavior of some macroeconomic indicators, such as price inflation, GDP and unemployment rate, governments establish limits to prices to create balance in the market. Additionally, the way that these countries deal with others matters such as sustainability, climate change, humanitarian rights and technological evolution impact not only the operations of the company and the right flow of the food supply chain, but also the relationship between countries/governments. That said, it was considered that Geopolitical risks have a **harmful impact that is likely to happen**, (Figure 43).

### Economic risks | COVID-19 (E 1)

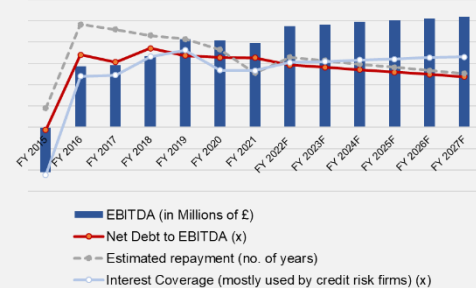
Covid-19 is expected to have a continuous impact on the economies around the world disrupting Tesco's supply chain and adversely impacting Tesco Bank operations. Any failure to adapt to this new environment, and possible unexpected future pandemics, may affect the company's future results and competitiveness. However, with the vaccine

Figure 41: NPM versus ROE



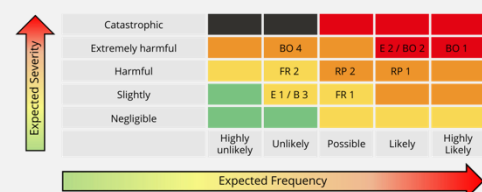
Source: Author analysis

Figure 42: Financial strength ratios



Source: Author analysis

Figure 43: Risk Matrix



### Regulatory and Political situation

- RP 1: Brexit
- RP 2: Geopolitical risks

### Economic Risks

- E 1: Interest rate and foreign currency exposure
- E 2: COVID-19

### Financial Risks

- FR 1: Dividend policy maintenance
- FR 2: Liquidity risks

### Business and Operational Environment

- BO 1: Competitive pressure and new players entrance
- BO 2: Product quality, compliance and safety
- BO 3: Sustainability of the supply chain
- BO 4: Data and privacy security

Source: Author analysis

development and government restrictions, in the UK and rest of world, the uncertainty remains whether these are sufficient to control the pandemic and bring back normal life. Also, it is unclear if new customer's habits (i.e., ecommerce) will cease after the pandemic or if COVID-19 has changed the business environment for good. Tesco has been implementing social distancing measures, additional security, and hygiene procedures and also increasing its supply chain capacity in order to meet changes in demand. Although the retail sector is not the most affected by the pandemic, it was considered that COVID-19 has an **extremely harmful impact that is likely to happen** (Figure 43).

#### Economic risks | Interest rate and foreign currency exposure (E 2)

**Interest rates and foreign exchange rates** are the two mainly financial risks that Tesco is exposed to, that make share price volatile. Regarding foreign exchange risk, they come mainly via transactional exposure that arises from the cost of future purchase of goods. Also, the debt incurred by the company is traded in three different interest rates/currencies (pound sterling, euro, and dollar) which brings some uncertainty. These risks are hedged by the company via forward foreign currency contracts and forward rate agreements. That said, these financial risks are **unlikely to happen with a slightly impact on the company**, (Figure 44).

#### Financial Risk | Dividend Policy Maintenance (FR 1)

Even in difficult times, one of Tesco's main goals is trying to maintain its dividend policy (payout policy of 50%) and stable dividends. In the most recent FY, Tesco decided to maintain a flat dividend for its shareholders (9.15p) in order to reinforce their confidence in the company, not fulfilling the established payout policy. For the next years, with more narrowing margins and competitive pressure, dividends are expected to be around 5 pence if the company decides to maintain a payout policy of 50% (similar to the amount that would have been paid if the company had not decided to apply a flat dividend). In the next years, Tesco will have to rethink its strategy to keep shareholders trust, otherwise the risk of losing investors will have a **slight impact on the company**, (Figure 43).

#### Financial Risk | Liquidity risks (FR 2)

Liquidity risk has been kept under control by the company, including in the pandemic. As one of the biggest players, Tesco has a favorable position when negotiating with its suppliers. Also, in the last FY, Tesco sold its businesses in Asia, thus injecting £2.5bn in the company. This transaction "has greatly reduced the prospect of having to make further pension deficit contributions in the future", (Tesco's annual report, 2021)<sup>13</sup>. Additionally, credit rating agencies held Tesco's Investment Grade rating, and revolving credit facilities and maturing bonds were refinanced<sup>18</sup>. A failure of Tesco's business performance of creating/delivering cash as required can compromise the access to funding, and simultaneously damage Tesco's bank ability to pursue its operations. That said, liquidity is **unlikely to happen with a harmful impact** on the company operations (Figure 43).

#### Business and Operational Environment | Competitive Pressure and New players entrance (BOE 1)

The retail industry is very mature, where major companies have already reached their saturation point. Price wars between large players and hard discounters can penalize margins significantly, where only companies that have more scale and a strong efficient retail model can improve their position. Tesco reviews its strategy regularly to remain competitive and informed about the market. Although Tesco is a market leader in UK, it has been losing market share for hard discounters forcing them to create new products/campaigns (i.e., Aldi price match) and new store formats (i.e., Jack's) to face these challenges. Overall, this risk was considered **highly likely to happen with an extremely harmful impact** (Figure 43).

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<sup>18</sup> Source: Tesco annual report, 2021

## Business and Operational Environment | Product quality, compliance, and safety (BOE 2)

When dealing with food products, quality control is extremely important. Any failure in logistics and meeting health standards or labeling can seriously deteriorate the company's reputation and costumers' loyalty, leading to damaging financial consequences. Since the company deals with food in its day-to-day business, this risk can be **likely to happen with an extremely harmful impact**, (Figure 43).

## Business and Operational Environment | Sustainability of the supply chain (BOE 3)

Failing to meet sustainability and climate change commitments may result in supply chain disruption, regulatory violations, and create reputational impacts on the company's image to society. To mitigate these risks, Tesco has been collaborating with its suppliers and ensures that all standards are met (i.e., human rights, integrity, product safety, and environmental standards, including food waste and reduction of plastic). Since sustainability has increasing impact on the planet, non-compliance can bring **slight impacts** from social, environmental, financial, and reputational perspectives (Figure 43).

## Business and Operational Environment | Data and privacy security (BOE 4)

Tesco retains a large amount of data from its customers, not only in the retail sector but also through Tesco bank. Any failure when developing an effective protection system can compromise the name of the company along with financial sanctions and other collateral damages. With an increase usage of the ecommerce segment, it is important to reinforce consumer confidence with a strong and secure platform. To prevent this risk, Tesco has a privacy compliance programme and works with a third-party supplier assurance programme, that focuses on data security and privacy risks.<sup>13</sup> Therefore, data and privacy security risk were considered to have an **extremely harmful impact that is unlikely to happen**, (Figure 43).

## 10.2. Price Target and Equity Value Sensitivity analysis

Based on the risks identified on the risk matrix, the investment on Tesco PLC was classified with a **medium risk**. For the sensitivity analysis, a **conservative profile** was adopted to determine how changes in key variables affect the BUY recommendation from the DCF method. Different ranges were used to reach the final recommendation, considering several scenarios under a medium risk level (Tables 18 and 19). Additionally, different variables were considered in the analysis to support the final recommendation.

**UK Guilt 10Y Yield (rf):** Since Yields are very unpredictable and align with the uncertainty that Brexit brings, it was important to analyze the impact on yields' changes. Keeping all other variables equal, a slowdown on the risk-free rates will lead to an increase in the PT, (i.e., when the Rf is lower than the base case of **1.17%**, the upside potential changes to a "Strong Buy"). This improvement is justified by a decrease in the overall cost of equity (Table 21).

**Market Risk Premium:** With higher uncertainty comes a higher market risk premium. For an increase in MRP of **0.1%** on the base case (5.66%), the estimated PT does not offset the risk. Therefore, the PT calculated through the DCF model does not meet the necessary conditions for a buy recommendation. In contrast, a decrease of **0.1%** quickly changes to a strong buy recommendation, (as per Table 22).

**Cost of debt (kd):** The PT is very volatile when it comes to changes on the terminal cost of debt. A decrease of **0.5%**, on the base kd, quickly changes the share price and the final recommendation, as per Table 23. On the other hand, a lower kd highly increases the PT for the "strong buy" range. This can be a sign of concern for investors with a conservative profile.

**Terminal growth rate (g) vs Terminal cost of debt (kd):** Since the terminal growth rate and WACC are fundamental variables when performing DCF model, it is essential to analyze their changes and impacts on the final PT (Table 24). Tesco's share price can range between negative values (translating in a share price equal to zero and a possible

**Tables 19 & 20:** Recommendation system considering a Medium Risk

Recommendation / Level of risk	Medium Risk
SELL	-5% ≤
REDUCE	> -5% & ≤ 5%
HOLD	> 5% & ≤ 15%
BUY	> 15% & ≤ 30%
STRONG BUY	≥ 30%

Considering a Medium Risk	
Base Share Price (30th June)	222,95 GBX
-5% ≤	211,80 ≤
> -5% & ≤ 5%	> 211,80 & ≤ 234,10
> 5% & ≤ 15%	> 234,10 & ≤ 256,39
> 15% & ≤ 30%	> 256,39 & ≤ 289,84
≥ 30%	≥ 289,84

Source: Author analysis

**Table 21:** Sensitivity analysis between the PT and critical key variable: Risk free

Risk Free Rate	PT (FCFF) 282,86
0,97%	1 291,30
1,02%	683,55
1,07%	464,55
1,12%	351,69
<b>1,17%</b>	<b>282,86</b>
1,22%	236,50
1,27%	203,15
1,32%	178,01
1,37%	158,37

Source: Author analysis

**Table 22:** Sensitivity analysis of between the PT and critical key variable: MRP

MRP	PT (FCFF) 282,86
5,26%	1 799,71
5,36%	773,07
5,46%	491,95
5,56%	360,59
<b>5,66%</b>	<b>282,86</b>
5,76%	234,85
5,86%	199,90
5,96%	173,97
6,06%	153,97

Source: Author analysis

scenario of bankruptcy) to a maximum of 1373.44 GBX. With this analysis, it is possible to conclude that the share price is very sensitive to both changes in growth and WACC, since they are very close to each other. An increase in the terminal growth, higher than **0.11%**, leads to a downside potential. Considering that it is a **medium risk investment**, with a **conservative profile**, the recommendation could turn to “HOLD” with an expected change of both variables.

**Table 23:** Sensitivity analysis of between the PT and critical key variable: kd

TV cost of debt	PT (FCFF) 282,86
1,10%	503,58
1,15%	419,97
1,20%	360,13
1,25%	315,18
<b>1,30%</b>	<b>282,86</b>
1,35%	252,14
1,40%	229,19
1,45%	210,05
1,50%	193,85

Source: Author analysis

**Table 24:** Sensitivity analysis of PT considering changes in terminal growth versus terminal WACC

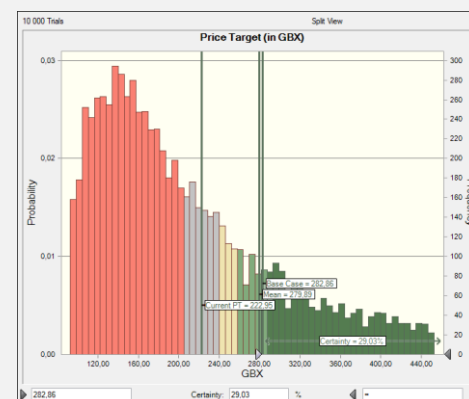
Terminal Growth Rate	PT (FCFF) 282,86	Terminal WACC								
		2,94%	2,99%	3,04%	3,09%	3,15%	3,19%	3,24%	3,29%	3,34%
2,81%	282,86	317,57	229,02	178,98	146,81	119,90	107,87	95,19	85,15	77,01
2,86%		515,54	316,80	228,47	178,55	140,28	124,09	107,61	94,96	84,95
2,91%		1 373,44	514,29	316,03	227,92	169,07	146,10	123,79	107,35	94,73
2,96%		- 2 058,14	1 370,11	513,05	315,27	212,84	177,69	145,75	123,49	107,09
<b>3,01%</b>		- 607,31	- 2 317,99	1 270,14	497,62	<b>282,86</b>	223,99	175,52	144,23	122,35
3,06%		- 342,35	- 586,04	- 2 048,17	1 363,48	442,78	313,75	226,27	176,83	145,05
3,11%		- 241,42	- 341,52	- 584,62	- 2 043,20	966,24	509,34	312,99	225,73	176,41
3,16%		- 186,37	- 240,84	- 340,69	- 583,20	- 5 235,48	1 356,89	508,11	312,24	225,18
3,21%		- 151,71	- 185,92	- 240,25	- 339,86	- 704,53	- 2 033,32	1 353,61	506,88	311,48

Source: Author analysis

### 10.3. Monte Carlo simulation

To complement the sensitivity analysis of the PT, a **Monte Carlo simulation (MCS)** was conducted considering the following parameters: terminal growth rate, market risk premium, risk free rate, and cost of debt. Based on their historical values, their standard deviation and mean were obtained, thus attributing a normal distribution when defining their assumptions. That said, with **10,000 trials**, this simulation led to a **mean value of 279.89 GBX** meaning an **upside potential of 25.54%**, falling into the “Buy” recommendation range (**15% > 25.54% ≤ 30%**) (Figure 44). According to the MCS, the variables that the PT is more sensitive to are: MRP (-55%), Rf (-24.8%), kd (-5.3%) and terminal growth rate (15%), (Figure 45). Based on this summation, the “Buy” recommendation given by the DCF model has **32.53%** probability to be accurate, and a **29.03%** probability to the final PT to be bigger or equal than the base case.

**Figure 44:** Monte Carlo simulation



**Figure 45:** Monte Carlo: Sensitivity chart

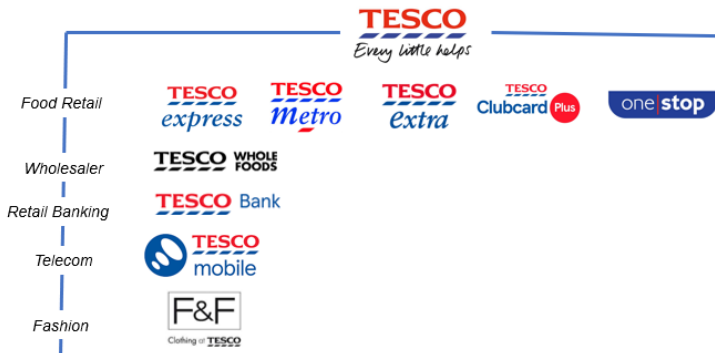


Monte Carlo Simulation	
# Trials	10 000
Base Case (PT- FCFF)	282,86 GBX
<b>Mean</b>	<b>279,89 GBX</b>
10 <sup>th</sup> Percentile	92,75 GBX
90 <sup>th</sup> Percentile	636,29 GBX
Certainty ≥ Base Case	29,03%
Certainty ≥ Current Share price	40,58%
Certainty ≥ the Buy range	32,53%
<b>Upside Potential</b>	<b>25,54%</b>

Source: Author analysis

# Appendices

## Appendix 1: Tesco different store formats

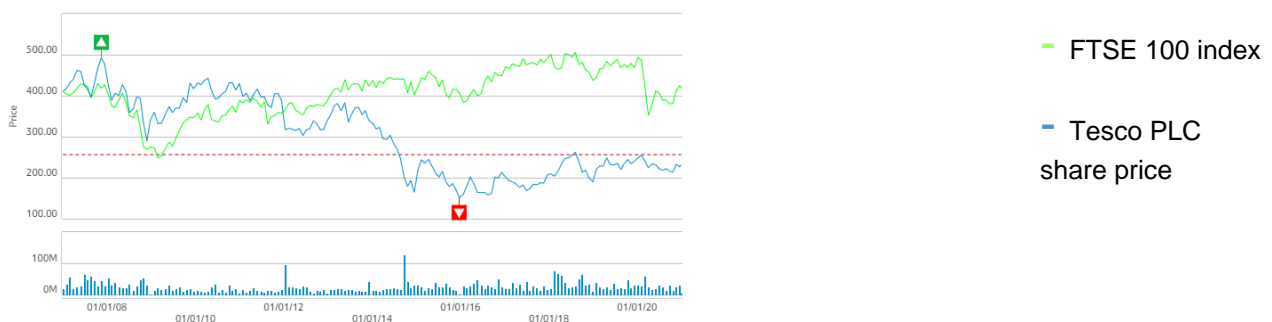


## Appendix 2: Tesco's retail operations worldwide



Source: Tesco annual report, 2021

## Appendix 3: Tesco vs FTSE 100



Source: Tesco| Investors | share price - <https://www.tescopl.com/investors/share-price->

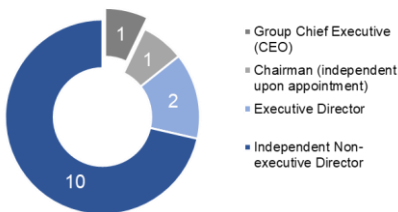
## Appendix 4: Integrating sustainability to the business: Sustainability Linked Bonds

Sustainability-linked committed facility	Sustainability-linked bond	Enhanced TCFD
<p><b>Interest linked to:</b></p> <ol style="list-style-type: none"> <li>Carbon emissions</li> <li>Renewable energy</li> <li>Food waste</li> </ol> 	<ol style="list-style-type: none"> <li>First for a retailer</li> <li>£ 750m</li> <li>Coupon of 0.375%</li> <li>8.5 year maturity</li> </ol> 	<ol style="list-style-type: none"> <li>Embedded in strategic business decision making</li> <li>New quantitative assessment</li> <li>Expanded reporting</li> </ol> 

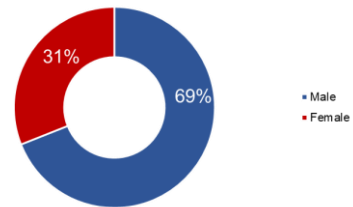
Source: Tesco preliminary results presentations (2021)

## Appendix 5: Tesco's Board composition, succession, and expertise

Board Composition (number of Directors)



Board Gender Split (in %)



Board tenure (number of directors)



Board expertise (numbers of Directors)



Source: Tesco annual report (2021)

