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SALE-AND-LEASEBACK – AN EXCUSE TO FURTHER STUDY AN INTRICATE MARKET

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Abstract: Besides giving a simple model which fits a certain offer for buying/selling land in the context of specific capital costs and according capitalized fundamental values, this paper presents an extensive overview of a number of factors that should impact the decision-making process in owning, selling or leasing land. Additionally, it brings to the table a topic that is not common in academic literature which is the valuing of sale-and-leasebacks to agriculture, particularly directing land valuing and leases in agriculture research to this combined form of financing for an agricultural company.

Keywords: Sale-and-Leaseback; Capital Cost; Agriculture; Land

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Leases

Leasing can be seen as an intermediate form between buying and renting and, as such, represents an alternative method to ownership to gain use of an asset (Devaney S. & Lizieri C., 2004). As defined in IFRS 16.9, a contract is, or contains, a lease if it conveys the right to control the use of an identified asset – be it property, plant, equipment, etc. - for a period in exchange for consideration. Control is conveyed where the lessee has both the right to substantially all the economic benefits from the use of the asset and the right to direct its use (Lessambo, 2018).

When you already possess the asset, leasing it can release associated capital functioning as internal funding and possibly leading to asset diversification. After IFRS 2016, to the lessee, a lease can be viewed as a debt-financed acquisition of *a right to use an asset* (Sieverding, 2018). As such, a lease is not a sale due to the fact that it does not transfer control or ownership of the underlying asset to a third party, but only transfers the right to control the use of the said asset for the period of the lease (KPMG, 2023).

In the scope of this work, we will focus on long-term leases with their foremost benefit, compared to short term leases, being the reduction in renewal costs while aligning interests between landlord and tenant more closely investment-wise. These moral hazard effects need to be balanced to reach value maximization in a lease term. Long term leases will, of course, and on the other hand, lack flexibility to address market uncertainties, increase costs of renegotiation or tenant dismissal and be subject to poor tenant performance for longer (Yoder *et al*, 2008). These will also have higher probability of leading to situations where, at a given time, the leasehold itself has value, because either the rent being paid is less than fair market rental for the property or it is more (Morris, 1977).

Sale-and-leaseback

Even though sale-and-leasebacks are not new to corporations, as records of sale-and-leasebacks date as early as 1882 (Wilson, 1953), these are not top-of-mind financing mechanisms to executives in Portugal.

A sale-and-leaseback is intended to have little or no impact to daily operations on the use of that asset – one sells the asset, after having set a sale price, receives a lump sum payment and simultaneously leases it back, already knowing the lease terms, which usually involve a long-term arrangement whereby the lessor owns a given rent and may include an option for additional terms and an option to repurchase the property. One will no longer own the asset but will secure its use for the purposes of its business. (Ashiya, 2015; Clifford Chance, 2020; Rutherford, 1990; Sieverding, 2018; Wilson, 1953; Whitby, 2013).

As such, two transactions need to be assessed when analyzing a sale-and-leaseback: i) the seller-lessee receives cash from the sale of the asset; ii) the seller-lessee pays periodic rent payments to the buyer-lessor to retain the use of the asset. (Ashyia, 2015; Lessambo, 2018). For the buyer-lessor, opposed to other leases, since the properties or assets are owner-occupied prior to the sale, the net income is forecasted rather than historical (Sirmans & Slade, 2010). When setting the rent, the investor will be looking for the purchase price, together with an agreed return, to be amortized over the term of the lease (Clifford Chance, 2020)¹.

The interest cost of these types of funds will vary due to different factors which include the general credit standing of the lessee, the ease of transferability to other use(r) following a lease termination, total availability of funds in the economy and the demand for supply of fund in each particular area

¹ Sale-and-leaseback have been of great interest recently for investors wanting to be granted a golden visa. This regime has changed in recent years, but these arrangements are still possible in parts of the country, namely rural areas. These investors are a market distortion not considering exclusively either the intrinsic value of the asset nor the agreed return on its economic life but adding to those the value of Portuguese citizenship.

