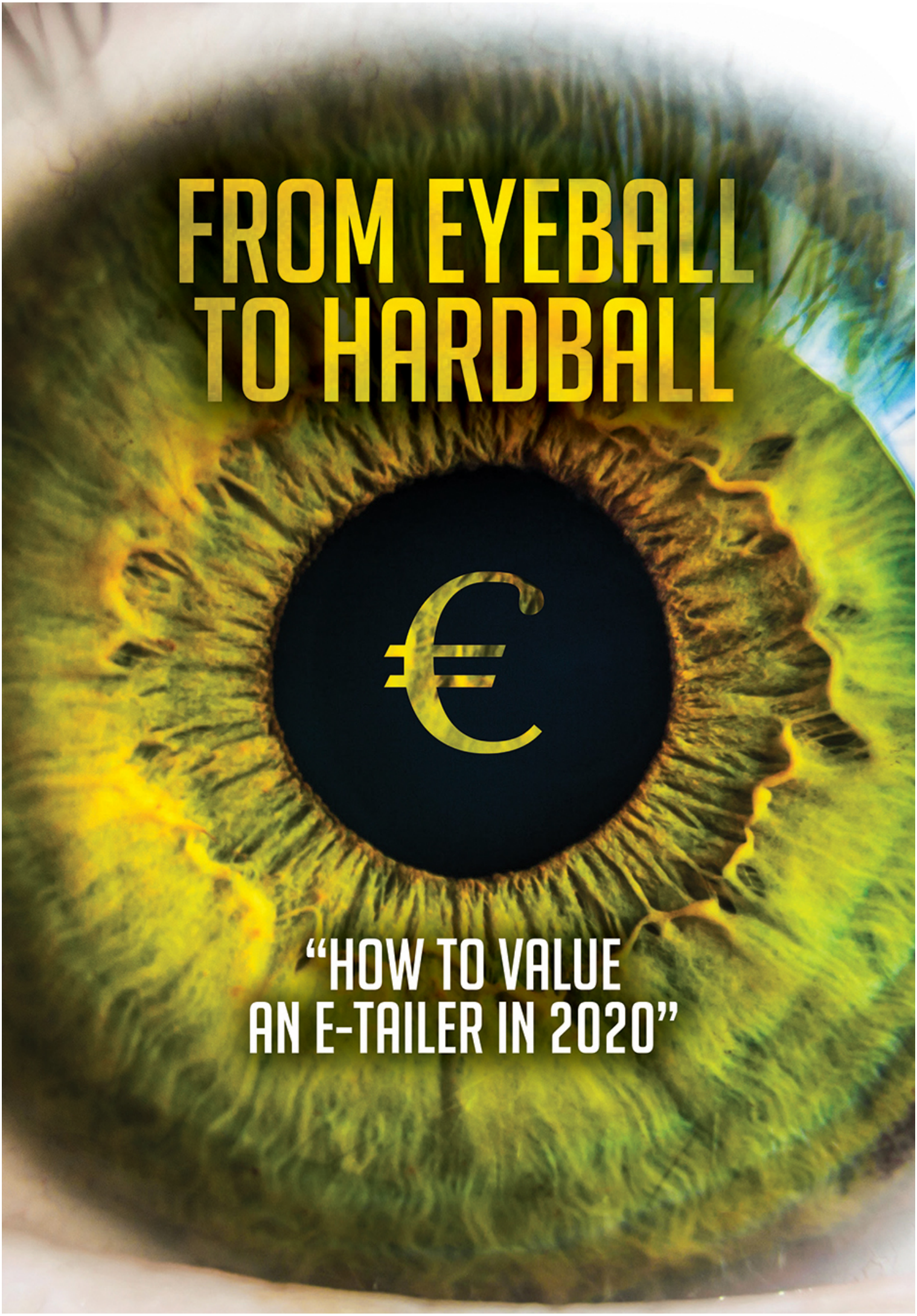
FROM EYEBALL
TO HARDBALL
€
"HOW TO VALUE
AN E-TAILER IN 2020"


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# FROM EYEBALL TO HARDBALL

"How to value an E-tailer in 2020"

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# 1. INTRODUCTION

In 1999, eBay's enterprise value-to-revenue ratio was 771. Netscape's price-to-earnings ratio was 34.919 and Amazon's price-to-book ratio was 351[i]. During that exact same year, the enterprise value-to-revenue ratio of the successful and well-established company Coca-Cola was 8,5, its price-to-earnings ratio was 45 and its price-to-book ratio was 19.

In other words, regular metrics didn't provide the desired insights about e-commerce companies during those extraordinary years. At that time, this situation seemed to ask for unorthodox value drivers and valuation methods. Can it be concluded, looking back after twenty years, that this was just a regular early stage of a new industry life cycle and that the regular business value drivers and valuation methods have reclaimed their position as metrics of choice? Or has a new approach been developed for this industry that lasts until this day?

This essay will discuss different viewpoints in literature and input from e-tailers, to explore these questions and therewith answer the essay's main thesis: "How to value an e-tailer in 2020."

### 1.1 Scope of the essay: e-commerce and e-tailers

Although the first electronic transaction already took place in the early 1970's[ii], the first web browser, making the world wide web usable for a broader public, wouldn't be available until 1990[iii]. And with the founding of Amazon[iv] and eBay[v] in 1995, it is fair to say that e-commerce was still a recent development in the late 1990s.