## Appendix 6: Time spent in each key area by Tesco's BoD

### Key to stakeholders

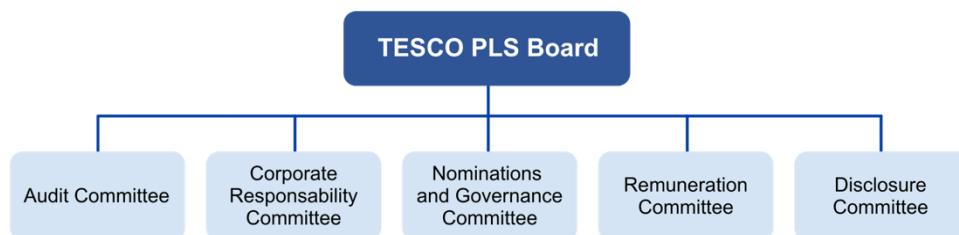


### Key to KPIs

- Grow sales
- Deliver profit
- Improve operating cashflow
- Customers recommend us and come back time and again
- Colleagues recommend us as a great place to work and shop
- Build trusted partnerships

Source: Tesco annual report (2021)

## Appendix 7: Corporate Governance Framework



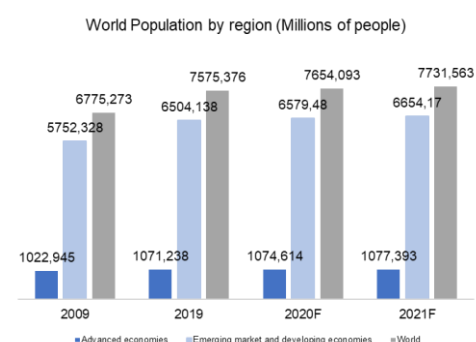
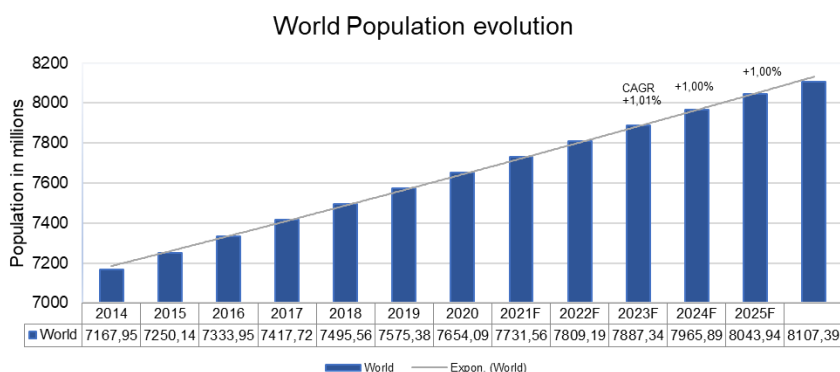
Source: Tesco annual report (2021)

## Appendix 8: Activity performed by the Board Committee

Committee	Role
<b>Audit Committee</b>	Their main role is to provide an independent judgement of the financial reporting processes (i.e., risk management and compliance, overseeing the effectiveness of the internal and external audit functions and subjects related to internal controls).
<b>Corporate Responsibility Committee</b>	Guarantee that the Board maintains focused on sustainability matters as well as on corporate responsibility, to reinforce Tesco's strategy.
<b>Nominations and Governance Committee</b>	Are responsible for the monitoring compliance of the Code. Also, monitors and reviews the composition of the BoD, guides senior management succession planning and leads the processes of new nominations.
<b>Remuneration and Disclosure Committee</b>	Having always into consideration the obligation to pay across the Group, is the responsibility of the remuneration committee to establish the remuneration policy for Executive Directors and senior managers. The remuneration of the Executive Directors is divided into fixed and variable remuneration. Fixed remuneration is composed of the base salary (normally reviewed annually), benefits. The base salary implemented for the new CEO was £1,350,000 and for the CFO £750,000 in the FY2020/2021. The CEO must build up a shareholding of 400% of his base salary and retain all shares that are vested in him. The variable payments are split into annual bonuses (are short-term payments that include the achievement of individual objectives) and Performance Share Plan (PSP). The annual bonus and the PSP are in accordance with the company's KPIs, as it is possible to see in Appendix Y. Non-executive Directors have the right to receive only the fixed remuneration constituted by the base salary and their benefits.

Source: Tesco annual report (2021)

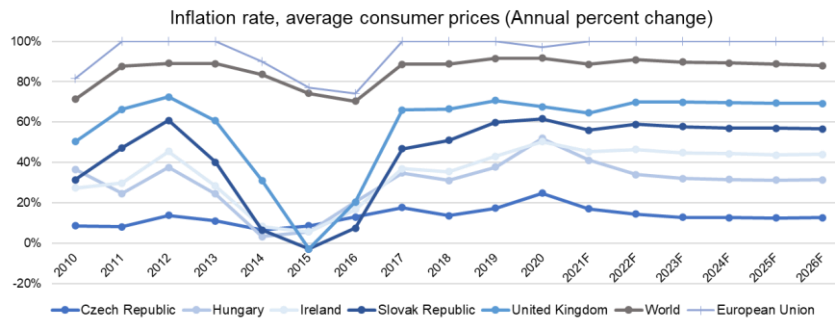
## Appendix 9: Evolution of population around the world



Source: IMF, World Economic Outlook Database and Author analysis

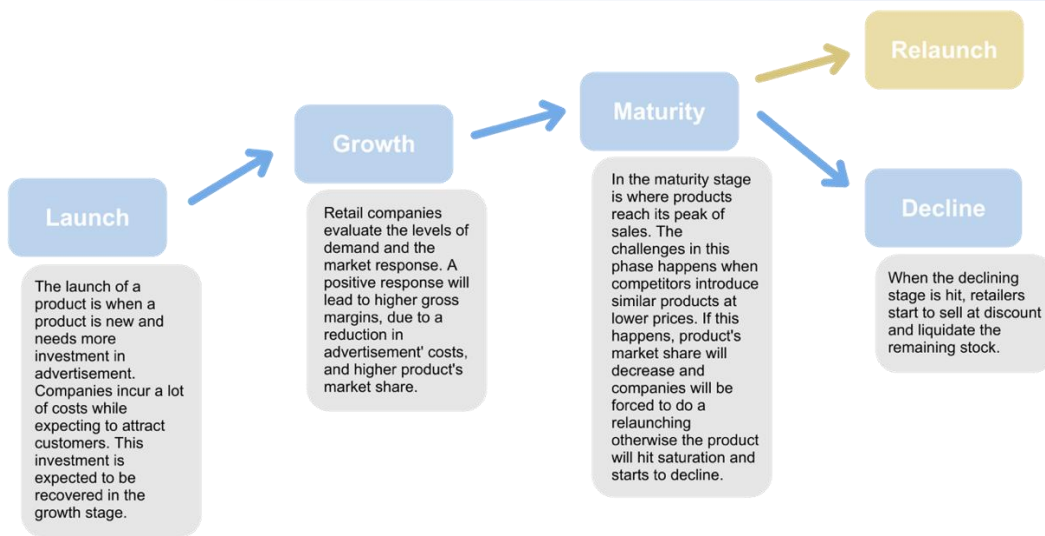
The disparity in population growth across different regions is likely to shape the global demand for food. The emerging markets and developing economies were the major focus of population growth with a CAGR of 1.236% in comparison to a CAGR of 0.46% for Advanced economies

## Appendix 10: Expected inflation growth by countries, 2010-2026F



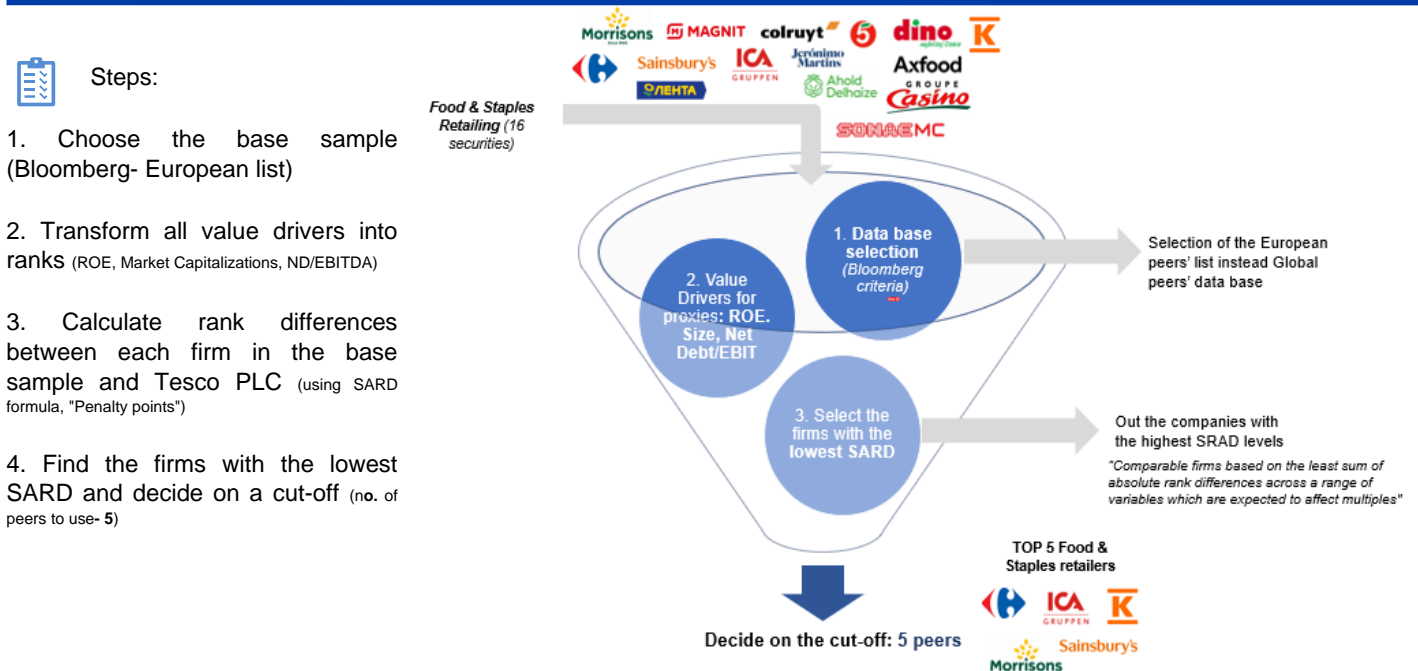
Source: IMF, World Economic Outlook Database and Author analysis

## Appendix 11: Global Food Retail & Distribution: Life Cycle



Source: Author analysis

## Appendix 12: Tesco peers' selection through SARD Approach



Formula used to perform SARD approach:  $SARD_{i,j} = |rX_{i,j} - rX_{j,j}| + |rY_{i,j} - rY_{j,j}| + \dots + |rZ_{i,j} - rZ_{j,j}|$

19/04/2021	SARD Variables			Transform all value drivers into ranks			Difference in ranks	Acc. w/ lowest SARDs
Source: Bloomberg	ROE	Size/ Market Cap.	Net Debt/EBIT	r ROE	r Size	r ND/EBITDA	SARD	Selection
<b>Food &amp; Staples Retailing (17 securities)</b>								
<b>TESCO PLC</b>	<b>7,27%</b>	<b>17 353 818 201,99</b>	<b>14,73</b>	<b>13</b>	<b>2</b>	<b>2</b>	<b>n/a</b>	
WM MORRISON SUPERMARKETS	7,08%	4 298 921 476,83	19,21	14	12	1	12	2 <sup>o</sup>
MAGNIT PJSC	17,77%	4 979 616 520,54	5,64	8	10	5	16	
COLRUYT SA	17,02%	5 711 536 489,41	2,75	9	8	12	20	
SAINSBURY (J) PLC	5,39%	5 460 991 879,39	7,05	16	9	4	12	3 <sup>o</sup>
LENTA PLC	19,20%	1 087 422 711,08	3,13	5	16	11	31	
ICA GRUPPEN AB	11,70%	7 218 311 276,92	3,41	11	6	8	12	4 <sup>o</sup>
JERONIMO MARTINS	15,67%	7 782 791 574,18	2,54	10	5	13	17	
KONINKLIJKE AHOLD DELHAIZE N	18,31%	21 872 941 550,45	3,18	6	1	10	16	
CARREFOUR SA	10,25%	10 648 106 204,28	3,36	12	3	9	9	1 <sup>o</sup>
X5 RETAIL GROUP NV-REGS GDR	26,83%	6 138 679 826,56	7,48	4	7	3	15	
DINO POLSKA SA	33,13%	4 806 570 127,15	1,18	3	11	16	33	
AXFOOD AB	45,69%	3 717 952 615,97	1,82	1	13	15	36	
CASINO GUICHARD PERRACHON	6,67%	2 575 514 778,67	2,52	15	14	14	26	
DISTRIBUIDORA INTERNACIONAL	45,27%	679 163 442,17	-10,26	2	17	17	41	
SONAE	3,44%	1 357 473 424,49	5,25	17	15	6	21	
KESKO OYJ-B SHS	17,78%	8 351 691 058,69	4,07	7	4	7	13	5 <sup>o</sup>

Peers (ranked by the lowest to the highest SARD)	SARD	Country	Code
<b>CARREFOUR SA</b>	9	France	CA
<b>WM MORRISON SUPERMARKETS</b>	12	United Kingdom	MRW
<b>SAINSBURY (J) PLC</b>	12	United Kingdom	SBRY
<b>ICA GRUPPEN AB</b>	12	Sweden	ICA
<b>KESKO OYJ-B SHS</b>	13	Finnish	KESKOB
X5 RETAIL GROUP NV-REGS GDR	15	Russia	FIVE
MAGNIT PJSC	16	Russia	MGNT
KONINKLIJKE AHOLD DELHAIZE N	16	Netherlands	AD
JERONIMO MARTINS	17	Portugal	JMT
COLRUYT SA	20	Belgium	COLR
SONAE	21	Portugal	SON
CASINO GUICHARD PERRACHON	26	France	CO
LENTA PLC	31	United Kingdom	LNTA
DINO POLSKA SA	33	Poland	DNP
AXFOOD AB	36	Sweden	AXFO
DISTRIBUIDORA INTERNACIONAL	41	Spain	DIA

**Low SARD-** "This approach suggests that the potential peer and target company (Tesco PLC) share similarities with respect to the select variables " - Jens Overgaard Knudsen, Simon Kold, and Thomas Plenborg, CFA institute

Source: Based on the paper from CFA institute, Jens Overgaard Knudsen, Simon Kold, and Thomas Plenborg, and Author analysis

## Appendix 13: Tesco Bank SWOT Analysis

Although the retail banking activity is financially separated from the parent company, there is ongoing monitoring of Tesco Bank's activities that could increase risks for Tesco PLC. Notwithstanding this, the bank has been capable to provide critical services in a moment of financial difficulty for many customers and invested in new experiences and initiatives (i.e. launch of ClubCards Plus, a new Student Shopper Card and, upgraded the Tesco Mobile app allowing its customers to purchase foreign currency).

<p><b>Strengths.</b></p> <ul style="list-style-type: none"> <li>• <b>Offers a wide range of services</b></li> <li>• <b>Strong customer base</b> and is supported by the biggest retailer in the UK</li> <li>• <b>Good performance:</b> the bank has presented a sustainable growth over the past years and a strong liquidity</li> <li>• <b>Cumulative spending,</b> from its customers, around £1bn</li> <li>• <b>Strong online platform</b> they give 24/7 support, and the app is very convenient for its clients to carry out their transactions</li> </ul>	<p><b>Weaknesses.</b></p> <ul style="list-style-type: none"> <li>• <b>New in the market:</b> low market share in comparison with other banks with decades of experience</li> <li>• <b>Few offices in the UK</b></li> <li>• <b>Stopped accepting new submissions for personal current accounts</b></li> <li>• <b>Sale of the Tesco Bank mortgage book</b></li> </ul>
<p><b>Opportunities.</b></p> <ul style="list-style-type: none"> <li>• <b>Launch new products:</b> the bank is planning on opening current account servings being this a good opportunity to bring new clients</li> <li>• <b>Scheme plans with Tesco Retail</b> (i.e., ClubCard and ClubCard plus)</li> <li>• <b>Upgrade of Tesco Mobile app</b></li> </ul>	<p><b>Threats.</b></p> <ul style="list-style-type: none"> <li>• <b>Economy recession due to COVID-19:</b> is expected an impact in income from its activities (i.e., credit cards, loans and travel money)</li> <li>• <b>Exposition of several risks:</b> operational risk, regulatory risk, credit risk and business risk</li> </ul>

Source: Author analysis

## Appendix 14: Income Statement

HISTORICAL INCOME STATEMENT								FORECASTED INCOME STATEMENT						CAGR 2022F-2027F
INCOME STATEMENT in Millions of GBP													%	
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F	
<b>Continuing Operations</b>														
Total Sales	62284	54433	55917	57491	63911	58091	57887	63352	64229	65752	66846	67873	68837	1,4%
Cost of sales (COGS)	64396	51579	53015	54141	59767	53810	53538	58592	59403	60812	61824	62774	63666	1,2%
Impairment loss on financial assets <sup>(a)</sup>						183	384	0	0	0	0	0	0	
<b>Gross (loss)/profit</b>	<b>-2112</b>	<b>2854</b>	<b>2902</b>	<b>3350</b>	<b>4144</b>	<b>4098</b>	<b>3965</b>	<b>4760</b>	<b>4825</b>	<b>4940</b>	<b>5022</b>	<b>5099</b>	<b>5172</b>	<b>1,4%</b>
Selling, General & Admin exp (D&A)	2695	1852	1995	1633	2075	1892	2229	2330	2369	2428	2475	2520	2563	1,6%
(Losses) profits on property-related items	985	44	110	120	84	0	0	0	0	0	0	0	0	
<b>Operating (loss)/profit</b>	<b>-5792</b>	<b>1046</b>	<b>1017</b>	<b>1837</b>	<b>2153</b>	<b>2206</b>	<b>1736</b>	<b>2430</b>	<b>2457</b>	<b>2512</b>	<b>2547</b>	<b>2580</b>	<b>2608</b>	<b>1,2%</b>
Share of pre-tax (losses) profits of joint ventures and associates	13	-21	-107	-6	35	-8	26	26	26	26	26	26	26	0,0%
Finance income	90	29	109	98	22	20	15	65	65	67	68	69	70	1,3%
Financial expenses	661	892	874	631	536	1190	952	935	920	886	873	837	837	-1,8%
<b>(Loss)/ profit before tax</b>	<b>-6376</b>	<b>162</b>	<b>145</b>	<b>1298</b>	<b>1674</b>	<b>1028</b>	<b>825</b>	<b>1586</b>	<b>1628</b>	<b>1719</b>	<b>1769</b>	<b>1837</b>	<b>1867</b>	<b>3,0%</b>
Income taxes	657	54	-87	-306	-354	-290	-104	412	423	447	460	478	485	2,8%
<b>(Loss)/ profit for the years from continuing operations</b>	<b>-5719</b>	<b>216</b>	<b>58</b>	<b>992</b>	<b>1320</b>	<b>738</b>	<b>721</b>	<b>1174</b>	<b>1205</b>	<b>1272</b>	<b>1309</b>	<b>1360</b>	<b>1382</b>	<b>3,0%</b>
<b>Discontinued Operations</b>														
Loss/ profit for the year from discontinued operation	47	-87	-112	216	0	235	5426	0	0	0	0	0	0	
<b>(Loss)/ profit of the year - Net income</b>	<b>-5766</b>	<b>129</b>	<b>-54</b>	<b>1208</b>	<b>1320</b>	<b>973</b>	<b>6147</b>	<b>1174</b>	<b>1205</b>	<b>1272</b>	<b>1309</b>	<b>1360</b>	<b>1382</b>	<b>2,8%</b>