(be it sector-wise or capital structure – debt/equity) (Organek *et al*, 1968). However, theoretically, one incremental dollar of a lease is the equivalent to one incremental dollar of debt, i.e, leasing is a perfect substitute of any other type of financing (Copeland & Weston, 1988).² Yet, if, by leasing, more capital can be raised (we will see how below) effective gearing will be higher, increasing cost of equity, the additional liability will restrict further borrowings and the loss of the collateral may lead to pressure on existing senior debt ratings (Devaney & Lizieri, 2004).

It is difficult to generalize in what regards to sale-and-leasebacks, since these are usually individually tailored (Cary, 1948)³. A transaction may involve single assets, like high value company headquarters, or multi-property deals encompassing pubs, retail stores, plots of land or gyms. One central requirement is that the buyer can always re-let the property and generate a rent from it (because he *owns* it), even if the seller chooses not to renew or continue its operations at the premises (Clifford Chance, 2020).

Even though variations occur frequently, this work will focus on triple-net leases whereby the lessee agrees to bear tax, utilities, insurance and maintenance costs as well as providing necessary improvements (Elayan *et al.*, 2006; Wilson, 1953).

Moreover, despite the possibility of conceiving share agreements in which the lessee bears the profits, but also the losses, arising from changes in market values of the asset being leased, we will try to determine those *a priori* to reach a fair value. One would also have to reach these values beforehand if a party was to negotiate the terms of a repurchase option which may vary from a nominal figure at the end of the lease to a value fixed by independent appraisal(s) at that time (Cary, 1948).

² The theory is not always one with the empirical observations. See Ashyia (2015), Brau & Slade (2006), Devaney & Lizieri (2004), Elayan *et al* (2006), Gronlund *et al* (2004), Kim *et al* (1978), Ling (2012), Organek *et al* (1968), Rutherford (1990), Scanlon (2009) and Sirmans & Slade (2006).

³ These will actually compound over factors that are specific to land transactions, which will be seen below.

Sale-and-leaseback for the seller-lessee

A sale-and-leaseback occurs when there is a reversal in the financing of a determined asset, that is, the company initially chose to acquire a given asset financing it with either debt or equity, but now is choosing to lease it (Whitby, 2013). The question in this matter is basically why is leasing the asset now more favorable when compared to the initial decision to purchase the said asset. This may have a lot to do with how the company will use the funds from the transaction. The motives for this “reversal in the financing of a determined asset”, besides direct bank debt reduction (which can be seen as a form of mere debt refinancing/restructuring), may involve strategic changes, planned expansion, liquidity requirements or taking advantage of the increased value of a depreciated property (Rutherford, 1990; Sieverding, 2018). In what regards capital structure, sale-and-leaseback allows for growth without diluting current shareholders interest in the business (Gronlund *et al*, 2004). Additionally, as stated, it may also offer tax advantages to the seller and strengthen its balance sheet (Clifford Chance, 2020).

In the end, there may be business policy considerations that outweigh any cost differential, as stated by Organek *et al* (1968), and this factor is markedly present in an asset such as land. In land assets, it is also clear that the profits from the asset may not come *only* from its *use*, but also from its *ownership*. In cases such as this it is important to attach a figure to the asset’s usefulness to the business at the expiration of the lease, which may be far in the future.

Either way, one tries to sell an asset when the said asset is well valued. As such, shortage of real estate investments can bring renewed opportunities to viable sale-and-leaseback opportunities (Hunsacker, 2012). Reports about real estate markets in Portugal have induced the pondering of this mechanism to the purpose of this work – a sale-and-leaseback should begin by selling the asset attractively.