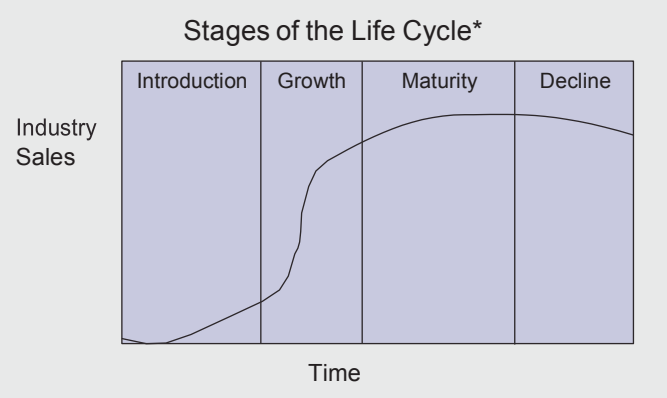
This new e-commerce phenomenon is generally defined as "the activity of buying or selling of products or online services over the Internet"[vi]. This is still quite a broad range of activities which Rappa categorized in a much-cited article[vii] into 9 different business models: Brokerage, Advertising, Infomediary, Merchant, Manufacturer (Direct), Affiliate, Community, Subscription and Utility. This essay will focus on companies that can be categorized as 'Merchant', more specifically 'Virtual Merchants' or e-tailers[1]: retail merchants that operate solely over the web. (the so-called 'pure players'[viii])

Dominant e-commerce companies as Amazon, AliExpress and eBay are not included in this definition. They are basically marketplaces and better fit Rappa's category 'Brokerage'[2].

### 1.2 The life cycle of e-tailing

To capture the spirit of the late 1990s it's good to recall that there was an enormous hype around any company categorized as 'e-commerce' or 'dotcom'. The expectations of the growth of e-tailers were tremendous. Two decades later, the global online retail sales volume is approximately 3 trillion USD[ix]. In other words, e-commerce entered most people's lives and businesses and has indeed become a gamechanger.

To explain the dynamics of the late 1990s and of now, the industry life cycle model of Porter[x] will be used as a framework throughout the essay. Porter (1980) introduced this well-known and much-applied model, that describes through a S-shaped curve how an industry is pioneered by a few first movers and expands with the growth of innovation. During the growth stage a limited customer demand and first mover advantages set barriers for market entry, but also for survival, leading to a shakeout with a reduced number of market participants. In the maturity stage, market saturation is reached, where demand no longer increases. And when new disrupters challenge the industry, the decline stage sets it and another new industry life cycle will emerge with new technological breakthroughs.




Source: Porter, M. (1980). Competitive Strategy.

These life cycle stages are defined primarily by age and the industry's sales growth rate over time: e-tailing was a very recent phenomenon in the late 1990s and research of Ravindra Khattree shows that in 2000 e-tailing in the United States still accounted for less than 1% of the total retail spending, while showing a year-over-year growth of 92%[xi]. Based on these facts of age and growth rate, it should be fair to conclude that e-tailing in 2000 was in the early growth stage of its life cycle

1. As most literature concerns listed e-tailers, this is assumed applicable for all e-tailers.
2. This includes the dominant local player Bol.com (dependent on 3rd parties for 50% of its revenue).

An often-heard criticism on Porter's model is that the length of a life cycle varies from one industry to the other. That observation will be addressed in paragraph 3.1 of this essay.

**1.3 Compressed life cycle**

In addition to Porter's model, Damodaran[xii] added the observation that tech companies have a so-called compressed life cycle.

The essence of his addition is that if tech companies are compared to non-tech companies, they scale up easier in their early stages because the related investments are less. Next to that they are able to grow faster because of the ease of entry into the business. But once they reach maturity, their competitive advantages quickly deplete, leading to shorter harvest periods.

Generally speaking, young companies bring more uncertainty then mature ones. But Damodaran demonstrates with the compressed life cycle that young tech companies have an even higher level of uncertainty then young non-tech companies do. This uncertainty had an impact on the way that valuators, analysts and academics approached their valuations in the late 1990s and will be addressed in chapter 2.

**1.4 Valuation through the life cycle stages**

Each life cycle stage not only brings its own peculiarities with regard to running and managing a business, but also to the valuation methods of choice and the underlying value drivers.

In the early stages of the life cycle of e-tailing, the determination of these methods and drivers were highly affected by several important factors[xiii]:

1. The industry and its participants were so young that historical financial information wasn't available or only very limited available. This complicated forecasting.
2. The historical financial information that was available was less useful then in mature industries, because of the rapidly changing dynamics of the industry.

In other words, uncertainty was high and the (financial) fundaments were thin: conditions that led to the prominent use of non-financial drivers and alternative valuation methods[xiv].

But when an industry matures, uncertainty usually decreases, its track record increases, and financial drivers and regular fundamental valuation methods like the Discounted Cash Flow again re-emerge as the preferred valuation tools of choice[xv].

**1.5 Relevance for theory and practice**

The remainder of this essay will work towards an answer on the main thesis. To this end, the introduced life cycle model will be used as a framework to analyze valuation methods and value drivers and to interpret the dynamics of the applicable stages in 1999 and 2019.

The starting point will be an analysis of the literature about the late 1990s situation. The conclusions from this analysis will be brought forward to 2019. Then the current life cycle stage will be determined, and its industry dynamics will be discussed. These insights will be combined with the results from a questionnaire that was send out to the 250 largest e-tailers in the Netherlands[3], to suggest an approach to value e-tailers in 2020 (and correspondingly provide an answer to the thesis).

*Theory*

During the research preceding this essay, it became clear that most available literature concerns the situation of e-tailing in the late 1990s. This is not really surprising, as e-tailing was regarded a new and exciting phenomenon at the time. However, the amount of current literature about e-tailing is quite limited. Hopefully this essay brings new insights and perhaps it could trigger new research.

*Practice*

What became clear from the questionnaire is that most respondents are familiar with the main valuation methods and, clearly, they are aware of their main value drivers. However, the actual usage of the Discounted Cash Flow (DCF), that most academics as well as professionals indicate as their valuation method of choice[xvi], is limited. The conclusion of this essay may provide e-tailers more grip on the application of the theoretical DCF concept, which will lead to insights about their day-to-day business.

## 2. LITERATURE: E-TAILING IN THE LATE 1990S

This essay started with the observation that traditional metrics shed a peculiar light on the value of e-commerce companies in the days of the dotcom bubble. These days of the dotcom hype, in other

**3.** The scope of the questionnaire limits the applicability of the outcome of this essay to Dutch e-tailers.

words, were tumultuous and valuators felt forced to look beyond the regular metrics and methods to explain company value and provide valuations.