Note: Financial year end 2020/2021, (FY 2021) February 2021

## Appendix 15: Common size Income Statement

COMMON SIZE IS (%)													Average	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F
<b>Continuing Operations</b>																			
Revenues	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%	100,00%		
Cost of sales (COGS)	103,39%	94,76%	94,81%	94,17%	93,52%	92,63%	92,49%	95,11%	92,49%	92,49%	92,49%	92,49%	92,49%	92,49%	92,49%	92,49%			
Impairment loss on financial assets <sup>(a)</sup>						0,32%	0,66%	0,49%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%			
<b>Gross (loss)/profit</b>	<b>-3,39%</b>	<b>5,24%</b>	<b>5,19%</b>	<b>5,83%</b>	<b>6,48%</b>	<b>7,05%</b>	<b>6,85%</b>	<b>4,75%</b>	<b>7,51%</b>	<b>7,51%</b>	<b>7,51%</b>	<b>7,51%</b>	<b>7,51%</b>	<b>7,51%</b>	<b>7,51%</b>	<b>7,51%</b>			
Administrative expenses	4,33%	3,40%	3,57%	2,84%	3,25%	3,26%	3,85%	3,50%	3,68%	3,69%	3,69%	3,70%	3,71%	3,72%	3,72%				
(Losses) profits on property-related items	1,58%	0,08%	0,20%	0,21%	0,13%	0,00%	0,00%	0,31%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%				
<b>Operating (loss)/profit</b>	<b>-9,30%</b>	<b>1,92%</b>	<b>1,82%</b>	<b>3,20%</b>	<b>3,37%</b>	<b>3,80%</b>	<b>3,00%</b>	<b>1,11%</b>	<b>3,84%</b>	<b>3,82%</b>	<b>3,82%</b>	<b>3,81%</b>	<b>3,80%</b>	<b>3,79%</b>					
Share of pre-tax (losses) profits of joint ventures and associates	0,02%	-0,04%	-0,19%	-0,01%	0,05%	-0,01%	0,04%	-0,02%	0,04%	0,04%	0,04%	0,04%	0,04%	0,04%					
Finance income	0,14%	0,05%	0,19%	0,17%	0,03%	0,03%	0,03%	0,09%	0,10%	0,10%	0,10%	0,10%	0,10%	0,10%					
Finance costs	1,06%	1,64%	1,56%	1,10%	0,84%	2,05%	1,64%	1,41%	1,48%	1,43%	1,35%	1,31%	1,23%	1,22%					
<b>(Loss)/ profit before tax</b>	<b>-10,24%</b>	<b>0,30%</b>	<b>0,26%</b>	<b>2,26%</b>	<b>2,62%</b>	<b>1,77%</b>	<b>1,43%</b>	<b>-0,23%</b>	<b>2,50%</b>	<b>2,54%</b>	<b>2,61%</b>	<b>2,65%</b>	<b>2,71%</b>	<b>2,71%</b>					
Taxation	1,05%	0,10%	-0,16%	-0,53%	-0,55%	-0,50%	-0,18%	-0,11%	0,65%	0,66%	0,68%	0,69%	0,70%	0,71%					
<b>(Loss)/ profit for the years from continuing operations</b>	<b>-9,18%</b>	<b>0,40%</b>	<b>0,10%</b>	<b>1,73%</b>	<b>2,07%</b>	<b>1,27%</b>	<b>1,25%</b>	<b>-0,34%</b>	<b>1,85%</b>	<b>1,88%</b>	<b>1,93%</b>	<b>1,96%</b>	<b>2,00%</b>	<b>2,01%</b>					
<b>Discontinued Operations</b>																			
Loss/ profit for the year from discontinued operation	0,08%	-0,16%	-0,20%	0,38%	0,00%	0,40%	9,37%	1,41%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%					
<b>(Loss)/ profit of the year</b>	<b>-9,26%</b>	<b>0,24%</b>	<b>-0,10%</b>	<b>2,10%</b>	<b>2,07%</b>	<b>1,67%</b>	<b>10,62%</b>	<b>1,05%</b>	<b>1,85%</b>	<b>1,88%</b>	<b>1,93%</b>	<b>1,96%</b>	<b>2,00%</b>	<b>2,01%</b>					

Note: Financial year end 2020/2021, (FY 2021) February 2021

## Appendix 16: Common-size Cash Flow Statement

CASH FLOW STATEMENT In Millions of GBP							FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F
<b>Operational Cash Flow</b>												
Net Income				1 173,57	1 204,88	1 272,07	1 308,70	1 359,60	1 381,66			
Selling, General & Admin exp (D&A)				2 329,52	2 368,76	2 428,10	2 474,74	2 519,76	2 563,29			
Assets of the disposal groups and non-current assets classified as held for sale				605,00	0,00	0,00	0,00	0,00	0,00			
Liabilities of the disposable groups classified as held for sale				276,00	0,00	0,00	0,00	0,00	0,00			
ΔWC				-26,69	-68,08	-118,21	-84,87	-79,71	-74,80			
<b>Cash Flow from operating activities</b>				<b>3 858,78</b>	<b>3 641,72</b>	<b>3 818,38</b>	<b>3 868,30</b>	<b>3 959,07</b>	<b>4 019,75</b>			
<b>Cash Flow from Investing Activities</b>												
CAPEX				-1 920,64	-1 950,96	-1 998,92	-2 035,50	-2 070,52	-2 104,05			
<b>Cash Flow from Investing activities</b>				<b>-1 920,64</b>	<b>-1 950,96</b>	<b>-1 998,92</b>	<b>-2 035,50</b>	<b>-2 070,52</b>	<b>-2 104,05</b>			
<b>Cash Flow From Financing Activities</b>												
Dividend payment				-586,78	-602,44	-636,04	-654,35	-679,80	-690,83			
Δ in Total Debt				-1 222,07	-467,08	-391,56	-351,04	-675,96	-44,02			
<b>Cash Flow from Financing activities</b>				<b>-1 808,85</b>	<b>-1 069,52</b>	<b>-1 027,60</b>	<b>-1 005,39</b>	<b>-1 355,75</b>	<b>-734,84</b>			
<b>Net Change in Cash</b>				<b>129,29</b>	<b>621,24</b>	<b>791,86</b>	<b>827,41</b>	<b>532,80</b>	<b>1 180,85</b>			
<b>Beginning Balance of Cash</b>				<b>2 510,00</b>	<b>2 639,29</b>	<b>3 260,52</b>	<b>4 052,39</b>	<b>4 879,79</b>	<b>5 412,59</b>			
<b>Ending Balance of Cash</b>				<b>2 639,29</b>	<b>3 260,52</b>	<b>4 052,39</b>	<b>4 879,79</b>	<b>5 412,59</b>	<b>6 593,44</b>			

Note: Financial year end 2020/2021, (FY 2021) February 2021

## Appendix 17: Balance Sheet (Statement of financial position)

BALANCE SHEET <i>in Millions of GBP</i>	HISTORICAL BALANCE SHEET							FORECASTED BALANCE SHEET						CAGR
	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F	2022F-2026F
<b>Non-current assets</b>														%
Goodwill and other intangible assets (net value)	3 771	2 874	2 717	2 661	6 223	6 078	5 393	5 208	5 018	4 822	4 619	4 410	4 195	-3,27%
PP&E	20 440	17 900	18 108	18 712	19 186	19 234	17 211	16 987	16 759	16 526	16 290	16 049	15 805	-1,13%
Right of use assets				7 527	7 713	6 874	5 951	5 951	5 951	5 951	5 951	5 951	5 951	0,00%
Investment property	164	78	64	100	36	26	19	19	19	19	19	19	19	0,00%
Investment in joint ventures and associates	940	785	739	597	602	307	178	178	178	178	178	178	178	0,00%
Other investments <sup>(a)</sup>	975	1 135	823	860	979	866	763	901	902	904	905	906	907	0,12%
Trade and other receivables			180	217	243	166	170	210	213	218	222	225	228	1,39%
Loans and advances to customers	3 906	4 723	5 795	6 885	7 868	4 171	3 309	3 309	3 309	3 309	3 309	3 309	3 309	0,00%
Derivative financial instruments	1 546	1 532	1 303	1 117	1 178	1 083	1 425	1 425	1 425	1 425	1 425	1 425	1 425	0,00%
Deferred taxes	514	49	707	401	408	449	552	552	552	552	552	552	552	0,00%
<b>Total Non-current assets</b>	<b>32 256</b>	<b>29 076</b>	<b>30 436</b>	<b>39 077</b>	<b>44 436</b>	<b>39 254</b>	<b>34 971</b>	<b>34 740</b>	<b>34 326</b>	<b>33 904</b>	<b>33 470</b>	<b>33 025</b>	<b>32 570</b>	<b>-1,01%</b>
<b>Current assets</b>														
Other investments			284	68	67	202	178	195	198	202	206	209	212	1,39%
Inventories	2 957	2 430	2 301	2 264	2 617	2 433	2 069	2 636	2 672	2 735	2 781	2 824	2 864	1,39%
Trade and other receivables	2 121	1 607	1 475	1 415	1 550	1 396	1 263	1 671	1 694	1 735	1 763	1 791	1 816	1,39%
Loans and advances to customers	3 814	3 819	4 166	4 637	4 882	4 280	3 093	3 093	3 093	3 093	3 093	3 093	3 093	0,00%
Derivative financial instruments	153	176	286	27	52	63	37	37	37	37	37	37	37	0,00%
Current tax assets	16	15	13	12	6	21	41	41	41	41	41	41	41	0,00%
Short-term investments	593	3 463	2 727	1 029	390	1 076	1 011	1 011	1 011	1 011	1 011	1 011	1 011	0,00%
Cash and cash equivalents	2 165	3 082	3 821	4 059	4 227	4 137	2 510	2 639	3 261	4 052	4 880	5 413	6 593	15,45%
Assets of the disposal groups and non-current assets classified as held for sale	139	236	344	149	98	285	605	0	0	0	0	0	0	0,00%
<b>Total Current assets</b>	<b>11 958</b>	<b>14 828</b>	<b>15 417</b>	<b>13 660</b>	<b>13 889</b>	<b>13 893</b>	<b>10 807</b>	<b>11 323</b>	<b>12 007</b>	<b>12 907</b>	<b>13 812</b>	<b>14 418</b>	<b>15 667</b>	<b>4,95%</b>
<b>TOTAL ASSETS</b>	<b>44 214</b>	<b>43 904</b>	<b>45 853</b>	<b>52 737</b>	<b>58 325</b>	<b>53 147</b>	<b>45 778</b>	<b>46 063</b>	<b>46 333</b>	<b>46 811</b>	<b>47 281</b>	<b>47 443</b>	<b>48 237</b>	<b>0,59%</b>
<b>Current liabilities</b>														
Trade and other payables	9 922	8 568	8 875	8 773	9 131	8 922	8 399	9 417	9 548	9 774	9 937	10 090	10 233	1,39%
Borrowings	2 008	2 826	2 560	1 467	2 874	2 219	1 080	598	531	486	813	183	183	-21,06%
Lease Liabilities				712	646	598	575	586	598	611	623	635	648	1,63%
Derivative financial instruments and other liabilities	89	62	61	69	250	61	81	81	81	81	81	81	81	0,00%
Customer deposits and deposits from banks	7 020	7 479	6 687	7 812	8 832	6 377	5 321	5 321	5 321	5 321	5 321	5 321	5 321	0,00%
Current tax liabilities	95	419	613	335	325	324	79	79	79	79	79	79	79	0,00%
Provisions	671	360	438	416	226	155	186	186	186	186	186	186	186	0,00%
Liabilities of the disposable groups classified as held for sale	5	0	171	0	0	0	276	0	0	0	0	0	0	0,00%
<b>Total Current liabilities</b>	<b>19 810</b>	<b>19 714</b>	<b>19 405</b>	<b>19 584</b>	<b>22 284</b>	<b>18 656</b>	<b>15 997</b>	<b>16 268</b>	<b>16 344</b>	<b>16 538</b>	<b>17 040</b>	<b>16 575</b>	<b>16 732</b>	<b>0,37%</b>
<b>Non-current liabilities</b>														
Trade and other receivables			324	364	365	170	109	287	291	298	303	307	312	1,39%
Borrowings	10 651	10 711	9 433	7 032	5 580	6 005	6 188	5 325	4 794	4 308	3 495	3 312	3 128	-9,06%
Lease Liabilities				9 560	9 859	8 968	7 827	7 939	8 058	8 185	8 307	8 432	8 558	1,21%
Derivative financial instruments and other liabilities	946	889	607	594	389	887	926	926	926	926	926	926	926	0,00%
Customer deposits and deposits from banks			2 276	2 972	3 296	1 830	1 017	1 017	1 017	1 017	1 017	1 017	1 017	0,00%
Post-employment benefit obligations/Pension Liabilities	4 842	3 175	6 621	3 282	2 808	3 085	1 222	1 222	1 222	1 222	1 222	1 222	1 222	0,00%
Deferred tax liabilities	199	135	88	82	49	40	48	48	48	48	48	48	48	0,00%
Provisions	695	664	685	129	147	137	119	119	119	119	119	119	119	0,00%
<b>Total Non-current liabilities</b>	<b>17 333</b>	<b>15 574</b>	<b>20 034</b>	<b>24 015</b>	<b>22 493</b>	<b>21 122</b>	<b>17 456</b>	<b>16 883</b>	<b>16 475</b>	<b>16 122</b>	<b>15 437</b>	<b>15 383</b>	<b>15 330</b>	<b>-1,84%</b>
<b>TOTAL LIABILITIES</b>	<b>37 143</b>	<b>35 288</b>	<b>39 439</b>	<b>43 599</b>	<b>44 777</b>	<b>39 778</b>	<b>33 453</b>	<b>33 151</b>	<b>32 819</b>	<b>32 660</b>	<b>32 477</b>	<b>31 958</b>	<b>32 062</b>	
<b>Equity</b>														
Share capital	406	407	409	410	490	490	490	490	490	490	490	490	490	0,00%
Share premium	5 094	5 095	5 096	5 107	5 165	5 165	5 165	5 165	5 165	5 165	5 165	5 165	5 165	0,00%
All other reserves	-414	-141	601	717	3 770	3 658	3 183	3 183	3 183	3 183	3 183	3 183	3 183	0,00%
Retained earnings	1 985	3 265	332	2 926	4 147	4 078	3 505	4 092	4 694	5 330	5 985	6 664	7 355	10,25%
<b>Equity attributable to owners of the parent</b>	<b>7 071</b>	<b>8 626</b>	<b>6 438</b>	<b>9 160</b>	<b>13 572</b>	<b>13 391</b>	<b>12 343</b>	<b>12 930</b>	<b>13 532</b>	<b>14 168</b>	<b>14 823</b>	<b>15 502</b>	<b>16 193</b>	<b>3,70%</b>
Non controlling interests/Minority interest	0	-10	-24	-22	-24	-22	-18	-18	-18	-18	-18	-18	-18	0,00%
<b>TOTAL EQUITY</b>	<b>7 071</b>	<b>8 616</b>	<b>6 414</b>	<b>9 138</b>	<b>13 548</b>	<b>13 369</b>	<b>12 325</b>	<b>12 912</b>	<b>13 514</b>	<b>14 150</b>	<b>14 805</b>	<b>15 484</b>	<b>16 175</b>	<b>3,70%</b>
<b>EQUITY &amp; LIABILITIES</b>	<b>44 214</b>	<b>43 904</b>	<b>45 853</b>	<b>52 737</b>	<b>58 325</b>	<b>53 147</b>	<b>45 778</b>	<b>46 063</b>	<b>46 333</b>	<b>46 811</b>	<b>47 281</b>	<b>47 443</b>	<b>48 237</b>	
CHECK A= E+L	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	TRUE	