Besides the intrinsic value of the asset, considering the general inflationary trends on some particular markets – as land and agriculture – a premium is going to be put on fast turnover since the investment of all the then available funds in working capital could result in much greater profits than the use of the same funds for fixed assets (Wilson, 1953). Moreover, the current economic environment may seem challenging to small firms trying to grow their business and one interesting way leases can help start-ups, where financial distress costs are usually present in financing institutions' analysis, or, in general, where management sees a high probability of default, is precisely in reducing financial distress costs since, in the event of bankruptcy, leases are generally senior to both debt and equity and thus simpler to repossess (Hunsacker, 2012; Wells & Whitby, 2012). Additionally, corporations, particularly small companies or successful start-ups (whose initial investment opportunities are usually better yielding than later-stage), are increasingly realizing that funds invested in their core business may very well be more effectively deployed than in real estate, that is, pressure on their capital efficiency is leading them to dispose of low-yielding assets, such as real estate, so as to obtain cash and invest it in their core business. Therefore sale-and-leasebacks are increasingly being seen as an adequate source of financing growth and improving return on equity for successful businesses who have strategies for the future and if an investor, or management team, believes that cash flows will be enhanced by this change in capital allocation, the operation will in fact prop up rather than restrict future loan finance (Elayan *et al*, 2006; Gronlund *et al*, 2004; Ling, 2012).

As such, the core advantage of a sale-and-leaseback is that a company essentially releases cash while preserving the right to use the sold asset while, in fact and depending on the terms of the arrangement, it might be cheaper than financing the company with a typical bank loan – though it still, naturally has a financial cost (Lessambo, 2018). Furthermore, if previously up to 80% of the value of a given asset could be obtained via a conventional mortgage, those days are far gone for

some sectors since as pointed out by Devaney & Lizieri (2004), most lenders will impose a significantly lower loan-to-value ratio so as to be protected from falls in the asset value and, in a sale-and-leaseback the seller-lessee is able to obtain cash to the extent of 100% of the value, unlocking more equity than a conventional financing, without restrictive covenants against future borrowing (Clifford Chance, 2020; Wilson, 1953).

A sale-and-leaseback also brings accounting consequences since, after 2016, IASB and FASB defined that all leases must be recognized in the balance sheet (Giner & Pardo, 2018).⁴ Besides some possible effects of the capital structure interpretation of the markets of a company which enters into a sale-and-leaseback, if this is structured as an operational lease, it opens the possibility of full deduction from income tax of the rental payments, seen as an operational cost of the business, as compared with a deduction of only the interest element of the repayments in the case of mortgage debt financing – advantage which is greatest in situations where the land is non-depreciable for tax purposes and in periods of high taxes (Wilson, 1953). It would compare to actually deducting both interest *and principal* in a loan repayment, increasing the value of the tax shield radically.

Finally, some types of assets may not be easily sold due to their special use which may also favor a sale-and-leaseback as an exit strategy (Scanlon, 2009). This will liquidate any difference between the market value and the company's claims on the asset, which may substantiate the hypothesis that firm values increase when information about real estate asset values is provided to the market (Gronlund *et al*, 2004; Wells & Whitby, 2012). Many real estate assets are difficult to observe and

⁴ For further references on this topic, please see Clifford Chance (2020), Elayan, Mayer & Li (2006), Giner & Pardo (2018), Lessambo (2018), Sieverding (2018), KPMG (2023), IFRS 2016 or any of your local law firms which will be happy to assist you.

appraise by an outsider and, therefore a sale-and-leaseback is a direct way to release these reserves and to spread information on the real market value.

Of course, there are benefits of owning an asset which can be summarized in the ability to fully control the asset (e.g. in relation to alterations, permitted use and sharing occupation), not foregoing future increases and the benefits of depreciation in the property's value, and not having to renew a lease at the term of the contract (Brau & Slade, 2006; Clifford Chance, 2020; Lessambo, 2018). Additionally, exiting a long-term lease may be more difficult than selling the asset and relocating, due to possible exit penalties.

Financially, the one that usually has the most material impact is that the seller-lessee will lose the residual value of the property as well as any possible increment in its value during the lease, both accruing to the buyer-lessor as the owner. As such, the long-term trend of the underlying must be carefully assessed before disposing it at present values (Clifford Chance, 2020; Wilson, 1953), which, as we will see, can be a challenging endeavor.