The solution was found in the usage of alternative metrics and the extensions of classic valuation methods. Something about which Isimbabi (2002) noted that valuations in the late 1990s were more a reflection of bets on the potential of the industry.

The remainder of this chapter will discuss whether this notion is far stretched or legit: the main methods of valuation will be reviewed together with the most used value drivers and industry dynamics during the early growth stage of e-tailing.

**2.1 Valuation Methods**

E-tailers in the late 1990s had basically no track record, no earnings and no peers. As a result, traditional DCF valuation techniques systematically underestimated the value of these high growth companies and were considered largely inapplicable[xvii].

The reason is the basis of DCF: the calculation of the net present value (NPV) of future free cash flows. Because many young e-tailers had negative cash flows, limited data and a highly uncertain future. This resulted in forecasts where all the value was reflected in the far future, which would have to be discounted at a high discount rate, reflecting the level of uncertainty. Several studies concluded[xviii] that this classic way of executing the DCF didn't reflect the huge growth potential of these new industry players and that it was too inflexible.

This clearly was a problem for academics and business professionals, who didn't have much to base their valuations on. This led them to devise alternative valuation approaches and measures[xix].

The most cited (alternative) methods during these days to value e-tailers in their growth stage are:

- Real options
- Probability-weighted DCF
- Price-to-sales (P/S) ratio

Academics obviously tended towards the fundamental approach of the real options method, while the probability-weighted DCF was used by both academics and business professionals and the latter seemed to tend towards the P/S ratio[xx].

**2.1.1 Real options**

A real option is the right to undertake certain business decisions, such as deferring, abandoning or expanding a capital investment project. Real options is a NPV valuation method that assigns value to that flexibility and like this captures the value that growth and strategic options offer.

The real options valuation method tackles two issues where traditional DCF falls short with regard to the valuation of young e-tailers: flexibility and growth.

*Flexibility*

E-tailers in their early stages of the life cycle most likely don't have a systematic risk that remains constant: it is more probable that this risk is decreasing as the company moves through various phases and management has the opportunity to act on information that will be revealed in the future. The traditional DCF valuation method however assumes that systematic risk remains constant.

Correspondingly, real options states that the real Net Present Value of a venture is not just the NPV of its future cash flows, but that the value of this flexibility to delay, expand or abandon should be added. This flexibility is estimated with the real options approach.

*Growth*

McKinsey research has pointed out, that for valuation it is especially growth (more than margin or cost) that matters most in the early stages of a company's life cycle[xxi]. The real options method addresses this issue by assigning a positive value to volatility, where the traditional DCF would increase the discount rate in response to a higher volatility. The assumption of the real options method is that an investment in an e-tailer offers potential for substantial returns while losses are limited.

In cases of high growth and high uncertainty, about which is learned in time, while one can respond to this uncertainty and take action, real options is the theoretically best approach.

This often is the case in the situation for late 1990s e-tailers. However, the real options method isn't much used in practice[xxii] as it is perceived as (too) complex and requires (too) many parameters as input. At the same time, there is the more comprehensible probability-weighted DCF. This method is easier to understand and basically does the trick as well, as will be illustrated next.

**2.1.2 Probability-weighted DCF**

Desmet[xxiii] (2000) proposed an adapted version of the regular DCF model. His main arguments are that with

scenarios growth can be captured, while weighing these scenarios captures the uncertainty. Next to that, the method, being cash flow based, is not dependent on accounting rules.

Their model builds forecasts by starting with the status of the industry and e-tailer in the future (10-15 years) and calculating that performance back to current performance.

The distinct feature of this method lies in its consideration of various scenarios. Usually, this method will involve the construction of three scenarios: a best-case, a base-case (the most likely scenario), and a worst-case scenario. A probability is assigned to each case.

Isimbabi (2002) found that the method often delivers high variations in the outcomes of scenarios – but that this might reflect the high uncertainties that are being dealt with.

Desmet (2000) initially found that the method led to (too) high values. But later research[xxiv] from Higson and Briginshaw showed that Desmet used unrealistic revenue growth rates and margins from the old economy retail companies. Their research delivered much lower valuations for the same cases.

The probability-weighted DCF is a fundamental valuation approach that seems to deal well with the uncertainty and high growth rates. Contrary to the real options method it is quite user friendly and intuitive.

**2.1.3 Price-to-sales ratio**

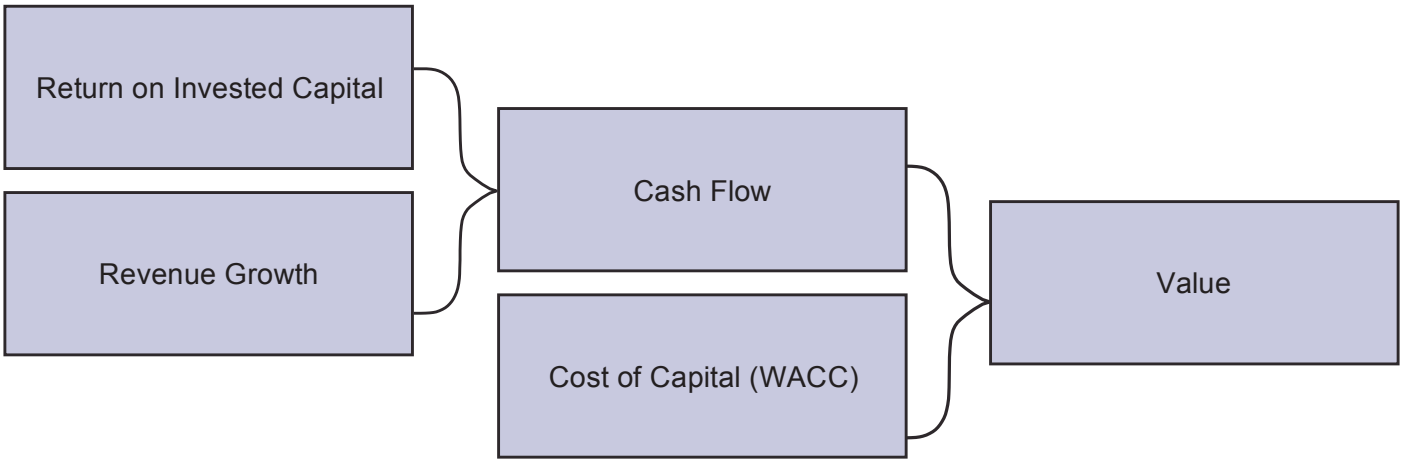
Business professionals, tending to have a preference for measures such as price-to-earnings (P/E) and market-to-book (M/B) ratios, found these to be inapplicable in the late 1990s. E-tailers had high expenditures on marketing and website development. These supported the value of these companies, but as they are intangible, they couldn't be capitalized. As a result, traditional accounting led to losses and asset light balances, making common ratio's as the P/E and M/B less useful.