Note: Financial year end 2020/2021, (FY 2021) February 2021

## Appendix 18: Common size Balance Sheet

COMMON SIZE BALANCE SHEET (%)	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	Average %	Average Em	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F
<b>Non-current assets</b>															
Goodwill and other intangible assets (net value)	8.53%	6.55%	5.93%	5.05%	10.67%	11.44%	11.78%	8.56%	4 245.29	11.31%	10.83%	10.30%	9.77%	9.30%	8.70%
PP&E	46.23%	40.77%	39.49%	35.48%	32.89%	36.19%	37.60%	38.38%	18 684.43	36.88%	36.17%	35.30%	34.45%	33.83%	32.77%
Right of use assets	0.00%	0.00%	0.00%	14.27%	12.93%	12.93%	13.00%	7.63%	7 016.25	0.00%	12.84%	12.71%	12.59%	12.54%	12.34%
Investment property	0.37%	0.18%	0.14%	0.19%	0.06%	0.05%	0.04%	0.15%	69.57	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%
Investment in joint ventures and associates	2.13%	1.79%	1.61%	1.13%	1.03%	0.58%	0.39%	1.24%	592.57	0.39%	0.38%	0.38%	0.38%	0.38%	0.37%
Other investments <sup>(a)</sup>	2.21%	2.59%	1.79%	1.63%	1.68%	1.63%	1.67%	1.88%	914.43	1.96%	1.95%	1.93%	1.91%	1.91%	1.88%
Trade and other receivables	0.00%	0.00%	0.39%	0.41%	0.42%	0.31%	0.37%	0.27%	195.20	0.46%	0.46%	0.47%	0.47%	0.47%	0.47%
Loans and advances to customers	8.83%	10.76%	12.64%	13.06%	13.49%	7.85%	7.23%	10.55%	5 236.71	7.18%	7.14%	7.07%	7.00%	6.97%	6.86%
Derivative financial instruments	3.50%	3.49%	2.84%	2.12%	2.02%	2.04%	3.11%	2.73%	1 312.00	3.09%	3.08%	3.04%	3.01%	3.00%	2.95%
Deferred taxes	1.16%	0.11%	1.54%	0.76%	0.70%	0.84%	1.21%	0.90%	440.00	1.20%	1.19%	1.18%	1.17%	1.16%	1.14%
<b>Total Non-current assets</b>	<b>72.95%</b>	<b>66.23%</b>	<b>66.38%</b>	<b>74.10%</b>	<b>76.19%</b>	<b>73.86%</b>	<b>76.39%</b>	<b>72.30%</b>	<b>35 643.71</b>	<b>75.42%</b>	<b>74.09%</b>	<b>72.43%</b>	<b>70.79%</b>	<b>69.61%</b>	<b>67.52%</b>
<b>Current assets</b>															
Other investments	0.00%	0.00%	0.62%	0.13%	0.11%	0.38%	0.39%	0.23%	159.80	0.42%	0.43%	0.43%	0.43%	0.44%	0.44%
Inventories	6.69%	5.53%	5.02%	4.29%	4.49%	4.58%	4.52%	5.02%	2 438.71	5.72%	5.77%	5.84%	5.88%	5.95%	5.94%
Trade and other receivables	4.80%	3.66%	3.22%	2.68%	2.66%	2.63%	2.76%	3.20%	1 546.71	3.63%	3.66%	3.71%	3.73%	3.77%	3.76%
Loans and advances to customers	8.63%	8.70%	9.09%	8.79%	8.37%	8.05%	6.76%	8.34%	4 098.71	6.71%	6.68%	6.61%	6.54%	6.52%	6.41%
Derivative financial instruments	0.35%	0.40%	0.62%	0.05%	0.09%	0.12%	0.08%	0.24%	113.43	0.08%	0.08%	0.08%	0.08%	0.08%	0.08%
Current tax assets	0.04%	0.03%	0.03%	0.02%	0.01%	0.04%	0.09%	0.04%	17.71	0.09%	0.09%	0.09%	0.09%	0.09%	0.08%
Short-term investments	1.34%	7.89%	5.95%	1.95%	0.67%	2.02%	2.21%	3.15%	1 469.86	2.19%	2.18%	2.16%	2.14%	2.13%	2.10%
Cash and cash equivalents	4.90%	7.02%	8.33%	7.70%	7.25%	7.78%	5.48%	6.92%	3 428.71	5.73%	7.04%	8.66%	10.32%	11.41%	13.67%
Assets of the disposal groups and non-current assets classified as held for sale	0.31%	0.54%	0.75%	0.28%	0.17%	0.54%	1.32%	0.56%	265.14	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Total Current assets</b>	<b>27.05%</b>	<b>33.77%</b>	<b>33.62%</b>	<b>25.90%</b>	<b>23.81%</b>	<b>26.14%</b>	<b>23.61%</b>	<b>27.70%</b>	<b>13 493.14</b>	<b>24.58%</b>	<b>25.91%</b>	<b>27.57%</b>	<b>29.21%</b>	<b>30.39%</b>	<b>32.48%</b>
<b>TOTAL ASSETS</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>49 136.86</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>
<b>Current liabilities</b>															
Trade and other payables	26.71%	24.28%	22.50%	20.12%	20.39%	22.43%	25.11%	23.08%	8 941.43	28.41%	29.09%	29.93%	30.60%	31.57%	31.92%
Borrowings	5.41%	8.01%	6.49%	3.36%	6.42%	5.58%	3.23%	5.00%	2 147.71	1.80%	1.62%	1.49%	2.50%	0.57%	0.57%
Lease Liabilities	0.00%	0.00%	0.00%	1.63%	1.44%	1.50%	1.72%	0.90%	632.75	1.77%	1.82%	1.87%	1.92%	1.99%	2.02%
Derivative financial instruments and other liabilities	0.24%	0.18%	0.15%	0.16%	0.56%	0.15%	0.24%	0.24%	96.14	0.24%	0.25%	0.25%	0.25%	0.25%	0.25%
Customer deposits and deposits from banks	18.90%	21.19%	16.96%	17.92%	19.72%	16.03%	15.91%	18.09%	7 075.43	16.05%	16.21%	16.29%	16.38%	16.65%	16.60%
Current tax liabilities	0.26%	1.19%	1.55%	0.77%	0.73%	0.81%	0.24%	0.79%	312.86	0.24%	0.24%	0.24%	0.24%	0.25%	0.25%
Provisions	1.81%	1.02%	1.11%	0.95%	0.50%	0.39%	0.56%	0.91%	189.00	0.56%	0.57%	0.57%	0.57%	0.58%	0.58%
Liabilities of the disposal groups classified as held for sale	0.01%	0.00%	0.43%	0.00%	0.00%	0.00%	0.83%	0.18%	64.57	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
<b>Total Current liabilities</b>	<b>53.33%</b>	<b>55.87%</b>	<b>49.20%</b>	<b>44.92%</b>	<b>49.77%</b>	<b>46.90%</b>	<b>47.82%</b>	<b>49.69%</b>	<b>19 350.00</b>	<b>49.07%</b>	<b>49.80%</b>	<b>50.64%</b>	<b>52.47%</b>	<b>51.87%</b>	<b>52.18%</b>
<b>Non-current liabilities</b>															
Trade and other receivables	0.00%	0.00%	0.82%	0.83%	0.82%	0.43%	0.33%	0.46%	266.40	0.87%	0.89%	0.91%	0.93%	0.96%	0.97%
Borrowings	28.68%	30.35%	23.92%	16.13%	12.46%	15.10%	18.50%	20.73%	7 942.86	16.06%	14.61%	13.19%	10.76%	10.36%	9.76%
Lease Liabilities	0.00%	0.00%	0.00%	21.93%	22.02%	22.55%	23.40%	12.84%	9 053.50	23.95%	24.55%	25.06%	25.58%	26.38%	26.69%
Derivative financial instruments and other liabilities	2.55%	2.52%	1.54%	1.36%	0.87%	2.23%	2.77%	1.98%	748.29	2.79%	2.82%	2.84%	2.85%	2.90%	2.89%
Customer deposits and deposits from banks	0.00%	0.00%	5.77%	6.82%	7.36%	4.60%	3.04%	3.94%	2 278.20	3.07%	3.10%	3.11%	3.13%	3.18%	3.17%
Post-employment benefit obligations	13.04%	9.00%	16.79%	7.53%	6.27%	7.76%	3.65%	9.15%	3 576.43	3.69%	3.72%	3.74%	3.76%	3.82%	3.81%
Deferred tax liabilities	0.54%	0.38%	0.22%	0.19%	0.11%	0.10%	0.14%	0.24%	91.57	0.14%	0.15%	0.15%	0.15%	0.15%	0.15%
Provisions	1.87%	1.88%	1.74%	0.30%	0.33%	0.34%	0.36%	0.97%	134.33	0.36%	0.36%	0.36%	0.37%	0.37%	0.37%
<b>Total Non-current liabilities</b>	<b>46.67%</b>	<b>44.13%</b>	<b>50.80%</b>	<b>55.08%</b>	<b>50.23%</b>	<b>53.10%</b>	<b>52.18%</b>	<b>50.31%</b>	<b>19 718.14</b>	<b>50.93%</b>	<b>50.20%</b>	<b>49.36%</b>	<b>47.53%</b>	<b>48.13%</b>	<b>47.82%</b>
<b>TOTAL LIABILITIES</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>39 068.14</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>
<b>Equity</b>															
Share capital	5.74%	4.72%	6.38%	4.49%	3.62%	3.67%	3.98%	4.66%	443.14	3.79%	3.63%	3.46%	3.31%	3.16%	3.03%
Share premium	72.04%	59.13%	79.45%	55.89%	38.12%	38.63%	41.91%	55.03%	5 126.71	40.00%	38.22%	36.50%	34.89%	33.36%	31.93%
All other reserves	-5.85%	-1.64%	9.37%	7.85%	27.83%	27.36%	25.83%	12.96%	1 624.86	24.65%	23.55%	22.49%	21.50%	20.56%	19.68%
Retained earnings	28.07%	37.89%	5.18%	32.02%	30.61%	30.50%	28.44%	27.53%	2 891.14	31.69%	34.74%	37.67%	40.42%	43.04%	45.47%
<b>Equity attributable to owners of the parent</b>	<b>100.00%</b>	<b>100.12%</b>	<b>100.37%</b>	<b>100.24%</b>	<b>100.18%</b>	<b>100.16%</b>	<b>100.15%</b>	<b>100.17%</b>	<b>10 085.86</b>	<b>100.14%</b>	<b>100.13%</b>	<b>100.13%</b>	<b>100.12%</b>	<b>100.12%</b>	<b>100.11%</b>
Non controlling interests	0.00%	-0.12%	-0.37%	-0.24%	-0.18%	-0.16%	-0.15%	-0.17%		-0.14%	-0.13%	-0.13%	-0.12%	-0.12%	-0.11%
<b>TOTAL EQUITY</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>10 068.71</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

## Appendix 19: Managerial Balance Sheet

	HISTORICAL MANAGERIAL BALANCE SHEET								FORECASTED MANAGERIAL BALANCE SHEET					
MANAGERIAL BALANCE SHEET In Millions of GBP	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F	
PP&E	20440	17900	18108	18712	19186	19234	17211	16987	16759	16526	16290	16049	15805	
Goodwill	3771	2874	2717	2661	6223	6078	5393	5208	5018	4822	4619	4410	4195	
Other Long-term assets	4139	3579	3636	10602	10916	9605	8888	9026	9027	9029	9030	9031	9032	
LT Investments & Receivables	3906	4723	5975	7102	8111	4337	3479	3519	3522	3527	3531	3534	3537	
<b>Fixed Assets</b>	<b>32256</b>	<b>29076</b>	<b>30436</b>	<b>39077</b>	<b>44436</b>	<b>39254</b>	<b>34971</b>	<b>34740</b>	<b>34326</b>	<b>33904</b>	<b>33470</b>	<b>33025</b>	<b>32570</b>	
Inventories	2957	2430	2301	2264	2617	2433	2069	2636	2672	2735	2781	2824	2864	
Trade and other receivables	2121	1607	1475	1415	1550	1396	1263	1671	1694	1735	1763	1791	1816	
Loans and advances to customers	3814	3819	4166	4637	4882	4280	3093	3093	3093	3093	3093	3093	3093	
Current tax assets	16	15	13	12	6	21	41	41	41	41	41	41	41	
Other operational assets	153	176	570	95	119	265	215	232	235	239	243	246	249	
<b>Total Operational assets</b>	<b>9061</b>	<b>8047</b>	<b>8525</b>	<b>8423</b>	<b>9174</b>	<b>8395</b>	<b>6681</b>	<b>7673</b>	<b>7735</b>	<b>7843</b>	<b>7921</b>	<b>7994</b>	<b>8063</b>	
Trade and other payables	9922	8568	8875	8773	9131	8922	8399	9417	9548	9774	9937	10090	10233	
Customer deposits and deposits from banks	7020	7479	6687	7812	8832	6377	5321	5321	5321	5321	5321	5321	5321	
Current tax liabilities	95	419	613	335	325	324	79	79	79	79	79	79	79	
Other operational liabilities	760	422	499	485	476	216	267	267	267	267	267	267	267	
<b>Total Operational liabilities</b>	<b>17797</b>	<b>16888</b>	<b>16674</b>	<b>17405</b>	<b>18764</b>									

## Appendix 20: Macroeconomic Assumptions

MACROECONOMIC ASSUMPTIONS (used to forecast retail revenues)	FY 2021	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F	Unit
<b>a) Inflation rate, average consumer prices (annual percentage change)</b>								
United Kingdom (UK)	1,50%	1,90%	2,00%	2,10%	2,00%	2,00%	2,00%	%
Republic of Ireland (ROI)	1,60%	1,90%	2,00%	2,00%	2,00%	2,00%	2,00%	%
Czech Republic	2,30%	2,00%	2,00%	2,00%	2,00%	2,00%	2,00%	%
Hungary	3,60%	3,50%	3,30%	3,00%	3,00%	3,00%	3,00%	%
Slovakia	1,20%	1,90%	2,00%	2,00%	2,10%	2,00%	2,00%	%
<b>YoY inflaton growth</b>								
United Kingdom (UK)	-	0,40%	0,10%	0,10%	-0,10%	0,00%	0,00%	%
Republic of Ireland (ROI)	-	0,30%	0,10%	0,00%	0,00%	0,00%	0,00%	%
Czech Republic	-	-0,30%	0,00%	0,00%	0,00%	0,00%	0,00%	%
Hungary	-	-0,10%	-0,20%	-0,30%	0,00%	0,00%	0,00%	%
Slovakia	-	0,70%	0,10%	0,00%	0,10%	-0,10%	0,00%	%
<b>b) Real GDP growth (Annual percent change)</b>								
United Kingdom (UK)	5,30%	5,10%	2,00%	1,80%	1,50%	1,40%	1,40%	%
Republic of Ireland (ROI)	4,20%	4,80%	3,70%	2,80%	2,70%	2,60%	2,60%	%
Czech Republic (CR)	4,20%	4,30%	3,70%	3,20%	2,90%	2,50%	2,50%	%
Hungary (H)	4,30%	5,90%	3,80%	3,20%	2,60%	2,60%	2,60%	%
Slovakia (S)	4,70%	4,40%	3,80%	3,10%	3,00%	2,50%	2,50%	%
<b>c) Population (Millions of people)</b>								
United Kingdom (UK)	0,53%	0,50%	0,47%	0,45%	0,45%	-0,21%	-0,21%	%
Republic of Ireland (ROI)	0,96%	0,95%	0,94%	0,95%	0,96%	0,63%	0,63%	%
Czech Republic (CR)	0,34%	0,26%	0,16%	0,09%	0,02%	0,00%	0,00%	%
Hungary (H)	-0,19%	-0,21%	-0,20%	-0,20%	-0,21%	0,99%	0,99%	%
Slovakia (S)	0,13%	0,13%	0,15%	0,13%	0,13%	0,16%	0,16%	%

Source: IMF, World Economic Outlook Database forecasts

d) Global fuel price changes, 2005-2019	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	Average	Unit
Gasoline world average	0,84	0,78	0,84	0,93	0,91	-	USD/litre
Diesel World average	0,92	0,85	0,92	1,04	1,02	-	USD/litre
% Δ of Gasoline world average price		-7,14%	7,69%	10,71%	-2,15%	2,28%	%
% Δ of Diesel World average price		-7,61%	8,24%	13,04%	-1,92%	2,94%	%
<b>e) Passenger car registration in UK</b>							
	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020		
Petrol	49%	53%	62%	66%	62,7%		
Diesel World average	49%	42%	32%	27%	20%		%

Source: International Energy Agency (IEA) Statistics report — May 2020, and Statista

## Appendix 21: Income statement: Forecasting Assumptions

INCOME STATEMENT ASSUMPTIONS	Assumption/Rationale
Total Revenues	
<b>1. Retail Revenues</b>	
United Kingdom (UK)	UK revenues <sub>n-1</sub> * (1+GDP grow th <sub>n</sub> ) * (1+population grow th <sub>n</sub> ) * (1+inflation <sub>n</sub> )
Booker (B)	B revenues <sub>n-1</sub> * (1+GDP growth <sub>n</sub> ) * (1+population growth <sub>n</sub> ) * (1+inflation <sub>n</sub> )
Republic of Ireland (ROI)	ROI revenues <sub>n-1</sub> * (1+GDP grow th <sub>n</sub> ) * (1+population grow th <sub>n</sub> ) * (1+inflation <sub>n</sub> )
Czech Republic (CR)	CR revenues <sub>n-1</sub> * (1+GDP grow th <sub>n</sub> ) * (1+population grow th <sub>n</sub> ) * (1+inflation <sub>n</sub> )
Hungary (H)	H revenues <sub>n-1</sub> * (1+GDP grow th <sub>n</sub> ) * (1+population grow th <sub>n</sub> ) * (1+inflation <sub>n</sub> )
Slovakia (S)	S revenues <sub>n-1</sub> * (1+GDP grow th <sub>n</sub> ) * (1+population grow th <sub>n</sub> ) * (1+inflation <sub>n</sub> )
YoY retail sales growth (%)	
<b>2. Fuel (UK)</b>	Average Fuel revenues excl. FY2021 * (1+UK GDP grow th <sub>n</sub> ) * (1+UK inflation grow th <sub>n</sub> ) * (1+ world av. gasoline price Δ*62,7% users of gasoline)*(1+ world av. diesel priceΔ*19,7 %users of diesel)
<b>2. Fuel (Central Europe)</b>	For Central Europe fuel revenues, it was used a different approach. Since there is no detailed information and only represent 0,2% of total revenues, it was assumed to be constant for all forecasted years using na average of the historical years, excluding FY2021 because of the pandemic and the lockdowns .
YoY fuel sales growth (%)	
<b>3. Online sales</b>	The online grocery market in UK is expected to grow until 2024, 41%, since 2020. This means an average per year of 8,2%. Since Tesco has 30,7% of market share in online grocery, it was predicted an increase of online sales around 3% YoY (30,7% * 8,20%). For the remaining forecasted years, after 2024, it was assumed the same growth rate.
YoY online sales growth (%)	
<b>4. Tesco Bank revenues</b>	Tesco Bank revenues <sub>n-1</sub> * (1+GDP growth <sub>n</sub> ) * (1+inflation <sub>n</sub> ) - "The pace and scale of recovery in profitability is highly dependent on the economic outlook, which remains uncertain" (Tesco, 2021). For that reason it was used <b>GDP and inflation</b> of UK as drivers of revenue for Tesco Bank.
YoY online sales growth (%)	
Cost of sales (COGS)	Since Tesco does not disclose detailed information about its cost of sales on its annual reports, therefore, COGS will be growing at revenues growth % YoY.
Selling, General & Admin exp (D&A)	Includes Depreciations and Amortisations once there is no detailed info about AE and personnel costs are included in COGS
Share of pre-tax (losses) profits of joint ventures and associates	Assumed to be constant over the forecasted years and equal to the last FY
Finance income	See Finance Income and costs assumption
Finance costs	See Finance Income and costs assumption
Taxation	Following the UK Government's budget announcement in March, the company expects the effective tax rate to increase to <b>around 26% in the medium term</b> due to an increase in the UK corporation tax rate. (Tesco 2021).
Loss/ profit for the year from discontinued operation	Since it is a non-current operation and depends on the decision of selling more businesses in the future, it was assumed no more selling of businesses (in this case, the rest of the remaining businesses in Central Europe)