Sale-and-leaseback for the buyer-lessor

Nowadays, institutions lead the market regarding these types of transactions due to a significant accumulation of funds that need to find satisfactory returns, even though not usually interested in real estate management *per se* (Organek *et al*, 1968)⁵. As such, and given that a sale-and-leaseback is usually not worthwhile unless the amount of real property involved is substantial, institutions will obtain large investment units compared to the size of the properties on which they might make mortgage loans (Wilson, 1953).

There are a few ways in which, for an institutional investor, the sale-and-leaseback could be viewed as an interesting option, starting with the fact that it will be obtaining an asset already occupied

⁵ It is still true nowadays.

with a long-term tenant, which presents, in itself, some advantages as: i) elimination of search costs associated with leasing the asset; ii) pre-evaluation of the quality of the tenant, specifically regarding its general credit standing; iii) typical triple-net leasing structures eliminate uncertainties associated with operating expenses; iv) it has typically less rollover risk than assets within the same asset class (Hunsacker, 2012; Sirmans & Slade, 2010; Wilson, 1953). Finally, institutions have recourse to the asset if the lessee defaults, since they have already obtained the title in fee (with no need to go through foreclosure proceedings) (Elayan *et al*, 2006; Wilson, 1953).

Future corporate financial projections of the seller-lessee will be key since robust companies will deliver the full potential of the sale and ensure future returns, while questionable companies will increase the risk of defaulting on the leaseback and thus leave the buyer-lessor with the burden of finding a replacement tenant, the ease of which will depend on market conditions, and as an unsecured creditor of the seller in insolvency proceedings (Brau & Slade, 2006; Clifford Chance, 2020).

In general, empirical studies may reflect aggregate results which, in turn, may induce general conclusions, but they all lack absolute causality and discernment of a relative price change against the general noise of the market. Thus, although presenting the context in Annex 1, the review doesn't exclude a casuistic approach to a sale-and-leaseback transaction.

Deciding on a sale-and-leaseback

As seen, one way to look at a sale-and-leaseback is as a mere financing alternative. In that sense, if considering the asset is sold at a fair price, one can, as done by Wells & Whitby (2012), compare the incremental cost of issuing debt against an SLB lease rate as a fund-raising mechanism. The lessee will not borrow using a sale-and-leaseback unless the terms are better than those offered by other lenders. This will therefore depend on the buyer-lessor cost of capital which will be, naturally, reflected in the lease rate (Elayan *et al*, 2006). Simply put, one could compare a seller-lessee's

incremental cost of debt against the lease-to-value requested by the buyer-lessor and reach a conclusion.

Selling and leasing back assets that fail to meet internal hurdle rates – required return is greater than that generated by the property asset – enables corporations to enhance liquidity, expand operations, and invest in core businesses. (Wells & Whitby, 2012). However, if the risk-adjusted returns from the firm's use of capital are less than the implicit return on the real estate assets, then outsourcing deals will not add value to the firm (Devaney & Lizieri, 2004).

What is being stated imposes also that a decision on a sale-and-leaseback depends on the capital structure resulting *from both the deal and from the use of the proceeds*, because, being a debt liability, therefore increasing the firm's gearing, a sale-and-leaseback can be used either to retire existing debt, to buy back shares, or to reinvest in the operational activity. As such, if it results in a more leveraged company, equity holders will require higher returns – to compensate for greater potential volatility and exposure to rental market risk – and bondholders will need to balance potentially improved cash flows with loss of security as the proceeds are applied. (Devaney & Lizieri, 2004).

Sale-and-leasebacks in agriculture

As hinted previously, for any kind of asset, there may be countless variations within the structure of a sale-and-leaseback, be it due to different terms regarding the economic life of the asset, in what concerns the rent and how it is paid (cash, crop share, cost share etc.), the renewal options or potential repurchasing options (Bierlen & Parsch, 1996; Morris, 1977).