Without profit, many business professionals assumed that revenue is the next best indicator of an e-tailers performance, market share and strategic advantage. This led to the use of the P/S ratio, a relative valuation method that divides market capitalization by revenue.

The advantages are the applicability of this ratio for loss making companies, while it's less volatile and less distorted by accounting policies then earnings ratios. However, the disadvantages overrule the advantages: not every dollar of revenue has the same profitability, so a sales ratio gives no indication of profitability. A company can be lossmaking or generating nice profits. Based on the P/S ratio, you wouldn't know. Or as Koller[xxv] puts it: "The P/S ratio provides imprecise results and little insight into what drives a company's valuation." In other words: this ratio doesn't meet up to expectations with regard to company valuation. It is nothing more than a (too) general rule of thumb.

**2.2 Value drivers**

Raphael Amit defines value drivers as factors that enhance the total value created by a business




Source: Koller, T. (2015). Valuation: Measuring and Managing the value of companies.

model[xxvi]. As this is still quite a broad conception, the more concretized definition of Koller (2015) is preferred in this essay. His basic assumption is that value of any company is ultimately determined by its Return on Invested Capital (ROIC), its revenue growth and the ability to sustain both over time. Value drivers are the factors that influence these elements and either reduce risk or increase growth or returns.

Each valuation is preceded by a thorough analysis of its fundamental value drivers. Knowing these value drivers is essential for the production of a robust valuation. When industries are in the mature stage of the life cycle, the focus will be on financial value drivers like cost of goods sold and revenue per unit. But in an undeveloped, young industry the importance of non-financial drivers tends to be much larger[xxvii] because of a lack of reliable data. The importance of these alternative performance indicators usually fades out while the industry matures, and more data becomes available.

**2.2.1 Non-financial drivers**

From literature of the period 1998-2001 there are several studies about e-tailers proposing alternative value drivers that proof the importance of non-financial drivers in the late 1990s:

- Amit & Zott[xxviii] propose a model with 4 primary and interrelated value drivers of e-businesses: novelty, lock-in, complementarity & efficiency.
- Trueman (2000) suggests using unique visitors and pageviews.
- Isimbabi (2002) discusses the usage of lifetime value per customer, conversion rates, market cap per eyeballs[4], regular pageviews, ad Impressions, click- through rates, unique Visitors, reach and customer acquisition costs.
- Albers & Clement[xxix] suggest using customer satisfaction.
- Amir & Lev[xxx] propose using website traffic.

While academics produced a broad range of alternative metrics, most research seems to point at two main non-financial value drivers for e-tailers: the amount of website visits (the 'traffic') and the amount of pageviews (the "eyeballs"). Trueman for example, demonstrated the positive relationship between stock prices and the number of visitors and pageviews.

Nowadays, looking back, there are quite a few comments to be made about this research and the alternatives that were proposed. As Trueman produced one of the most-cited articles about the late 1990s e-tailing, his proposals and method will be highlighted to put its conclusions into perspective:

*Proposed value drivers*

The main short coming of Trueman's research, is the selection of drivers. A metric like 'unique visitors' is not particularly meaningful without knowledge of the source of these visitors (the "traffic"). Generally speaking, visitors can arrive at a website via the following channels:

- Direct traffic (visitors that enter the URL directly in the browser)
- Organic traffic (visitors that arrive via free results from search engines)
- Cost per click traffic (visitors that arrive via paid results from search engines)
- Cost per sale traffic (visitors that arrive via partners that receive commissions)
- Referral traffic (visitors that arrive via links on other websites paid/free)
- Newsletter traffic (visitors that arrive via a link in the company's newsletter)
- (Social media traffic: relevant in 2019, but not in 1999)

These sources of traffic have different cost structures and they have a high impact on value creation. If one decides to use traffic as a value driver, first of all its source should be considered before any conclusions can be drawn.

The second main driver, the "pageviews", has a more direct connection to value: especially for e-tailers, research demonstrated a clear relation of pageviews/ visitor with future revenue. This indeed makes more sense, as customers tend to get acquainted with an e-tailer and its offerings before he or she has built enough trust and interest to place an order. This process usually translates into the visiting of multiple pages, while one-page visitors are a negative indicator of future revenues.

**4.** Eyeball metrics refer to pageviews: the number of times a website page has been viewed within a certain timeframe.

*Research method*
The data for Trueman's research was provided by a company called Media Metrix. This firm has tracking software installed at a panel of internet users at the time of the research, and they provided the number of unique users and pageviews per website. By now it is clear that most tracking software isn't flawless[xxxi], but more importantly: all users were aware that they were being tracked. This most likely affected their behaviour, leading to social desirability bias[xxxii]. On top, one can argue that only a delimited type of respondents would be willing to accept tracking software on their computer for a small fee.

Concluding: while Trueman (2000) is referred to by many articles and used as a basis for future research, there are quite a few comments to be made about the selection of drivers and the execution of his research.

### 2.2.2 Financial drivers

The young e-tailers of the late 1990s had a few (interrelated) peculiarities that made many of the regular financial drivers difficult to use: they were asset light, their R&D and marketing investments are expensed and they usually had a negative cash flow. These peculiarities are the main reasons behind the extreme results in the introduction of this essay. This didn't just lead to extensive use of non-financial value drivers, it also led to the use of different financial drivers.