### Appendix 21 a): Detailed revenues

REVENUES BY SEGMENTS/CHANNELS AND GEOGRAPHY	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F	CAGR %	% of total revenues
<b>UK and ROI</b>	<b>42933</b>	<b>43080</b>	<b>43524</b>	<b>44908</b>	<b>51643</b>	<b>52898</b>	<b>53170</b>	<b>58275</b>	<b>58984</b>	<b>60364</b>	<b>61324</b>	<b>62210</b>	<b>63027</b>	<b>1,32%</b>	<b>91,80%</b>
UK incl. Fuel and Booker	0	41259	41458	42644	43445	44302	43750	55427	56000	57267	58113	58895	59604	1,22%	87,00%
Physical stores	0	35362	32434	33091	33285	33539	33128	34958	35694	36373	36883	37400	37925	1,37%	55,24%
Online sales	0	0	3200	3300	3400	3600	6300	6459	6662	6871	7088	7311	7541	2,62%	10,56%
Fuel	0	5897	5824	6253	6760	7163	4322	6867	6317	6521	6502	6453	6316	-1,38%	9,82%
Booker	0	0	0	0	5826	6204	6736	7143	7328	7501	7640	7731	7822	1,52%	11,38%
ROI	0	1821	2066	2264	2372	2392	2684	2848	2984	3097	3211	3315	3423	3,11%	4,76%
<b>International</b>	<b>18327</b>	<b>10398</b>	<b>11381</b>	<b>11532</b>	<b>11171</b>	<b>4125</b>	<b>3982</b>	<b>4301</b>	<b>4453</b>	<b>4582</b>	<b>4704</b>	<b>4834</b>	<b>4969</b>	<b>2,44%</b>	<b>7,02%</b>
<b>Central Europe</b>	<b>9851</b>	<b>5450</b>	<b>6195</b>	<b>6585</b>	<b>6298</b>	<b>4125</b>	<b>3982</b>	<b>4301</b>	<b>4453</b>	<b>4582</b>	<b>4704</b>	<b>4834</b>	<b>4969</b>	<b>2,44%</b>	<b>7,02%</b>
Fuel in Central Europe	0	0	0	225	267	244	120	245	245	245	245	245	245	0,00%	0,37%
Czech Republic (physical stores)	0	1137	1324	1474	1492	1437	1391	1450	1506	1556	1601	1641	1682	2,51%	2,38%
Hungary (physical stores)	0	1353	1593	1641	1585	1479	1376	1453	1502	1542	1579	1636	1695	2,61%	2,37%
Poland (physical stores)	0	1933	2070	1977	1719	0	0	0	0	0	0	0	0	-	-
Slovakia (physical stores)	0	996	1169	1236	1216	1203	1095	1153	1199	1238	1278	1311	1346	2,62%	1,90%
<b>Asia</b>	<b>8476</b>	<b>4948</b>	<b>5186</b>	<b>4947</b>	<b>4873</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-</b>	<b>-</b>
Thailand	0	3705	4378	4156	4055	0	0	0	0	0	0	0	0	-	-
Malaysia	0	742	808	791	818	0	0	0	0	0	0	0	0	-	-
Turkey	0	501	0	0	0	0	0	0	0	0	0	0	0	-	-
<b>Tesco Bank</b>	<b>1024</b>	<b>955</b>	<b>1012</b>	<b>1051</b>	<b>1097</b>	<b>1068</b>	<b>735</b>	<b>776</b>	<b>792</b>	<b>807</b>	<b>818</b>	<b>830</b>	<b>841</b>	<b>1,36%</b>	<b>1,23%</b>
<b>Total revenues</b>	<b>62284</b>	<b>54433</b>	<b>55917</b>	<b>57491</b>	<b>63911</b>	<b>58091</b>	<b>57887</b>	<b>63352</b>	<b>64229</b>	<b>65752</b>	<b>66846</b>	<b>67873</b>	<b>68837</b>	<b>1,39%</b>	<b>100,00%</b>
<b>YoY revenues growth (%)</b>		<b>-12,61%</b>	<b>2,73%</b>	<b>2,81%</b>	<b>11,17%</b>	<b>-9,11%</b>	<b>-0,35%</b>	<b>9,44%</b>	<b>1,38%</b>	<b>2,37%</b>	<b>1,66%</b>	<b>1,54%</b>	<b>1,42%</b>		

## Appendix 21 b): Financial Income and Costs forecasting assumptions

FINANCE INCOME ASSUMPTIONS/FORECAST	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F
Interest receivable and similar income	90	29	48	44	22	16	10	59,5	60,4	61,8	62,8	63,8	64,7
Financial instruments – fair value remeasurements	-	-	61	54	-	-	-	-	-	-	-	-	-
Finance income receivable on net investment in leases	-	-	-	-	-	4	5	5	5	5	5	5	5
<b>Total Finance Income</b>	<b>90</b>	<b>29</b>	<b>109</b>	<b>98</b>	<b>22</b>	<b>20</b>	<b>15</b>	<b>64,5</b>	<b>65,4</b>	<b>66,8</b>	<b>67,8</b>	<b>68,8</b>	<b>69,7</b>

### Formula/Assumption -

Since there isn't detailed information about Interest receivable and similiar income, this line was forecasted based on the average of all forecasted years in % of revenues.

FINANCE COSTS ASSUMPTIONS/FORECAST	FY 2020	FY 2021	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F
GBP MTNs and loans	142	158	140,7	125,9	112,7	112,7	77,0	77,0
EUR MTNs	59	51	51,0	51,0	29,9	17,0	17,0	17,0
USD bonds	11	9	9,0	9,0	9,0	9,0	9,0	9,0
Fair value remeasurements of financial instruments	246	214	214	214	214	214	214	214
Finance charges payable on lease liabilities	486	446	446	446	446	446	446	446
Other interest payable	24	31	31	31	31	31	31	31
Net pension finance costs	71	43	43	43	43	43	43	43
<b>Total Finance Costs before exceptional items</b>	<b>1039</b>	<b>952</b>	<b>934,67</b>	<b>919,9</b>	<b>885,6</b>	<b>872,7</b>	<b>837,0</b>	<b>837,0</b>
Fair value remeasurement loss on derivative restructuring	180	-	-	-	-	-	-	-
Fair value remeasurement gain on Tesco Bank mortgage book disposal	29	-	-	-	-	-	-	-
<b>Total Finance Costs before exceptional items</b>	<b>1248</b>	<b>952</b>	<b>934,67</b>	<b>919,9</b>	<b>885,6</b>	<b>872,7</b>	<b>837,0</b>	<b>837,0</b>

<b>2021</b>	£	<b>4 449,00</b>	\$	<b>355,00</b>	€	<b>2 958,00</b>
<b>Cost of Debt</b>		<b>3,5514%</b>		<b>2,535%</b>		<b>1,724%</b>
<b>2022</b>	£	<b>3 961,00</b>	\$	<b>355,00</b>	€	<b>2 958,00</b>
Finance costs		140,67		9,00		51,00
<b>2023</b>	£	<b>3 544,00</b>	\$	<b>355,00</b>	€	<b>2 958,00</b>
Finance costs	£	125,86	\$	9,00	€	51,00
<b>2024</b>	£	<b>3 173,00</b>	\$	<b>355,00</b>	€	<b>1 735,00</b>
Finance costs	£	112,68	\$	9,00	€	29,91
<b>2025</b>	£	<b>3 173,00</b>	\$	<b>355,00</b>	€	<b>985,00</b>
Finance costs	£	112,68	\$	9,00	€	16,98
<b>2026</b>	£	<b>2 169,00</b>	\$	<b>355,00</b>	€	<b>985,00</b>
Finance costs	£	77,03	\$	9,00	€	16,98
<b>2027</b>	£	<b>2 169,00</b>	\$	<b>355,00</b>	€	<b>985,00</b>
Finance costs	£	77,03	\$	9,00	€	16,98

## Appendix 22: Balance Sheet Assumptions

BALANCE SHEET ASSUMPTIONS	Assumption/Rationale						
	FY 2021	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F
<b>Non-current assets</b>							
Goodwill and other intangible assets (net value)	See CAPEX assumptions						
PP&E	See CAPEX assumptions						
Right of use assets	Assumed to be constant over the forecasted years and equal to the last FY						
Investment property	Assumed to be constant over the forecasted years and equal to the last FY						
Investment in joint ventures and associates	Assumed to be constant over the forecasted years and equal to the last FY						
Other investments	It will grow based on YoY revenues growth						
Trade and other receivables	See WC assumptions						
Loans and advances to customers	Assumed to be constant over the forecasted years and equal to the last FY						
Derivative financial instruments	Assumed no further investments over the forecasted years since it is very difficult to predict						
Deferred taxes	Assumed to be constant over the forecasted years and equal to the last FY						
<b>Total Non-current assets % growth YoY</b>	-10,91%	0,66%	1,21%	1,25%	1,30%	1,35%	1,40%
<b>Current assets</b>							
Other investments	It will grow based on YoY revenues growth						
Inventories	See WC assumptions - <b>(Average receivable days/365)*revenues</b>						
Trade and other receivables	See WC assumptions- <b>(Average inventory days/ 365) * COGS</b>						
Loans and advances to customers	Assumed to be constant over the forecasted years and equal to the last FY						
Derivative financial instruments	Assumed no further investments over the forecasted years since it is very difficult to predict						
Current tax assets	Assumed to be constant over the forecasted years and equal to the last FY						
Short-term investments	Assumed to be constant over the forecasted years and equal to the last FY						
Cash and cash equivalents	Assumed to be constant over the forecasted years and equal to the last FY						
Assets of the disposal groups and non-current assets classified as held for sale	"The assets classified as held for sale consist mainly of properties in the UK and Central Europe due to be sold within one year." (Tesco, 2021) Since it is very difficult to predict future discontinuous operations and there is no further information, it will be considered 0.						
<b>Total Current assets % growth YoY</b>	-22%	5%	6%	7%	7%	4%	9%
<b>TOTAL ASSETS % growth YoY</b>	-13,87%	0,62%	0,59%	1,03%	1,01%	0,34%	1,67%
<b>Current liabilities</b>							
Trade and other payables	See WC assumptions- <b>(Average trade payable days/365) * COGS</b>						
Borrowings	See Borrowings Assumption						
Lease Liabilities	"Approximately 75% (2020: 72%) of the Group's lease liabilities are subject to inflation-linked rentals and a further 15% (2020: 12%) are subject to rent reviews. Rental changes linked to inflation or rent reviews typically occur on an annual or five-yearly basis." (Tesco 2021) For the forecasted years it will be assumed that 75% of lease liabilities are subject to UK inflation and the remaining 15% will be subject to the same interest lease liability (Interest on lease liabilities - 446).						
Derivative financial instruments and other liabilities	Assumed no further investments over the forecasted years since it is very difficult to predict						
Customer deposits and deposits from banks	Assumed to be constant over the forecasted years and equal to the last FY						
Current tax liabilities	Assumed to be constant over the forecasted years and equal to the last FY						
Provisions	Assumed to be constant over the forecasted years and equal to the last FY						
Liabilities of the disposable groups classified as held for sale	Since it is very difficult to predict future discontinuous operations and there is no further information, it will be considered 0.						
<b>Total Current liabilities % growth YoY</b>	-14,25%	1,70%	0,46%	1,19%	3,03%	-2,73%	0,94%
<b>Non-current liabilities</b>							
Trade and other receivables	See WC assumptions						
Borrowings	See Borrowings Assumption						
Lease Liabilities	"Approximately 75% (2020: 72%) of the Group's lease liabilities are subject to inflation-linked rentals and a further 15% (2020: 12%) are subject to rent reviews. Rental changes linked to inflation or rent reviews typically occur on an annual or five-yearly basis." (Tesco 2021) For the forecasted years it will be assumed that 75% of lease liabilities are subject to UK inflation and the remaining 15% will be subject to the same interest lease liability (Interest on lease liabilities - 446).						
Derivative financial instruments and other liabilities	Assumed to be constant over the forecasted years and equal to the last FY						
Customer deposits and deposits from banks	Assumed to be constant over the forecasted years and equal to the last FY						
Post-employment benefit obligations	Assumed to be constant over the forecasted years and equal to the last FY						
Deferred tax liabilities	Assumed to be constant over the forecasted years and equal to the last FY						
Provisions	Assumed to be constant over the forecasted years and equal to the last FY						
<b>Total Non-current liabilities % growth YoY</b>	-17,36%	-3,28%	-2,42%	-2,14%	-4,25%	-0,35%	-0,34%
<b>TOTAL LIABILITIES % growth YoY</b>	-15,90%	-0,90%	-1,00%	-0,48%	-0,56%	-1,60%	0,32%
<b>Equity</b>							
Share capital	It will be equal to the recent FY (2021) for the forecasted years, since it has remained stable for the last three years						
Share premium	It will be equal to the recent FY (2021) for the forecasted years, since it has remained stable for the last three years						
All other reserves	Equal to FY 2021 nominal value						
Retained earnings	See Retained Earnings Assumptions						
Equity attributable to owners of the parent	Σ Share capital + Share premium + all other reserves and retained earnings						
Non controlling interests	Equal to FY 2021 nominal value						
<b>TOTAL EQUITY % growth YoY</b>	-7,81%	4,76%	4,67%	4,71%	4,62%	4,59%	4,46%

## Appendix 22 a): CAPEX and D&A forecasting assumptions

**Assumption/Rational for Capital Expenditures:** It will be assumed that the investment in new space/business and Maintenance/refresh of PP&E will grow at retail sales' growth (YoY%), because it is directly related with the core business. Regarding the CAPEX of IT/productivity, it will grow at YoY online sales' growth (%).

**Assumption/Rational for Depreciation and Amortization rate:** Since there is no information about the depreciation/amortization rate, it will be forecasted as a % of CAPEX using historical depreciation as a guide

**Assumption/Rational for Goodwill:** After FY2021, since it is difficult to forecast either future goodwill impairments or future acquisitions where the company pays in excess of fair market value for the assets acquired; it will be assumed the last value of FY2021 as constant for the further forecasted years. It is important to mention that this line may be impacted with Brexit.

CAPEX ASSUMPTIONS/FORECAST	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
<b>CAPEX (£ m)</b>	<b>2 077,00</b>	<b>2 845,00</b>	<b>1 556,00</b>	<b>1 504,00</b>	<b>5 429,00</b>	<b>2 113,00</b>	<b>1 768,00</b>
CAPEX PP&E (new business/space and reinvestment of excess of cash plus Maintenance/ refresh of PP&E)	1 642,00	2 604,00	1 395,00	1 301,00	1 377,00	1 906,00	1 562,00
CAPEX Intangibles (IT/productivity)	435,00	241,00	161,00	203,00	4 052,00	207,00	206,00
CAPEX ASSUMPTIONS/FORECAST	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F	
<b>CAPEX (£ m)</b>	<b>1 920,64</b>	<b>1 950,96</b>	<b>1 998,92</b>	<b>2 035,50</b>	<b>2 070,52</b>	<b>2 104,05</b>	
CAPEX PP&E (new business/space and reinvestment of excess of cash plus Maintenance/ refresh of PP&E)	1 709,45	1 733,13	1 774,24	1 803,75	1 831,47	1 857,48	
CAPEX Intangibles (IT/productivity)	211,19	217,83	224,69	231,76	239,05	246,57	
Amortisations/ CAPEX Intangible assets	<b>187,38%</b>						
Depreciations/CAPEX PP&E	<b>113,12%</b>						
<b>PP&amp;E (net carrying value) (£ m)</b>	<b>FY 2022F</b>	<b>FY 2023F</b>	<b>FY 2024F</b>	<b>FY 2025F</b>	<b>FY 2026F</b>	<b>FY 2027F</b>	
Ending PP&E (PP&E+CAPEX-Depreciations)	16 986,65	16 759,19	16 526,33	16 289,61	16 049,24	15 805,46	
<b>Depreciations of PP&amp;E (£ m)</b>	<b>FY 2022F</b>	<b>FY 2023F</b>	<b>FY 2024F</b>	<b>FY 2025F</b>	<b>FY 2026F</b>	<b>FY 2027F</b>	
Depreciations PP&E of the year	1 933,81	1 960,59	2 007,09	2 040,48	2 071,84	2 101,26	
<b>Goodwill and other intangible assets (G&amp;IA) (£ m)</b>	<b>FY 2022F</b>	<b>FY 2023F</b>	<b>FY 2024F</b>	<b>FY 2025F</b>	<b>FY 2026F</b>	<b>FY 2027F</b>	
Ending G&IA (G&IA+CAPEX-Depreciations)	5 208,47	5 018,13	4 821,80	4 619,30	4 410,42	4 194,97	
<b>Amortisations of G&amp;IA (£ m)</b>	<b>FY 2022F</b>	<b>FY 2023F</b>	<b>FY 2024F</b>	<b>FY 2025F</b>	<b>FY 2026F</b>	<b>FY 2027F</b>	
Amortisations G&IA of the year	395,72	408,17	421,01	434,26	447,93	462,02	
<b>TOTAL Depreciation &amp; Amortisation</b>	<b>2 329,52</b>	<b>2 368,76</b>	<b>2 428,10</b>	<b>2 474,74</b>	<b>2 519,76</b>	<b>2 563,29</b>	

## Appendix 22 b): Working Capital forecasting assumptions

Operational Cycle Ratios (current)	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	Average
<b>Accounts receivable days</b>	12,430	10,776	9,628	8,984	8,852	8,771	7,964	<b>9,63</b>
<b>Accounts payable days</b>	56,24	60,63	61,10	59,14	55,76	60,52	57,26	<b>58,67</b>
<b>Inventory days</b>	17,33	16,29	15,02	14,37	14,95	15,29	13,05	<b>15,19</b>
<b>Trade Cycle days</b>	-26,48	-33,56	-36,46	-35,79	-31,97	-36,46	-36,25	<b>-33,85</b>

Operational Cycle Ratios (non-current)	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	Average
<b>Trade and other receivables</b>	0	0	1,17	1,38	1,39	1,04	1,07	<b>1,21</b>
<b>Trade and other payables</b>	0	0	2,11	2,31	2,08	1,07	0,69	<b>1,65</b>

Formula/Assumption
DSO= (Trade receivables / Revenues) * 365
DPO= (Trade payables/ COGS) * 365
DSI= (Average inventories/COGS)* 365
<b>TCD= DSO+DSI-DPO</b>