But where the range of suggestions was quite diverse for the non-financial drivers, research is more conclusive on the main financial drivers of choice:

- Revenue growth[xxxiii].

Since the peculiarities of young e-tailers distort in particular the measurement of ROIC, the focus of valuators correspondingly shifted to the other main element of a company's value: revenue growth.

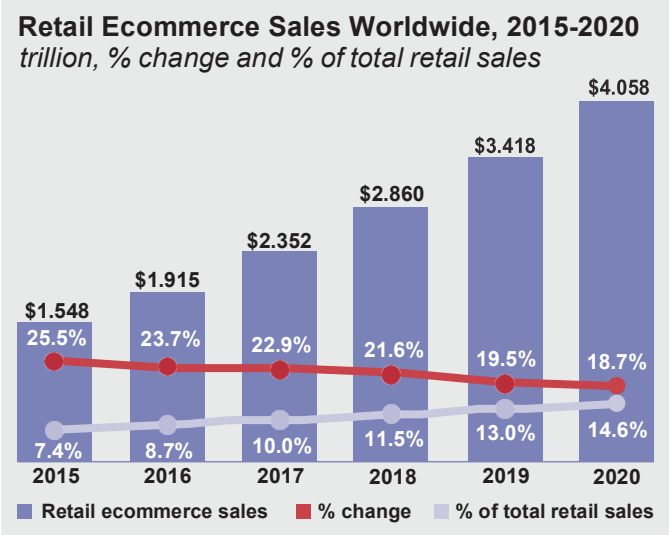
- Gross profits[xxxiv].

Gross profits reflect a firm's current operating performance and is often considered of a more permanent nature. As many e-tailers lacked earnings, their gross profits were an alternative metric to compare and benchmark performance.

Where the non-financial drivers are elaborated into great detail, possibly because of its novelty, the elaboration of financial drivers in the reviewed literature is limited. Most research was focused on finding new metrics to indicate (future) value of these new companies, while more focus on financial drivers that have a more fundamental nature would have made sense. Of the most cited financial drivers, growth is most relevant.

## 3. PRACTICE: HOW TO VALUE AN E-TAILER IN 2020

Moving approximately twenty years beyond the hype of the late 1990s, the same life cycle theory from Porter can be used to determine in what life cycle stage e-tailing is in 2019. As earlier discussed, age and growth rate are key inputs for this determination: while the industry did age over the past two decades, research from eMarketer shows that the annual growth rate nowadays still consists of double digits.




Source: eMarketer. (August 2017).

Part of this growth is coming from emerging countries like China, which slightly distorts the growth figures. It is important to realize that e-tailing still is a mainly locally and regionally oriented game (marketplaces not included) because of logistical costs. This implicates that growth rates should be considered within the accurate geographical scope.

But even when only e-tailing in Europe or even just in the Netherlands is considered, growth figures are still impressive: the average annual growth rate of retail e-commerce sales in Europe over the period

2014-2018 is a stable 15%[xxxv], while the average annual growth rate of retail e-commerce sales in The Netherlands over that same period is 20%[xxxvi].

When revenue from these e-tailers is compared to regular retail revenue, it seems there is still a large potential for further growth: research from Thuiswinkel.org and Strabo[xxxvii] demonstrated that in 2018 just 9% of the total retail revenue went via an online channel. As the Dutch market is a frontrunner in e-tailing, this conclusion is a safe indication of similar potential in other countries.

Summarizing the presented statistics, the assessment is that although twenty years have passed and growth is somewhat cooling down, growth rates still consist of double digits. While at the same time there still seems to be additional market share on the horizon. This indicates that e-tailing is still in the growth phase of the industry life cycle, although slowly moving towards maturity.

**3.1 E-tailing: tech or retail?**

Before valuation and value drivers will be discussed, it is important to point out an additional factor that has impact on e-tailer valuations in 2020: twenty years ago, these e-tailers were approached as young tech companies. That approach was valid at that time, as e-tailers matched the most cited characteristics of tech companies. However, as time passed by, the nature of e-tailing changed. And from being young tech companies, these e-tailers developed towards classic retailers with similar characteristics:

- Direct services-based contact with the general public (end-customers).
- Operating in the closing end of the distribution chain.
- Sourcing in bulk from wholesalers and selling in small quantities with a mark-up.
- Convenience providers to customers (assortment, payment, location, support and logistics).
- Investing working capital in inventory according to market requirements.

“Cutting edge technology” is not one of the characteristics (anymore). This essay puts forward the argument that technical developments over the past twenty years led to a current market situation where technology is not a distinctive characteristic of e-tailers anymore.

In the late 1990s web stores were built from scratch by employed web developers. Having an innovative e-tailing platform created a sustainable competitive advantage. Over the past twenty years however, standards were developed, and high-quality e-tailing platforms emerged. Many of these are open-source[xxxviii]. E-tailers these days don’t develop their own software anymore: they use packages from third parties (open-source or hosted SaaS solutions). These packages may still be configured or adjusted to the e-tailers liking but are in essence available to anyone in the industry.

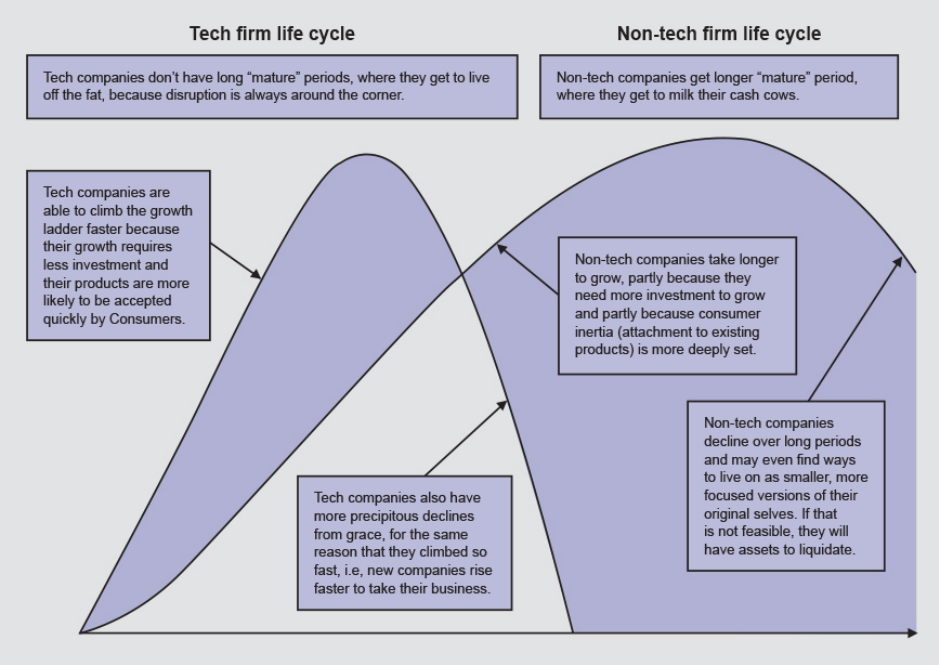
Many e-tailers nowadays do operate on a sophisticated platform, but it is not unique to them and it doesn’t provide a sustainable competitive advantage. Just as prime real estate isn’t a general characteristic of retail, cutting edge technology isn’t a general characteristic of e-tailing (anymore). Just to elaborate: of the top100 pure players in the Netherlands, some don’t even employ in-house web developers in 2019.

If the technical basis of an e-tailers platform is not a distinctive characteristic anymore, e-tailers should not be valued as tech companies anymore. E-tailers should be approached as regular retailers with the focus on the online distribution channel. Which is consistent with the fading distinction between old school retailers and e-tailers towards what is called ‘omnichannel’.

**3.2 Non-tech firm life cycle**

To determine the impact of this conclusion, this argument is put back into perspective of the industry life cycle model: in paragraph 1.3 it is argued that tech companies have a compressed life cycle. The assumption that e-tailers correspondingly had a compressed life cycle was valid in the late 1990s. But as argued above, the nature of e-tailing changed, and the question should be asked whether conclusions can be drawn from the compressed life cycle model in relation to this?

According to the model of Damodaran (2018), tech firms grow faster and have a shorter lifespan. Non-tech firms take longer to grow but have a longer lifespan to exploit its business. In other words, if e-tailers would be approached as tech companies, their short-term growth would be overestimated but the total value might be underestimated.




Source: Damodaran, A. (2018). The Darkside of Valuation.

### 3.3 Valuation of e-tailers in 2020

In paragraph 2.2 the dominant e-tailing valuation methods in the late 1990s were discussed, and as it turned out they had several disadvantages. But as the industry matured over the past twenty years, more data became available and track records originated. And as the industry dynamics stabilized, data became more reliable. In other words, nowadays there is more data which can be analysed, and uncertainty generally decreased.

Paragraph 2.2 also stated that the DCF is the preferred valuation method amongst business professionals and academics. It is even recommended as the single essential tool for understanding value of companies[xxxix]. It were just the circumstances of the late 1990s that made the traditional application of the tool less useful. However, if it is concluded that these circumstances at least partly dissolved, the following arguments should be re-evaluated: uncertainty, no cash flow and high growth.

*Uncertainty*

E-tailers in the late 1990s had no track record and no peers. Twenty years later a 3 trillion USD industry has been realized, with historical performances and plenty of peers. The industry dynamics are still volatile but stabilized relative to the late 1990s. In other words: data is available and reasonably reliable.

It is important to note however that e-tailers still operate in an environment with uncertainty: the industry is still young, and it is unclear how the next decade of e-tailing will look like. Will the marketplaces take over[xl] or do independent e-tail websites have a bright future ahead of them?

*No cash flow*

The negative cash flows of the 1990s e-tailers resulted in forecasts where all the value was reflected in the far future. The combination with high discount rates, reflecting the level of uncertainty made the DCF less useful as valuation method. Twenty years later however, running an online business with negative

cash flows doesn't seem to hold as the regular modus operandi anymore[xli]. The initial hype is over, and investors and entrepreneurs need returns on their investments. Taking Dutch e-tailers as an example, cash flow is usually modest but available.

*High growth*

The main argument during the late 1990s against the traditional DCF was that it didn't capture the value of high growth. This argument became less important because of two reasons: first of all, the industry growth rates stabilized as demonstrated at the opening of this chapter. Secondly, the argument is put forward that e-tailers nowadays are less of a tech company and more of a regular retailer, with corresponding growth rates.

So, while e-tailers nowadays are still characterized as companies in the growth stage of the industry cycle, they now do have track records and historical data. Together with better predictable cash flows and growth rates, most arguments to use alternative valuation methods became less convincing. In other words, the DCF, indicated as essential valuation method by academics and business professionals, re-emerges as method of choice. But the level of uncertainty about future market conditions is an argument that holds and must be dealt with. This is possible by using a risk-adjusted discount rate. However, a more transparent and elegant way is to use scenarios and to weigh the outcomes of these scenarios based on probability[xlii].

By creating different (top-down and bottom-up) scenarios based on the selected value drivers, one can forecast a range of outcomes. These forecasts are to be calibrated against the historical performance of the e-tailer in question and the performance of its industry peers. Some outcomes will be optimistic, some pessimistic (including failure), leading to different valuations reflecting the level of uncertainty. By weighing these outcomes based on an assigned (subjective) probability, the value is estimated.

This approach corresponds to the method Desmet (2000) suggested in paragraph 2.1.2, with the difference that current market status allows for better substantiated forecasts. Where the compressed life cycle theory suggests using shorter forecasting periods, the conclusion that e-tailers don't fit the tech description anymore in 2020, undermine that suggestion. For e-tailers in 2020 following similar guidelines to determine the forecasting period, as for regular retailers and omnichannelers seems a better choice.