## Appendix 22 c): Borrowings forecasting assumptions

Notes	Par Value	Maturity	FY 2021	
(a)	Bank Loans and overdrafts	-	-	559,00
	2,125 % MTN	€ 296,00	nov/20	0,00
	1m USD LIBOR + 0.7% Tesco Bank B	\$ 350,00	nov/20	0,00
	5% Tesco Bank Retail Bond	£ 200,00	nov/20	0,00
	6.125% MTN	£ 417,00	feb/22	417,00
	LIBOR + 0.53% Tesco Bank Bond	£ 300,00	oct/23	0,00
(b)	5% MTN	£ 71,00	mar/23	79,00
	1.375% MTN	€ 750,00	oct/23	662,00
(b)	2.5% MTN	€ 473,00	jul/24	415,00
	2.5% MTN	£ 400,00	may/25	417,00
(h)	3.5% Tesco Bank Senior MREL Notes	£ 250,00	jul/25	251,00
(i)	3.322% LPI MTN	£ 354,00	nov/25	364,00
	0.875% MTN	750,00 €	may/26	649,00
(c) (d)	5.5457% Secured Bond	£ 289,00	feb/29	275,00
(c)	6.067% Secured Bond	£ 200,00	feb/29	193,00
(c)	LIBOR + 1.2% Secured Bond	£ 50,00	feb/29	48,00
	9.375% MTN	€ 750,00	jul/29	625,00
(b)	6% MTN	£ 38,00	dec/29	45,00
	2.75% MTN	£ 450,00	apr/30	441,00
(f)(i)	LIBOR+ 1.17% Secured Bond	£ 187,00	jan/32	184,00
(f)	LIBOR+ 1.17% Secured Bond	£ 108,00	jan/32	100,00
(b)	5.5% MTN	£ 67,00	jan/33	80,00
(j)	1.982 RPI MTN	£ 294,00	mar/36	302,00
(b)	6.15% USD Bond	\$ 355,00	nov/37	333,00
(e) (g)	6.0517% Secured Bond	£ 458,00	oct/39	592,00
(b)	4.875% MTN	£ 14,00	mar/42	14,00
(b)	5.125% MTN	€ 235,00	apr/47	209,00
(b)	5.2% MTN	£ 14,00	mar/57	14,00
				<b>7 268,00</b>

### Notes (from Tesco annual report, 2021):

(a) Bank loans and overdrafts includes £532m (2020: £1,106m) of bank overdrafts. £525m (2020: £979m) is held under a notional pooling arrangement which does not meet the criteria to be presented net of cash on the balance sheet. Refer to Note 20

(b) During the year, the Group undertook a tender for outstanding bonds and as a result the following notional amounts were repaid early, 5% MTN Mar 2023 £22m, 2.5% MTN Jul 2024 €277m, 6% MTN Dec 2029 £10m, 5.5% MTN Jan 2033 £42m, 6.15% USD Bond Nov 2037 \$170m, 4.875% MTN Mar 2042 £6m, 5.125% MTN Apr 2047 €121m and 5.2% MTN Mar 2057 £16m.

(c) The bonds are secured by a charge over the property, plant and equipment held within The Tesco Property Limited Partnership, a 100% owned subsidiary of Tesco PLC. The carrying amounts of assets pledged as security for secured bonds is £817m (29 February 2020: £794m).

(d) This is an amortizing bond which matures in Feb 2029. £26m (29 February 2020: £22m) is the principal repayment due within the next 12 months. The remainder is payable in quarterly instalments until maturity in Feb 2029.

(e) These bonds are secured by a charge over the property, plant and equipment held within The Tesco Atrato Limited Partnership, a 100% owned subsidiary of Tesco PLC. The carrying amounts of assets pledged as security for secured bonds is £837m (29 February 2020: £612m).

(f) These bonds are secured by a charge over the property, plant and equipment held within The Tesco Property No. 2 Limited Partnership, a 100% owned subsidiary of Tesco PLC. The carrying amounts of assets pledged as security for secured bonds is £445m.

(g) This is an amortizing bond which matures in October 2039. £14m is the principal repayment due within the next 12 months. The remainder is payable in quarterly instalments until maturity in Oct 2039.

(h) These notes are Tesco Bank MREL compliant senior debt and were issued on 25 July 2019. The scheduled redemption date is July 2024.

(i) The 3.322% Limited Price Inflation (LPI) MTN is redeemable at par, indexed for increases in the RPI over the life of the MTN. The maximum indexation of the principal in any one year is 5%, with a minimum of 0%.

(j) The 1.982% RPI MTN is redeemable at par, indexed for increases in the RPI over the life of the MTN.

(k) Refer to Note 1 for further details regarding the prior year restatement.

(l) This is an amortizing bond which matures in January 2032. £9m is the principal repayment due within the next 12 months. The remainder is payable in quarterly instalments until maturity in Jan 2032.

- Extra assumptions notes: MTN: Medium Term Notes; Retail Price Index in UK (Jan 2021, TradeEconomics) 1,5% (adding to 3,22%)

Repayment of Debt	FY 2021	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F
Bank Loans and overdrafts	559,00						
6.125% MTN	417,00	417					
LIBOR + 0.53% Tesco Bank Bond	0,00		300				
5% MTN	79,00		22,00				
1.375% MTN	662,00						
2.5% MTN	415,00			277			
2.5% MTN	417,00						
3.5% Tesco Bank Senior MREL Notes	251,00	8,75	8,75	8,75	258,75		
3.322% LPI MTNO	364,00	17,07	17,07	17,07	371,07		
0.875% MTN	649,00						
5.5457% Secured Bond	275,00	36,13	52,15	52,15	52,15	52,15	52,15
6.067% Secured Bond	193,00	12,134	12,134	12,134	12,134	12,134	12,134
LIBOR + 1.2% Secured Bond	48,00						
9.375% MTN	625,00	70,3125	70,3125	70,3125	70,3125	70,3125	70,3125
6% MTN	45,00						
2.75% MTN	441,00	12,375	12,375	12,375	12,375	12,375	12,375
LIBOR+ 1.17% Secured Bond	184,00						
LIBOR+ 1.17% Secured Bond	100,00						
5.5% MTN	80,00						
1.982 RPI MTN	302,00	10,24	10,24	10,24	10,24	10,24	10,24
6.15% USD Bond	333,00						
6.0517% Secured Bond	592,00	14	26,12	26,12	26,12	26,12	26,12
4.875% MTN	14,00						
5.125% MTN	209,00						
5.2% MTN	14,00						
	1 080,00	598,00	531,15	486,14818	813,14818	183,3283	183,3283
	6 188,00	5325,34	4794,195591	4308,04741	3494,89923	3311,5709	3128,24263
	7 268,00	5 923,35	5325,343771	4794,19559	4308,04741	3494,8992	3311,57093

DEBT	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F
ST Borrowings	598,00	531,15	486,15	813,15	183,33	183,33
LT Borrowings	5 325,34	4 794,20	4 308,05	3 494,90	3 311,57	3 128,24
<b>TOTAL Borrowings</b>	<b>5 923,35</b>	<b>5 325,34</b>	<b>4 794,20</b>	<b>4 308,05</b>	<b>3 494,90</b>	<b>3 311,57</b>

## Appendix 22 d): Retained Earnings forecasting assumptions

RETAINED EARNINGS FORECAST	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F
Dividends	586,78	602,44	636,04	654,35	679,80	690,83
Retained Earnings	4 091,78	4 694,22	5 330,26	5 984,61	6 664,41	7 355,24

### Assumption/Rationale

The company compromises to maintain its policy of a pay-out ratio of 50%

RE=Beggining Period+Net Income (or Loss)–Cash dividends–Stock dividends

## Appendix 23: Valuation Assumptions

### Appendix 23 a): Risk free estimation

Risk-free rate (Rf)		Source
UK Gilt 5 Year Yield (last 5-year monthly average yield)	0,67%	Bank of England, June 2021 and author calculations
UK Gilt 5 Year Yield (last 5-year annual average yield)	0,69%	Bank of England, June 2021 and author calculations
UK Gilt 10 Year Yield (last 5-year monthly average yield)	1,17%	Bank of England, June 2021 and author calculations
UK Gilt 10 Year Yield (last 5-year annual average yield)	1,20%	Bank of England, June 2021 and author calculations
Survey: Fernandez	1,30%	Fernandez et al. (2021)

### Appendix 23 b): Beta estimation ( $\beta$ )

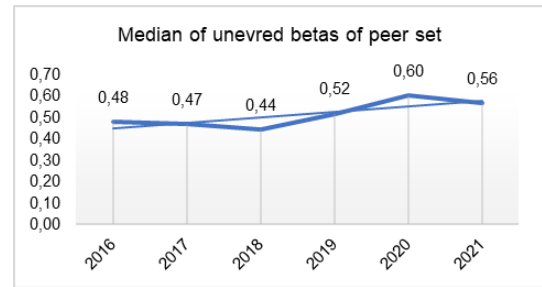
Company's beta ( $\beta$ )	
<b>Method 1) Financial Agencies in the last FY2021</b>	
Bloomberg (Adjusted Beta w/ 1Y of historical data) ( $\beta$ )	0,656
Reuteurs ( $\beta$ )	0,700
Financial Times ( $\beta$ )	0,697
Tesco unlevered beta (3Y)	0,350
<b>Method 2) Pure-play Method</b>	
Median of betas from peers ( $\beta$ )	0,511
<b>Method 3) Damodaran approach corrected for cash</b>	
Unlevered Industry beta in Europe in 2020/2021 (Grocery and food)	0,361
D/E	1,119
Tax rate (t)	26,00%
Levered Beta ( $\beta_L$ )	0,660
<b>Method 4) Regression (Y: Tesco PLC and X: FTSE 100)</b>	
Beta raw ( $\beta_{raw}$ )	0,304
Adjusted beta ( $\beta_{adj}$ )	0,54

Source
Bloomberg
Reuters, June 2021
Financial Times, June 2021
Source
Damodaran (2021) *

\*Tesco PLC is included in the sample (30 European retail companies)

## Method 2) Pure Play Model

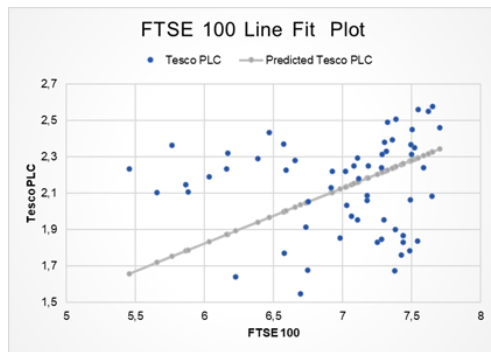
CARREFOUR SA	2016	2017	2018	2019	2020	2021
Beta (5Y monthly)	0,480	0,480	0,480	0,480	0,480	0,480
D/E	1,379	1,219	1,067	1,222	1,490	1,477
Tax rate	36,9%	31,7%	31,4%	31,4%	30%	32,1%
(β <sub>L</sub> )	0,90	0,88	0,83	0,88	0,98	0,96
WIM MORRISON	2016	2017	2018	2019	2020	2021
Beta (5Y monthly)	0,530	0,530	0,530	0,530	0,530	0,53000
D/E	1,259	1,080	0,290	0,278	0,599	0,48387
Tax rate	25,0%	25,0%	23,8%	23,5%	23,1%	28,70%
(β <sub>L</sub> )	1,03	0,96	0,65	0,64	0,77	0,71
SAINSBURY (J) PLC	2016	2017	2018	2019	2020	2021
Beta (5Y monthly)	0,390	0,390	0,390	0,390	0,390	0,39
D/E	0,423	0,319	0,211	0,243	0,923	1,03574
Tax rate	20,8%	23,2%	23,2%	24,5%	25,4%	25,00%
(β <sub>L</sub> )	0,52	0,49	0,45	0,46	0,66	0,69
ICA GRUPPEN AB	2016	2017	2018	2019	2020	2021
Beta (5Y monthly)	0,370	0,370	0,370	0,370	0,370	0,370
D/E	0,189	0,246	0,176	0,619	0,602	0,01770
Tax rate	18,2%	14,6%	13,7%	21,6%	21,4%	21,40%
(β <sub>L</sub> )	0,43	0,45	0,43	0,55	0,55	0,38
KESKO OYJ-B SHS	2016	2017	2018	2019	2020	2021
Beta (5Y monthly)	0,220	0,220	0,220	0,220	0,220	0,220
D/E	1,244	0,253	0,200	1,433	1,195	1,19504
Tax rate	21,6%	16,9%	20,9%	17,3%	17,5%	17,50%
(β <sub>L</sub> )	0,43	0,27	0,25	0,48	0,44	0,44
<b>Median of Levered Beta</b>	<b>0,48</b>	<b>0,47</b>	<b>0,44</b>	<b>0,52</b>	<b>0,60</b>	<b>0,56</b>
<b>Average (β<sub>L</sub>)</b>	<b>0,51</b>					



$$\text{Pure-Play Method: } \beta_L = \beta_u * \left(1 + \frac{D}{E} * (1 - t)\right)$$

Source: Yahoo Finance and peers' annual reports

## Method 4) Regression (Y: Tesco PLC and X: FTSE 100)



### SUMMARY OUTPUT

Regression Statistics	
Multiple R	0,990503107
R Square	0,981096405
Adjusted R Square	0,964147253
Standard Error	0,298756865
Observations	60

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95,0%	Upper 95,0%
Intercept	0	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
FTSE 100	0,304130678	0,005496049	55,33624051	1,5E-52	0,29313311	0,31512825	0,29313311	0,315128247

## Appendix 23 c): MRP and CRP estimation

Equity Risk Premium / Market risk Premium (ERP or MRP)	
<b>Method 1) Data from Surveys by regions</b>	
<b>UK &amp; ROI</b>	
<i>United Kingdom</i>	
Moody's rating (UK)	Aa3
Country Risk Premium (UK)	0,59%
Market risk premium (UK)	5,60%
<i>Republic of Ireland</i>	
Moody's rating (ROI)	A2
Country Risk Premium (ROI)	0,82%
Market risk premium (ROI)	5,90%
<b>Central Europe</b>	
<i>Czech Republic</i>	
Moody's rating (CR)	Aa3
Country Risk Premium (CR)	0,59%
Market risk premium (CR)	5,80%
<i>Slovakia</i>	
Moody's rating (S)	A2
Country Risk Premium (S)	0,82%
Market risk premium (S)	5,90%
<i>Hungary</i>	
Moody's rating (H)	Baa3
Country Risk Premium (H)	2,13%
Market risk premium (H)	7,10%
<b>Average of Central Europe MRP</b>	<b>6,27%</b>
<b>Average of Central Europe CRP</b>	<b>1,18%</b>
<b>ERP/MRP (in % of Tesco's sales)</b>	<b>5,66%</b>
<b>CRP (in % of Tesco's sales)</b>	<b>0,64%</b>

Source
Damodaran (2021)
Damodaran (2021)
Fernandez et al. (2021). Market Risk Premium and Risk-Free Rate used for 88 countries in 2021
Damodaran (2021)
Damodaran (2021)
Fernandez et al. (2021). Market Risk Premium and Risk-Free Rate used for 88 countries in 2021
Damodaran (2021)
Damodaran (2021)
Fernandez et al. (2021). Market Risk Premium and Risk-Free Rate used for 88 countries in 2021
Damodaran (2021)
Damodaran (2021)
Fernandez et al. (2021). Market Risk Premium and Risk-Free Rate used for 88 countries in 2021
Damodaran (2021)
Damodaran (2021)
Fernandez et al. (2021). Market Risk Premium and Risk-Free Rate used for 88 countries in 2021

$$MRP \text{ of Tesco} = MRP_{UK} * (\text{revenues incl. fuel}_{UK}) + MRP_{ROI} * (\text{revenues}_{ROI}) + MRP_{CR} * (\text{revenues}_{CR}) + MRP_S * (\text{revenues}_S) + MRP_H * (\text{revenues}_H) + Av. CE MRP * (\text{fuel revenues})$$

$$CRP \text{ of Tesco} = CRP_{UK} * (\text{revenues incl. fuel}_{UK}) + CRP_{ROI} * (\text{revenues}_{ROI}) + CRP_{CR} * (\text{revenues}_{CR}) + CRP_S * (\text{revenues}_S) + CRP_H * (\text{revenues}_H) + Av. CE CRP * (\text{fuel revenues})$$

### Appendix 23 d): Cost of debt estimation (kd)

Method 1) Synthetic rating	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F
kd	<b>3,70%</b>	<b>3,26%</b>	<b>2,92%</b>	<b>2,92%</b>	<b>2,92%</b>	<b>2,92%</b>
Net Interest coverage ratio	2,79	2,88	3,07	3,17	3,36	3,40
Company default spread	2,00%	1,56%	1,22%	1,22%	1,22%	1,22%
Damodaran	Ba2/BB	Ba2/BB	BBB-/Baa3	BBB-/Baa3	Baa2/BBB	Baa2/BBB
Fitch	BBB-	BBB-	BBB-	BBB-	BBB-	BBB-
Moody's	Baa3	Baa3	Baa3	Baa3	Baa3	Baa3
S&P	BBB-	BBB-	BBB-	BBB-	BBB-	BBB-
Country default spread	0,53%	0,53%	0,53%	0,53%	0,53%	0,53%
Risk free rate	1,17%	1,17%	1,17%	1,17%	1,17%	1,17%

In method 1, the final cost of debt was based on the net interest coverage ratio of the company and the ranking provided by Damodaran (in the table on the left).