### 3.4 Value drivers of e-tailing in 2020

As the DCF calculates the NPV of future cash flows, the forecasting of these cash flows in the determined scenarios is a crucial element. Value drivers are the factors that influence these forecasts with their impact on ROIC, growth and the ability to sustain both over time.

Being aware that e-tailers are (still) in the growth stage of the industry life cycle, what does that mean for today's value drivers? Taking the comments on the value drivers used in 1999 into consideration, a renewed approach will be suggested based on current literature, personal experience with 100+ e-tailer acquisitions and the results of a questionnaire send to the 100 largest pure players in the Netherlands.

#### 3.4.1 Questionnaire

The questionnaire has been distributed to approximately 100 pure players among the 250 largest e-tailers in the Netherlands[5]. Marketplaces (like Amazon and Bol.com) are excluded, just like omnichannelers. Of the pure players 18 responded. The consensus among statisticians is that the sample isn't large enough to make a statement about the entire population[xliii], although more recent literature argues a n>15 is large enough in some cases[xliv]. The outcomes of this questionnaire should, for this reason be interpreted with some precaution.

The goal of the questionnaire was to determine the main value drivers in the e-tailing industry in 2019. Besides the regular background questions, respondents were asked 4 types of questions, all aiming to discover value drivers, but via different lines of questioning[6]:

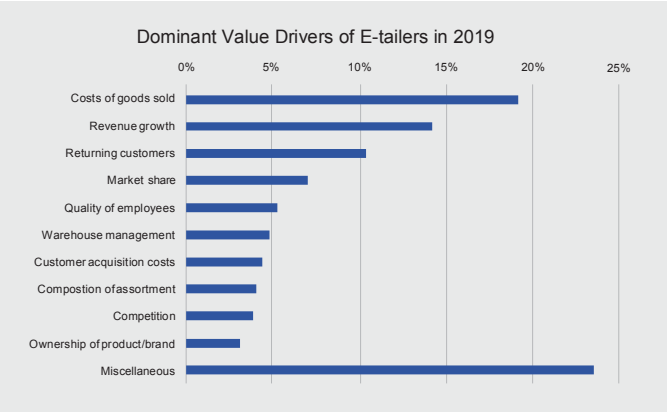
- Select and rank the 5 factors that have the most value enhancing influence on your company
- What are the factors that have a negative influence on your company value?
- What are the main KPI's your company focusses/ steers on?
- Which future factors do you expect to influence your company value?

5. The implicit assumption here is that the Dutch situation is representative for the industry.
6. The original questionnaire can be found at webshopovername.nl/enquete. Access to the results can be requested via https://docs.google.com/spreadsheets/d/13ldfZOZop3wVUEUcqYY3BnyoYNZ-d9a231cYOba49T0/edit?usp=sharing

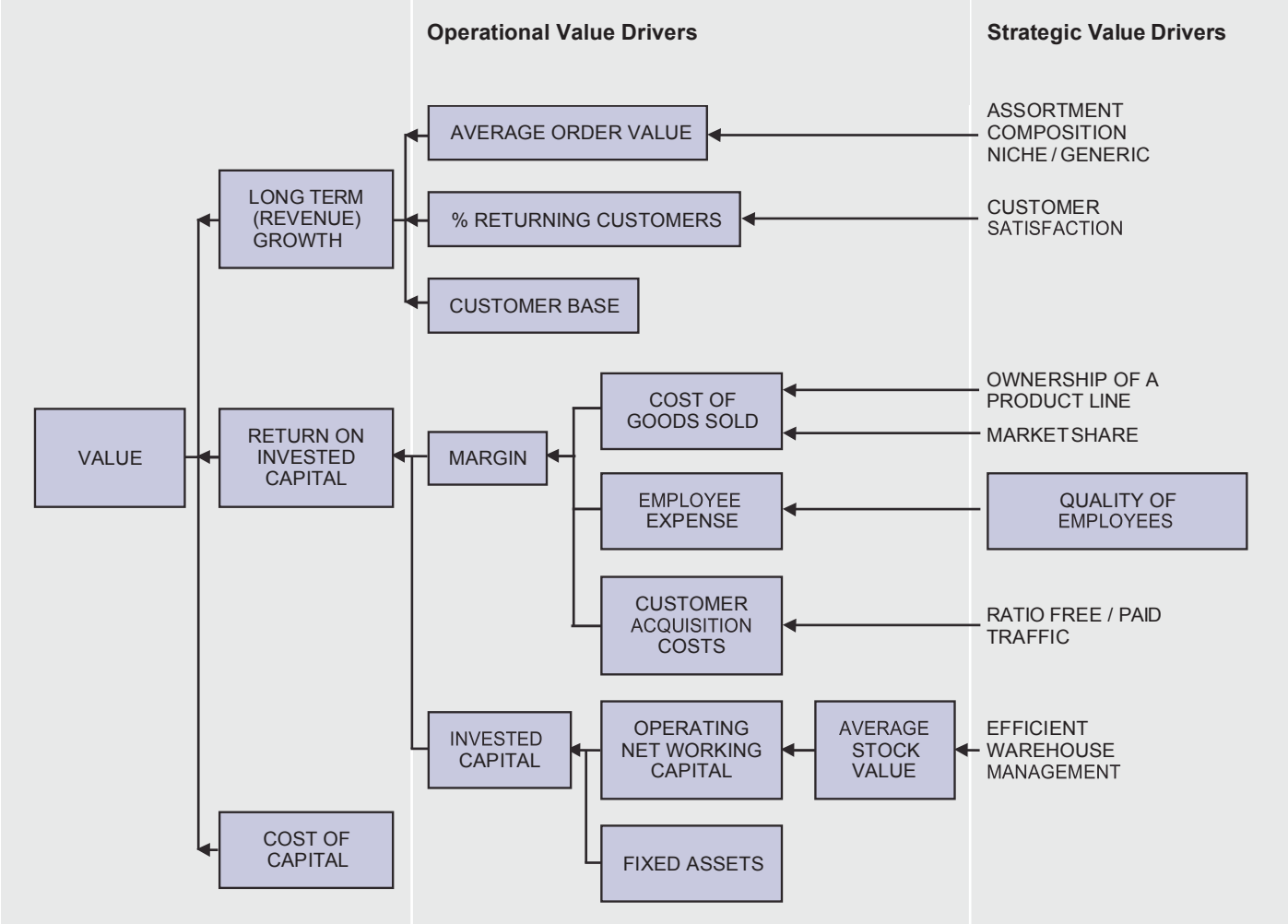
### 3.4.2 Value drivers

The results of the questionnaire were combined and weighted on an equal basis according to their rankings, leading to 10 dominant answers (in order of importance):