Method 2) Effective Interest rate	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F
kd	<b>0,64%</b>	<b>0,64%</b>	<b>0,64%</b>	<b>0,63%</b>	<b>0,65%</b>	<b>0,65%</b>
Note rate (for ST Debt incl. Leasings)	0,10%	0,10%	0,10%	0,10%	0,10%	0,10%
Bond rate (for LT Debt incl. Leasings)	0,69%	0,69%	0,69%	0,69%	0,69%	0,69%

Bloomberg (2021)

Bloomberg (2021)

Method 3) YTM of current debt: outstanding bonds from Tesco					
Outstanding Bonds in €m	Amount Outstanding	Maturity	Interest Rate	Issuing Entity	
XS0414345974	417,00	2022	6,13%	Tesco Plc	
XS0248392812	71,00	2023	5,00%	Tesco Plc	
XS1896851224	750,00	2023	1,38%	TCTS	
XS1082971588	473,00	2024	2,50%	TCTS	
XS0137945373	210,00	2025	3,32%	Tesco Plc	
XS1989383192	400,00	2025	2,50%	TCTS	
XS2086868010	750,00	2026	0,88%	TCTS	
XS0105244585	38,00	2029	6,00%	Tesco Plc	
<b>XS2289877941 ESG- sustainability-linked bond</b>	750,00	2029	0,38%	TCTS	
XS2163089563	450,00	2030	2,75%	TCTS	
XS0159013142	67,00	2033	5,50%	Tesco Plc	
XS0248395088	196,00	2036	1,98%	Tesco Plc	
XS0248395245	14,00	2042	4,88%	Tesco Plc	
XS0295018070	235,00	2047	5,13%	Tesco Plc	
XS0289810318	14,00	2057	5,20%	Tesco Plc	
US881575AC87	355,00	2037	6,15%	Tesco Plc	
<b>Total amount outstanding</b>	<b>5190,00</b>				

Outstanding Bonds in €m	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F
XS0414345974	0,49%					
XS0248392812	0,07%	0,07%				
XS1896851224	0,20%	0,22%				
XS1082971588	0,23%	0,25%	0,30%			
XS0137945373	0,13%	0,15%	0,18%	0,20%		
XS1989383192	0,19%	0,21%	0,25%	0,29%		
XS2086868010	0,13%	0,14%	0,17%	0,19%	0,23%	
XS0105244585	0,04%	0,05%	0,06%	0,07%	0,08%	0,11%
<b>XS2289877941 ESG- sustainability-linked bond</b>	0,05%	0,06%	0,07%	0,08%	0,10%	0,13%
XS2163089563	0,24%	0,26%	0,31%	0,36%	0,43%	0,58%
XS0159013142	0,07%	0,08%	0,09%	0,11%	0,13%	0,17%
XS0248395088	0,07%	0,08%	0,10%	0,11%	0,14%	0,18%
XS0248395245	0,01%	0,01%	0,02%	0,02%	0,02%	0,03%
XS0295018070	0,23%	0,25%	0,31%	0,35%	0,42%	0,57%
XS0289810318	0,01%	0,02%	0,02%	0,02%	0,03%	0,03%
US881575AC87	0,42%	0,46%	0,55%	0,63%	0,76%	1,03%
<b>Total amount outstanding</b>	<b>5190,00</b>	<b>4773,00</b>	<b>3952,00</b>	<b>3479,00</b>	<b>2869,00</b>	<b>2119,00</b>
<b>kd (average Tesco bonds' coupon yield) - incl. ESG- sustainability-linked bond</b>	<b>0,163%</b>	<b>0,153%</b>	<b>0,186%</b>	<b>0,201%</b>	<b>0,233%</b>	<b>0,316%</b>
<b>kd (average Tesco bonds' coupon yield)</b>	<b>0,170%</b>	<b>0,160%</b>	<b>0,196%</b>	<b>0,212%</b>	<b>0,248%</b>	<b>0,339%</b>

$$\text{Average } (\sum \frac{\text{Amount Outstanding of Bond}_i}{\text{Total Amount Outstanding}} * \text{Interest rate of Bond}_i)$$

Source
Based on Damodaran interest cov. range and rating
Damodaran (2021) (based on interest coverage ratio)
Damodaran (2021)
Damodaran (2021)
Bank of England, June 2021 and author calculations

For developed market firms with market cap > \$5 billion			
If interest coverage ratio is	Rating is	Spread is	
>	≤ to		
8.50	100000	Aaa/AAA	0.63%
6.5	8.499999	Aa2/AA	0.78%
5.5	6.499999	A1/A+	0.98%
4.25	5.499999	A2/A	1.08%
3	4.249999	A3/A-	1.22%
2.5	2.999999	Baa2/BBB	1.56%
2.25	2.249999	Ba1/BB+	2.00%
2	2.249999	Ba2/BB	2.40%
1.75	1.999999	B1/B-	3.51%
1.5	1.749999	B2/B	4.21%
1.25	1.499999	B3/B-	5.15%
0.8	1.249999	Caa/CCC	8.20%
0.65	0.799999	Ca2/CC	8.64%
0.2	0.649999	C2/C	11.34%
-100000	0.199999	D2/D	15.12%

Source: Damodaran (2021)

## Appendix 23 e): Long term sustainable growth rate

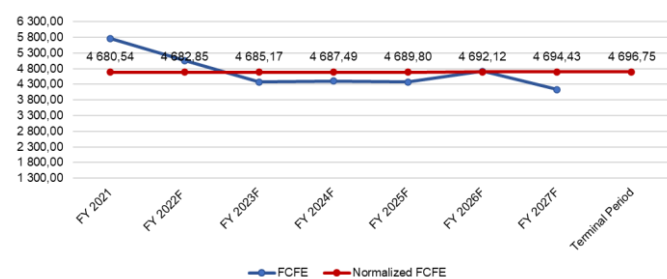
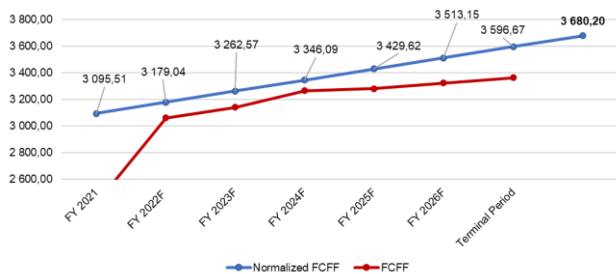
g	FY 2021	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F	Terminal Period
<b>Method 1) PRAT model (Higgins 2007)</b>								
ROE		9,1%	8,9%	9,0%	8,8%	8,8%	8,5%	
(NI-D)/ NI)		50%	50%	50%	50%	50%	50%	
g		4,54%	4,46%	4,49%	4,42%	4,39%	4,27%	4,43%
<b>Method 2) Nominal Growth</b>								
Nominal growth rate based on GDP and inflation rate								3,01%
<b>Method 3) Stable growth rate</b>								
Reinvestment rate		-16,91%	-24,22%	-26,73%	-29,45%	-27,80%	-27,71%	
g (Reinvestment rate * ROE)		-0,77%	-1,08%	-1,20%	-1,30%	-1,22%	-1,18%	-1,13%
Average of Method 2 and 3 (used for DDM model)								1,65%

### Method 2) Nominal Growth

	% Revenues (FY 2022F - FY 2027F)	GDP growth %	Inflation growth %	TV growth
UK	88,23%	2,85%	0,08%	2,59%
ROI	4,76%	3,47%	0,07%	0,17%
Czech Republic	2,38%	3,47%	-0,05%	0,08%
Hungary	2,37%	3,73%	-0,10%	0,09%
Slovakia	2,27%	3,58%	0,13%	0,08%
<b>g</b>				<b>3,01%</b>

## Appendix 23 f): Terminal Value

Method 1) Normalize FCFF	FY 2021	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F	CAGR	Terminal Period
FCFF	2 415,72	3 060,67	3 142,33	3 264,98	3 282,51	3 324,78	3 363,99		
Normalized FCFF	3 095,51	3 179,04	3 262,57	3 346,09	3 429,62	3 513,15	3 596,67		3 680,20
EBIT*(1-t)	1 284,64	1 798,22	1 817,96	1 858,74	1 885,04	1 908,84	1 930,23	6,82%	2 061,93
YoY		-41,77%	39,98%	0,06%	0,06%	0,05%	0,05%		0,05%
(*) (1-t)	0,74	0,74	0,74	0,74	0,74	0,74	1,74		
(+) D&A	2 153,00	2 329,52	2 368,76	2 428,10	2 474,74	2 519,76	2 563,29	2,66%	2 631,38
YoY		-3,76%	8,20%	1,68%	2,51%	1,92%	1,82%		1,73%
(-) Δ WCR	59,00	-26,69	-68,08	-118,21	-84,87	-79,71	-74,80	24,46%	-93,10
YoY		-97,3%	-145,2%	155,1%	73,6%	-28,2%	-6,1%		-6,2%
(-) CAPEX	1 768,00	1 920,64	1 950,96	1 998,92	2 035,50	2 070,52	2 104,05	2,67%	2 160,18
YoY		-16,33%	8,63%	1,58%	2,46%	1,83%	1,72%		1,62%
<b>FCFF</b>	<b>2 415,72</b>	<b>3 060,67</b>	<b>3 142,33</b>	<b>3 264,98</b>	<b>3 282,51</b>	<b>3 324,78</b>			<b>2 626,23</b>



Formula used: =TREND ()

Method 2) Normalized FCFE	FY 2021	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F	Terminal Period
FCFE	5 764,86	5 058,50	4 376,89	4 401,55	4 371,87	4 715,62	4 125,91	
Normalized FCFE	4 680,54	4 682,85	4 685,17	4 687,49	4 689,80	4 692,12	4 694,43	4 696,75

## Appendix 23 g): Cost of Equity (ke)

### Cost of Equity (ke) - CAPM

	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F
Risk free rate	1,17%	1,17%	1,17%	1,17%	1,17%	1,17%
Beta	0,54	0,54	0,54	0,54	0,54	0,54
MRP/ERP	5,66%	5,66%	5,66%	5,66%	5,66%	5,66%
CRP	0,64%	0,64%	0,64%	0,64%	0,64%	0,64%
<b>ke</b>	<b>4,850%</b>	<b>4,850%</b>	<b>4,850%</b>	<b>4,850%</b>	<b>4,850%</b>	<b>4,850%</b>

$$ke = R_f + \beta * (MRP) + CRP$$

## Appendix 23 h): WACC

$$WACC = ke * \frac{E}{D+E} + kd * \frac{D}{D+E} * (1-t)$$

### Cost of Capital - WACC incorporating ESG policy

	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F
ke	4,85%	4,85%	4,85%	4,85%	4,85%	4,85%
E/(E+D)	0,47	0,49	0,51	0,53	0,55	0,56
kd	1,50%	1,35%	1,25%	1,25%	1,27%	1,30%
(1-t)	74,00%	74,00%	74,00%	74,00%	74,00%	74,00%
D(E+D)	0,53	0,51	0,49	0,47	0,45	0,44
<b>WACC</b>	<b>2,875%</b>	<b>2,892%</b>	<b>2,927%</b>	<b>2,997%</b>	<b>3,098%</b>	<b>3,152%</b>

### Cost of Capital - WACC

	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F
ke	4,85%	4,85%	4,85%	4,85%	4,85%	4,85%
E/(E+D)	0,47	0,49	0,51	0,53	0,55	0,56
kd	1,50%	1,35%	1,25%	1,25%	1,27%	1,30%
(1-t)	74,00%	74,00%	74,00%	74,00%	74,00%	74,00%
D(E+D)	0,53	0,51	0,49	0,47	0,45	0,44
<b>WACC</b>	<b>2,876%</b>	<b>2,893%</b>	<b>2,928%</b>	<b>2,998%</b>	<b>3,100%</b>	<b>3,155%</b>

## Appendix 24: DCF Method – FCFF and FCFE method

### Appendix 24 a): FCFF method

$$FCFF = EBIT * (1 - t) + D\&A - \Delta WCR - CAPEX$$

Free Cash Flow to the Firm using WACC (FCFF) incorporating ESG policy								
	FY 2021	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F	Terminal Period
EBIT	1 736,00	2 430,03	2 456,71	2 511,81	2 547,35	2 579,51	2 608,41	
(*) (1-t)	0,77	0,74	0,74	0,74	0,74	0,74	0,74	
(+) D&A	2 153,00	2 329,52	2 368,76	2 428,10	2 474,74	2 519,76	2 563,29	
(-) Δ WCR	59,00	-26,69	-68,08	-118,21	-84,87	-79,71	-74,80	
(-) CAPEX	1 015,00	1 093,76	1 112,47	1 140,08	1 162,14	1 183,54	1 204,33	
<b>FCFF</b>	<b>2 415,72</b>	<b>3 060,67</b>	<b>3 142,33</b>	<b>3 264,98</b>	<b>3 282,51</b>	<b>3 324,78</b>	<b>3 363,99</b>	<b>3 680,20</b>
<b>FCFF</b>	<b>4,17%</b>	<b>4,83%</b>	<b>4,89%</b>	<b>4,97%</b>	<b>4,91%</b>	<b>4,90%</b>	<b>4,89%</b>	
g								3,01%
WACC		2,88%	2,89%	2,93%	3,00%	3,10%	3,15%	3,15%
<b>PV of FCFF</b>		<b>3 060,67</b>	<b>3 053,97</b>	<b>3 081,93</b>	<b>3 004,26</b>	<b>2 942,82</b>	<b>2 880,46</b>	<b>2 546 838,22</b>

Free Cash Flow to the Firm using WACC (FCFF) without gree policy								
	FY 2021	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F	Terminal Period
EBIT	1 736,00	2 430,03	2 456,71	2 511,81	2 547,35	2 579,51	2 608,41	
(*) (1-t)	0,77	0,74	0,74	0,74	0,74	0,74	0,74	
(+) D&A	2 153,00	2 329,52	2 368,76	2 428,10	2 474,74	2 519,76	2 563,29	
(-) Δ WCR	59,00	-26,69	-68,08	-118,21	-84,87	-79,71	-74,80	
(-) CAPEX	1 015,00	1 093,76	1 112,47	1 140,08	1 162,14	1 183,54	1 204,33	
<b>FCFF</b>	<b>2 415,72</b>	<b>3 060,67</b>	<b>3 142,33</b>	<b>3 264,98</b>	<b>3 282,51</b>	<b>3 324,78</b>	<b>3 363,99</b>	<b>3 680,20</b>
<b>FCFF</b>	<b>4,17%</b>	<b>4,83%</b>	<b>4,89%</b>	<b>4,97%</b>	<b>4,91%</b>	<b>4,90%</b>	<b>4,89%</b>	
g								3,01%
WACC		2,88%	2,89%	2,93%	3,00%	3,10%	3,15%	3,15%
<b>PV of FCFF</b>		<b>3 060,67</b>	<b>3 053,97</b>	<b>3 081,86</b>	<b>3 004,15</b>	<b>2 942,63</b>	<b>2 880,11</b>	<b>2 504 033,26</b>

FCFF Method (in millions of GBP)	
NPV @ WACC	18 023,38
Terminal Value	2 504 033,26
PV (Terminal Value)	2 143 854,34
<b>Enterprise Value</b>	<b>2 161 877,72</b>
(+) Cash	2 639,29
(-) Debt	14 447,93
(-) Minority Interest	-18,00
<b>Equity Value- FCFF method</b>	<b>2 150 087,08</b>
Shares outstanding (m)	7 731,71
<b>Price Target (in GBX)</b>	<b>278,09</b>
<b>UPSIDE POTENTIAL</b>	<b>24,73%</b>

FCFF Method (in millions of GBP)	
NPV @ WACC	18 024,12
Terminal Value	2 546 838,22
PV (Terminal Value)	2 180 763,35
<b>Enterprise Value</b>	<b>2 198 787,47</b>
(+) Cash	2 639,29
(-) Debt	14 447,93
(-) Minority Interest	-18,00
<b>Equity Value- FCFF method</b>	<b>2 186 996,83</b>
Shares outstanding (m)	7 731,71
<b>Price Target (in GBX)</b>	<b>282,86</b>
<b>UPSIDE POTENTIAL</b>	<b>26,87%</b>
Increase in upside potential with ESG	2,14%
Increase in PT with ESG (in Gbx)	4,77

## Appendix 24 b): FCFE method

$$FCFE = FCFF - \text{interest expense} * (1 - t) + \text{Net borrowings}$$

$$\text{Net Borrowings} = \text{New debt borrowings} - \text{Debt repayment}$$

Free Cash Flow to the Equity using ke (FCFE)								
	FY 2021	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F	Terminal Period
FCFF	2 415,72	3 060,67	3 142,33	3 264,98	3 282,51	3 324,78	3 363,99	
Interest net	-911,00	-844,12	-828,49	-792,80	-778,84	-742,22	-741,31	
(-) After tax Interest net	-674,14	-624,65	-613,08	-586,67	-576,34	-549,24	-548,57	
(+) Net Borrowing	2 120,00	1 222,07	467,08	391,56	351,04	675,96	44,02	
<b>FCFE</b>	<b>5 209,86</b>	<b>4 907,39</b>	<b>4 222,49</b>	<b>4 243,21</b>	<b>4 209,89</b>	<b>4 549,97</b>	<b>3 956,57</b>	<b>4 696,75</b>
g								3,01%
ke		4,85%	4,85%	4,85%	4,85%	4,85%	4,85%	4,85%
PV of FCFE @ ke		<b>4 907,39</b>	<b>4 027,18</b>	<b>3 859,75</b>	<b>3 652,32</b>	<b>3 764,78</b>	<b>2 977,94</b>	<b>254 981,62</b>

FCFE Method (in millions of GBP)	
NPV @ ke	23 189,37
Terminal Value	254 981,62
PV (Terminal Value)	191 913,47
<b>Equity Value</b>	<b>215 102,84</b>
Shares outstanding (m)	7 731,71
<b>Price Target (in GBX)</b>	<b>27,82</b>

Reasons for not being a reasonable price target for valuation:

1. ke is more sensitive to changes in the capital structure than WACC
2. FCFE growth is more linked with company's fundamentals
3. "Difficult to implement correctly because capital structure is embedded within the cash flow. Best used when valuing financial institutions. Will yield the value of equity in a business "

## Appendix 25: APV Method

$$APV = FCFF (\text{discounted at } k_u) + \text{Interest tax shield} (\text{discounted at } k_d)$$

Adjusted Present Value Model (APV)								
	FY 2021	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F	Terminal Period
FCFF	2 415,72	3 060,67	3 142,33	3 264,98	3 282,51	3 324,78	3 363,99	3 680,20
PV of FCFE @ ku		<b>3 060,67</b>	<b>3 046,31</b>	<b>3 068,49</b>	<b>2 990,70</b>	<b>2 936,65</b>	<b>2 880,49</b>	<b>2 551 391,20</b>
g								3,01%
unlevered cost of capital (ku)		3,15%	3,15%	3,15%	3,15%	3,15%	3,15%	3,15%
Tax rate	23,00%	26,00%	26,00%	26,00%	26,00%	26,00%	26,00%	
(*) Interest Expenses	952,00	934,67	919,86	885,60	872,67	837,01	837,01	
Interest Tax Shield	<b>218,96</b>	<b>243,01</b>	<b>239,16</b>	<b>230,26</b>	<b>226,89</b>	<b>217,62</b>	<b>217,62</b>	<b>222,23</b>
PV of Interest Tax Shield		<b>243,01</b>	<b>235,97</b>	<b>224,61</b>	<b>218,60</b>	<b>206,92</b>	<b>204,06</b>	<b>211,08</b>
kd		1,50%	1,35%	1,25%	1,25%	1,27%	1,30%	1,30%
Normalized interest tax shield	235,85	233,58	231,31	229,04	226,77	224,50	224,50	222,23