1. Cost of goods sold
2. Revenue growth
3. The percentage of returning customers (churn)
4. Market share
5. Quality of employees
6. Warehouse management
7. Customer acquisition costs
8. Composition of assortment (niche or generic)
9. Competition
10. Ownership of a product (line)/brand




These value drivers are plotted into a value driver tree based on the basic assumption of paragraph 2.2 that value is created by revenue growth, ROIC and the ability to sustain both over time[xlv]:




Interestingly the amount of website visits and pageviews (prime value driver of literature in the late 1990s) was named explicitly by only one respondent. This fully makes sense as traffic itself doesn't mean that much.

Respondents even literally stated by themselves in the free comments that 'an e-tailer is just like any other (offline) company and similar drivers should apply'.

So, while literature, even more recent work[xlvi], still seems to work with number of visitors and pageviews, the industry itself doesn't regard these as their main value drivers (anymore) and applies more regular business value drivers as listed above. This is fully in line with Trueman's (2000) expectation that as internet companies mature, he expects the financial drivers to become dominant relative to the measures of internet usage. And along the same line also with Damodaran (2017), who notes that while the story drives valuation for a young company, as a firm matures, numbers assume greater importance.

In paragraph 2.2.1 the argument was put forward that website traffic isn't a sound value driver. This seems to be underwritten by the outcome of the questionnaire. It also matches my personal experience with e-tailing over the last decade: high level traffic is a driver without much substance: it's all about the financial drivers.

## 4. SYNTHESIS AND CONCLUSIONS

Where in the late 1990s, track records, reliable data and cash flows were missing, academics and business professionals felt compelled to develop alternative valuation methods and value drivers. One of the most-cited metrics from this period is the enterprise value-to-eyeballs ratio, which makes it a perfect representative of the dynamics of the e-tailing industry during those days. Twenty years later, not only did the industry became more mature, but one of its key characteristics evolved from 'tech' to 'retail'. Since hardball is the name of the game in retail, this explains the title of this essay: "from eyeball to hardball".

This essay used the industry life cycle model of Porter as a framework to describe the dynamics of e-tailing in the late 1990s and as a starting point to explain the development of alternative valuation metrics in these days. While reviewing the alternative valuation methods, real options and the probability-weighted DCF demonstrated to be of added value to the traditional DCF. The price-to-sales ratio proved to be less meaningful. Of the alternative value drivers, the two most cited were selected for review: website visitors and pageviews. The first was concluded to have little predictive value, the latter had a stronger correlation with future value.

Thereafter, the position of e-tailing in 2019 was determined based on the same life cycle model. Although twenty years past, based on age and growth, the model still indicates e-tailing is in its growth stage. But the circumstances for valuation did change: twenty years of track record was built up, the current market provides plenty of peers and negative cash flows are not a self-evident part of business anymore. Hence, the uncertainty decreased, and the predictability improved. Next to that, it was argued that e-tailers nowadays better fit the description of retailers than of tech companies. An argument which is supported by the fading distinction in today's market between classic retail (the 'bricks'), omnichannel and e-tailing (the 'clicks').

These considerations were the starting point for the formulation of a valuation approach for e-tailers in 2020: where most indicators pointed towards using the traditional DCF, the level of uncertainty does call for an adjustment. The probability-weighted scenarios are the designated version of the traditional DCF to deal with this uncertainty. And besides its fundamental accuracy, it has a high level of user-friendliness.

As any DCF calculates the NPV of future cash flows, forecasting is essential. These forecasts are highly determined by the value drivers of a business. To establish the main value drivers of e-tailers in 2019, the results of a questionnaire to the 100 largest pure players of the Netherlands was used. The top 10 that derived from that exercise are suggested as the key drivers as basis for an e-tailers forecast.

# 5. ADVICE FOR ACADEMIA AND PRACTICE

*Academia*

This essay argued that the nature of e-tailing changed and implied consequences of this argument for the valuation of e-tailers, based on the framework of the industry life cycle model.

Following this line of reasoning, one could suggest that if Damodaran's model would be applied to e-tailers in 2019, the growth on short term would be overestimated, but the total value might be underestimated as the total life span of non-tech firms in which value can be created is longer.

Research made clear that e-tailers, valued as young tech companies in the late 1990s, overall didn't deliver the expected short-term growth[xlvii]. But this conclusion can be based on the compressed life cycle assumption. Their life span as retailers instead of tech companies, on the other hand should be longer than initially estimated. So, while these companies may have seemed overvalued, it would be interesting to examine in future research whether this impression is rectified by adjusting the perspective to the valuation of a retail company.

More in general, judging from the lack of recent articles, it seems e-tailing lost the focus of academics. However, it is clear by now that the size and potential of the market is huge and still full of developments. E-tailing in my opinion deserves renewed academic attention.

*Practice*

For business owners and managers: an interesting secondary outcome of the questionnaire is that 78% of the respondents is familiar with the DCF, while only 11% uses the method. Hopefully this essay can spark interest in the target group to start measuring and managing their company value based on the best practices of the probability-weighted DCF.

For valuation purposes: e-tailing is a variant of retail and should be valuated as retail. Hopefully this essay was convincing in putting forward that argument and shed a light on possible consequences for business valuations.

For own practice: we are used to work with a straight-forward version of the DCF. This essay clarified the benefits of a probability- weighted scenario based DCF version, to provide customers with a more founded approach to determine their company value.

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