APV Method (in millions of GBP)	
NPV @ Ku	17 983,32
Terminal Value	2 551 391,20
PV (Terminal Value)	2 184 689,19
<b>Unlevered intrinsic EV</b>	<b>2 202 672,51</b>
PV of Tax Shield	1 333,18
PV (Terminal Value) tax shield	-12 329,49
<b>Intrinsic EV</b>	<b>2 191 676,20</b>
(+) Cash	2 639,29
(-) Debt	14 447,93
(-) Minority Interest	-18,00
<b>Equity Value</b>	<b>2 179 885,56</b>
Shares outstanding	7 731,71
<b>Price Target (in GBX)</b>	<b>281,94</b>
<b>UPSIDE POTENTIAL</b>	<b>26,46%</b>

## Appendix 26: DDM Method

$$DDM = \sum \frac{D_0 * (1 + g_L) + D_0 * H(g_S + g_L)}{r - g_L}, \text{ where } H = \text{high growth period} \div 2$$

Dividend Discount Model (DDM)								
	FY 2021	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F	Terminal Period
Dividend per share (in pence)	9,15	7,59	7,79	8,23	8,46	8,79	8,94	
Shares Outstanding (in millions)	7 731,71	7 731,71	7 731,71	7 731,71	7 731,71	7 731,71	7 731,71	
Total Dividends	707	587	602	636	654	680	691	
Payout Ratio	98%	50%	50%	50%	50%	50%	50%	50%
ke		4,85%	4,85%	4,85%	4,85%	4,85%	4,85%	4,85%
gs (PRAT)								4,43%
gL (nominal)								1,65%
H (half-life in years of the high-growth period)								5,0
<b>Share Price (PT)</b>								<b>280,81</b>

DDM Method	
<b>Price Target (in GBX)</b>	<b>280,81</b>
<b>UPSIDE POTENTIAL</b>	<b>25,95%</b>

## Appendix 27: Relative Valuation

MARKET DATA OF COMPARABLE COMPANIES IN THE SAMPLE (source: Bloomberg and companies' financials)	
Competitors	Current EV
CARREFOUR SA	22 739 226 275,61
WM MORRISON SUPERMARKETS	7 469 921 476,83
SAINSBURY (J) PLC	11 130 991 879,39
ICA GRUPPEN AB	8 446 487 864,19
KESKO OYJ-B SHS	10 420 305 567,16
<b>Max</b>	<b>22 739 226 275,61</b>
<b>Min</b>	<b>7 469 921 476,83</b>
<b>Average</b>	<b>12 041 386 612,64</b>
<b>Median</b>	<b>10 420 305 567,16</b>

MULTIPLES OF COMPARABLE FIRMS									
Competitors	EV/Sales			EV/EBITDA			EV/EBIT		
	2019 N-1	2020 N	2021 N+1	2019 N-1	2020 N	2021 N+1	2019 N-1	2020 N	2021 N+1
CARREFOUR SA	0,28	0,32	0,32	5,15	5,09	5,08	31,49	16,83	10,03
WM MORRISON SUPERMARKETS	0,42	0,43	0,42	8,23	7,20	8,82	16,06	14,56	24,41
SAINSBURY (J) PLC	0,38	0,38	0,38	7,35	4,96	5,68	15,40	11,29	15,70
ICA GRUPPEN AB	0,88	0,88	0,88	10,92	9,94	10,23	25,29	19,09	10,23
KESKO OYJ-B SHS	0,97	0,98	0,93	10,98	9,86	8,55	22,55	17,43	14,06
<b>Max</b>	0,97	0,98	0,93	10,98	9,94	10,23	31,49	19,09	24,41
<b>Min</b>	0,28	0,32	0,32	5,15	4,96	5,08	15,40	11,29	10,03
<b>Average</b>	0,59	0,60	0,59	8,52	7,41	7,67	22,16	15,84	14,89
<b>Median</b>	0,42	0,43	0,42	8,23	7,20	8,55	22,55	16,83	14,06

ENTERPRISE VALUE										
	Sales			EBITDA			EBIT			
	2019	2020	2021	2019	2020	2021	2019	2020	2021	
	N-1	N	N+1	N-1	N	N+1	N-1	N	N+1	
<b>TESCO PLC</b>	<b>63 911 000 000.00</b>	<b>58 091 000 000.00</b>	<b>57 887 000 000.00</b>	<b>4 144 000 000.00</b>	<b>4 098 000 000.00</b>	<b>3 965 000 000.00</b>	<b>2 153 000 000.00</b>	<b>2 206 000 000.00</b>	<b>1 736 000 000.00</b>	
CARREFOUR SA	17 994 684 263.65	18 678 776 475.58	18 343 932 876.46	21 333 790 737.18	20 870 179 009.51	20 161 232 599.01	67 808 246 774.78	37 130 076 361.21	17 413 011 387.06	
WM MORRISON SUPERMARKETS	26 919 095 094.77	24 745 392 821.08	24 571 618 623.10	34 091 800 220.25	29 491 077 275.58	34 968 404 552.10	34 586 539 655.09	32 122 118 475.41	42 378 378 051.56	
SAINSBURY (J) PLC	24 524 867 170.12	22 302 295 356.32	22 181 896 410.16	30 446 752 705.08	20 345 586 405.77	22 540 542 799.68	33 146 646 633.92	24 903 618 748.41	27 254 445 560.82	
ICA GRUPPEN AB	56 041 217 731.36	51 203 285 419.70	50 671 174 882.41	45 253 438 975.96	40 731 140 924.85	40 560 962 045.57	54 441 221 072.98	42 111 075 434.63	17 758 847 442.90	
KESKO OYJ-B SHS	62 124 267 640.18	56 736 898 556.74	53 665 500 744.32	45 502 366 986.63	40 399 633 126.04	33 893 774 875.96	48 560 428 324.88	38 440 123 881.53	24 412 483 757.88	
<b>Max</b>	<b>62 124 267 640.18</b>	<b>56 736 898 556.74</b>	<b>53 665 500 744.32</b>	<b>45 502 366 986.63</b>	<b>40 731 140 924.85</b>	<b>40 560 962 045.57</b>	<b>67 808 246 774.78</b>	<b>42 111 075 434.63</b>	<b>42 378 378 051.56</b>	
<b>Min</b>	<b>17 994 684 263.65</b>	<b>18 678 776 475.58</b>	<b>18 343 932 876.46</b>	<b>21 333 790 737.18</b>	<b>20 345 586 405.77</b>	<b>20 161 232 599.01</b>	<b>33 146 646 633.92</b>	<b>24 903 618 748.41</b>	<b>17 413 011 387.06</b>	
<b>Average</b>	<b>37 520 826 380.02</b>	<b>34 733 329 725.89</b>	<b>33 886 824 707.29</b>	<b>35 325 629 925.02</b>	<b>30 367 523 348.35</b>	<b>30 424 983 374.46</b>	<b>47 708 616 492.33</b>	<b>34 941 402 580.24</b>	<b>25 843 433 240.04</b>	
<b>Median</b>	<b>26 919 095 094.77</b>	<b>24 745 392 821.08</b>	<b>24 571 618 623.10</b>	<b>34 091 800 220.25</b>	<b>29 491 077 275.58</b>	<b>33 893 774 875.96</b>	<b>48 560 428 324.88</b>	<b>37 130 076 361.21</b>	<b>24 412 483 757.88</b>	

## Appendix 28: Financial Analysis

	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022F	FY 2023F	FY 2024F	FY 2025F	FY 2026F	FY 2027F	
<b>FINANCIAL STRENGTH INDICATORS</b>														
<b>Financial Structure Analysis (based on the Accounting BS) (%)</b>														
Liability ratio		84%	80%	86%	83%	77%	75%	73%	72%	71%	70%	69%	67%	66%
Liability structure		53%	56%	49%	45%	50%	47%	48%	49%	50%	51%	52%	52%	
Assets structure		73%	66%	66%	74%	76%	74%	76%	75%	74%	72%	71%	70%	68%
<b>Capital Structure Analysis (based on the Managerial BS) (%)</b>														
Debt ratio (TD/A)		48%	50%	41%	53%	48%	48%	50%	47%	45%	43%	42%	40%	39%
Debt structure (ST/TD)		16%	21%	21%	12%	19%	16%	11%	8%	8%	8%	11%	7%	7%
<b>Other measures of financial strength</b>														
<b>Debt repayment capability</b>														
EBITDA (in Millions of £)		-2 112	2 854	2 902	3 350	4 144	4 098	3 965	4 760	4 825	4 940	5 022	5 099	5 172
Net Debt to EBITDA (x)		-4.97	3.66	2.82	4.39	3.56	3.33	3.32	2.48	2.22	1.93	1.66	1.40	1.15
<b>Debt reimbursement</b>														
Cash earnings (in Millions of £)		-4 214	1 463	1 250	2 503	2 695	3 210	8 300	3 503	3 574	3 700	3 783	3 879	3 945
Estimated repayment (no. of years)		-2.49	7.15	6.54	5.88	5.47	4.25	1.59	3.37	3.00	2.58	2.21	1.84	1.50
Interest Coverage (mostly used by credit risk firms) (x)		-10.14	1.21	1.33	3.45	4.19	1.89	1.85	2.79	2.88	3.07	3.17	3.36	3.40
<b>LIQUIDITY INDICATORS</b>														
<b>Traditional measures of Liquidity (Based on the Accounting BS)</b>														
Current Ratio (x)		0.60	0.75	0.79	0.70	0.62	0.74	0.68	0.70	0.73	0.78	0.81	0.87	0.94
Cash Ratio (x)		0.11	0.16	0.20	0.21	0.19	0.22	0.16	0.16	0.20	0.25	0.29	0.33	0.39
Acid test or Quick ratio (x)		0.25	0.41	0.41	0.33	0.28	0.35	0.30	0.33	0.37	0.41	0.45	0.50	0.56
Working Capital (Accounting BS based)		-7 852	-4 886	-3 988	-5 924	-8 395	-4 763	-5 190	-4 945	-4 337	-3 631	-3 228	-2 158	-1 065
<b>Liquidity based on funding structure of Working Capital</b>														
Working Capital (in Millions of £)		-7 852	-4 886	-3 988	-5 924	-8 395	-4 763	-5 190	-4 945	-4 337	-3 631	-3 228	-2 158	-1 065
Working Capital Requirements (in Millions of £)		-8 736	-8 841	-8 149	-8 982	-9 590	-7 444	-7 385	-7 412	-7 480	-7 598	-7 683	-7 763	-7 837
Net Liquid Balance (in Millions of £)		884	3 955	4 161	3 058	1 195	2 681	2 195	2 466	3 142	3 967	4 455	5 605	6 773
HV Liquidity ratio (%)		90%	55%	49%	66%	88%	64%	70%	67%	58%	48%	42%	28%	14%
<b>CASH CONVERSION CYCLE</b>														
Cash Conversion Cycle in Days of Sales (days)		-51.20	-59.28	-53.19	-57.03	-54.77	-46.77	-46.57	-42.70	-42.51	-42.18	-41.95	-41.74	-41.56
Cash Trade Cycle Ratio (% Sales)		-0.14	-0.16	-0.15	-0.16	-0.15	-0.13	-0.13	-0.12	-0.12	-0.12	-0.11	-0.11	-0.11
<b>PROFITABILITY INDICATORS</b>														
<b>Traditional DuPont Model Vs. Integrative Model</b>														
<b>DuPont Model</b>														
Net Profit (in Millions of £)		-5 766	129	-54	1 208	1 320	973	6 147	1 174	1 205	1 272	1 309	1 360	1 382
Profitability (NPM) (%)		-9.26%	0.24%	-0.10%	2.10%	2.07%	1.67%	10.62%	1.85%	1.88%	1.93%	1.96%	2.00%	2.01%
Asset utilization (Asset TO) (x)		1.41	1.24	1.22	1.09	1.10	1.09	1.26	1.38	1.39	1.40	1.41	1.43	1.43
Leverage (Equity multiplier) (x)		6.25	5.10	7.15	5.77	4.31	3.98	3.71	3.57	3.43	3.31	3.19	3.06	2.98
<b>ROE</b>		<b>-81.54%</b>	<b>1.50%</b>	<b>-0.84%</b>	<b>13.22%</b>	<b>9.74%</b>	<b>7.28%</b>	<b>49.87%</b>	<b>9.09%</b>	<b>8.92%</b>	<b>8.99%</b>	<b>8.84%</b>	<b>8.78%</b>	<b>8.54%</b>
<b>Integrative Model (assuming non-existent non-recurring events)</b>														
<b>Strategic and Operating Profitability</b>														
ROIC (%)		-21.93%	3.87%	3.51%	5.20%	5.44%	5.91%	5.52%	7.84%	7.89%	8.01%	8.04%	8.14%	8.07%
<b>Financial Leverage Effect</b>														
ROIC (EBIT/IC) (%)		-21.93%	3.87%	3.51%	5.20%	5.44%	5.91%	5.52%	7.84%	7.89%	8.01%	8.04%	8.14%	8.07%
Cost of debt (Kd)		0.05	0.07	0.07	0.03	0.03	0.07	0.06	0.06	0.07	0.07	0.07	0.07	0.07
D/E		1.79	1.57	1.87	2.05	1.40	1.33	1.27	1.12	1.03	0.96	0.89	0.81	0.77
<b>Impact on Income tax</b>														
(1-t)		0.74	0.67	1.60	1.24	1.21	1.28	1.13	0.74	0.74	0.74	0.74	0.74	0.74
<b>ROE</b>		<b>-57.90%</b>	<b>1.03%</b>	<b>-7.81%</b>	<b>9.86%</b>	<b>9.88%</b>	<b>4.59%</b>	<b>4.73%</b>	<b>8.98%</b>	<b>8.90%</b>	<b>9.07%</b>	<b>9.00%</b>	<b>9.03%</b>	<b>8.86%</b>
<b>Other measures of profitability</b>														
Earnings per share (EPS)		-£0.89	£0.02	-£0.01	£0.19	£0.17	£0.13	£0.80	£0.15	£0.16	£0.16	£0.17	£0.18	£0.18
Diluted Earnings per Share (Diluted EPS)		-£0.89	£0.02	-£0.01	£0.19	£0.17	£0.13	£0.80	£0.15	£0.16	£0.16	£0.17	£0.18	£0.18
Return on Assets - ROA (%)		-14.42%	0.37%	0.32%	2.46%	2.87%	1.93%	1.80%	3.44%	3.51%	3.67%	3.74%	3.87%	3.87%
ROCE (%)		-26.13%	0.67%	0.55%	3.92%	4.64%	2.98%	2.77%	5.32%	5.43%	5.68%	5.85%	5.95%	5.93%
Gross Profit Margin (%)		-3.39%	5.24%	5.19%	5.83%	6.48%	7.05%	6.85%	7.51%	7.51%	7.51%	7.51%	7.51%	7.51%
EBIT margin (%)		-10.24%	0.30%	0.26%	2.26%	2.62%	1.77%	1.43%	2.50%	2.54%	2.61%	2.65%	2.71%	2.71%
Net Income Margin (%)		-9.26%	0.24%	-0.10%	2.10%	2.07%	1.67%	10.62%	1.85%	1.88%	1.93%	1.96%	2.00%	2.01%
<b>SUSTAINABLE GROWTH</b>														
ROE		-57.90%	1.03%	-7.81%	9.86%	9.88%	4.59%	4.73%	8.98%	8.90%	9.07%	9.00%	9.03%	8.86%
Payout ratio		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Retention ratio		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
<b>g* (sustainable growth)</b>		<b>-28.95%</b>	<b>0.51%</b>	<b>-3.90%</b>	<b>4.93%</b>	<b>4.94%</b>	<b>2.29%</b>	<b>2.37%</b>	<b>4.49%</b>	<b>4.45%</b>	<b>4.53%</b>	<b>4.50%</b>	<b>4.51%</b>	<b>4.43%</b>
<b>g (growth of sales)</b>		<b>N/A</b>	<b>-12.61%</b>	<b>2.73%</b>	<b>2.81%</b>	<b>11.17%</b>	<b>-9.11%</b>	<b>-0.35%</b>	<b>9.44%</b>	<b>1.38%</b>	<b>2.37%</b>	<b>1.66%</b>	<b>1.54%</b>	<b>1.42%</b>
Fixed Assets growth		N/A	-9.86%	4.68%	28.39%	13.71%	-11.66%	-10.91%	-0.66%	-1.19%	-1.23%	-1.33%	-1.38%	
WCR growth		N/A	1.20%	-7.83%	10.22%	6.77%	-22.38%	-0.79%	0.36%	1.58%	1.12%	1.04%	0.96%	
<b>Equity growth</b>		<b>N/A</b>	<b>21.85%</b>	<b>-25.56%</b>	<b>42.47%</b>	<b>48.26%</b>	<b>-1.32%</b>	<b>-7.81%</b>	<b>4.76%</b>	<b>4.67%</b>	<b>4.71%</b>	<b>4.62%</b>	<b>4.59%</b>	<b>4.46%</b>
<b>ECONOMIC VALUE CREATION ANALYSIS</b>														
<b>In Millions of £</b>														
Invested Capital			30978,65	31117,98	31369,36	31677,62	31686,11	32337,29						
ROIC			7.8%	7.9%	8.0%	8.0%	8.1%	8.1%						
WACC			2.88%	2.89%	2.93%	3.00%	3.10%	3.15%						
<b>EVA (In Millions of £)</b>			<b>£1 539,3</b>	<b>£1 556,7</b>	<b>£1 593,7</b>	<b>£1 598,1</b>	<b>£1 597,9</b>	<b>£1 589,1</b>						

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## Recommendation System

Level of Risk	SELL	REDUCE	HOLD/NEUTRAL	BUY	STRONG BUY
High Risk	$0\% \leq$	$>0\% \ \& \ \leq 10\%$	$>10\% \ \& \ \leq 20\%$	$>20\% \ \& \ \leq 45\%$	$>45\%$
Medium Risk	$-5\% \leq$	$>-5\% \ \& \ \leq 5\%$	$>5\% \ \& \ \leq 15\%$	$>15\% \ \& \ \leq 30\%$	$>30\%$
Low Risk	$-10\% \leq$	$>-10\% \ \& \ \leq 0\%$	$>0\% \ \& \ \leq 10\%$	$>10\% \ \& \ \leq 20\%$	$>20\%$