Agriculture is an asset intensive industry where farmland accounts for more than 80% of its asset base. As such, variations in the value of land – either up or down – severely impact the sector's financial health, since it is the primary asset for farmer wealth and the leading source of collateral for agricultural loans (Burnett *et al*, 2024; Henderson, 2008). If, before, land was seen

quintessentially as a collateral, fortunately lenders are increasingly justifying farm loans based on cash flows, even though theoretical models still suggest that the price of farmland is determined, in part, by the amount of debt it can carry (Deaton & Lawley, 2022).

Either way, when grounding loans or valuations on cash flows one must look at the farming activity itself which, justifiably, is viewed as risky both in terms of operating incomes (output prices and yields) and wealth accumulation (land prices). Anticipation of both these factors is rarely accurate *per se* and government policies viciously distort the markets with production plans and investment portfolios often needing to be revised (Just & Miranowski, 1993).

Market thinness

In what regards land, one can almost state that each parcel is unique and that, therefore, there's no sole market for land, but as many as the farms that exist which, ultimately, are not under the scope of a single general land market theory (Needham *et al*, 2011; Rios & Solé, 2007). For example, it is quite difficult to incorporate that each plot has a specific location and that these location characteristics are the desired for the demanders in geographical models even taking into account land use, price and use intensity (Needham *et al*, 2011).

Location is just one of the motives used to justify land market's thinness⁶. Size, quality, immobility and high search transaction costs could be added to the list (Kionka *et al*, 2021) turning land markets into a place specially propense to information asymmetries, uncertainty and opportunism. A thin market will, naturally, be less efficient since participants are not able to materialize desired purchases and sales on their own timings which entails that prices are not as informative (Burnett

⁶ 0.59% of agricultural land sold in Germany in 2019; below 1% annually between 2005 and 2015 for France, Ireland and Sweden; 0.35% for Greece in 2004; 0.62% for Spain in 2006 (Kionka *et al*, 2021). Less than 4% of all US land in farms was expected to be sold to from 2014 to 2019, and just over 2% of farmland was expected to be sold to a nonrelative of the current owner (Burnett *et al*, 2024). This compares to a turnover rate of roughly 2% per year in residential property markets (Bigelow *et al*, 2020). Moreover, considering this asset is not traded in any exchange, no bid-ask spread is available, metric usually used to perform liquidity assessments.

et al, 2024). Either way, Kionka *et al* (2021) states that, historically, land markets appear to be more of a seller's market in which typical trading strategies that immediately respond to price changes are less relevant because supply shocks that may happen are usually absorbed by a steady and high demand from expanding farms.

In addition to *asset* heterogeneity and immobility which, as seen, turns each transaction unique and relatively rare, *seller* and *buyer* heterogeneity may also induce some price dispersion for the same land characteristics due to the fact that different buyers have different goals, portfolios, access to information and willingness to pay. Humpesch *et al* (2023) concluded that, for buying land, informational advantages from local farmers resulted in price markdowns, while non-local buyers suffered with price markups mostly due to higher information and search costs. If the distinction, like in Huttel *et al* (2016b), is made by sector, non-agricultural buyers very likely face less financial restraints than farmers and, probably benefitting from more diversified portfolios, will end up bidding more aggressively, while farmers will have a better understanding of expected revenues from the land since they are probably more competent in assessing local infrastructure, accessibility, soil characteristics, zoning requirements, etc.

Another interesting point made in what regards different buyers and how it leads to price dispersion is made by Humpesch *et al* (2023) who state that non-operating/non-farmer buyers who do not intend to operate the land will find it advantageous to have an existing tenant since no additional costs have to be incurred to find one, while an operating/farmer buyer will see it as a drawback.

In what concerns the sell side, it is also clear by Humpesch *et al* (2023) research that institutional and professional sellers usually achieve markups when selling when compared against private sellers.

Bierlen & Parsch (1996) postulate why land-lease markets may present some inherent inefficiencies which are similar to the motives for, and a result of, land-market thinness. The

authors point out that, because land is heterogeneous and its quality difficult to quantify, information asymmetries may arise which can only be reduced by significant expenditure or use of the land by the tenant. In addition, since new land leases tend to be infrequent for a tenant, they may be poorly informed about lease markets. Deaton & Lawley (2022) also point out that landlord absenteeism (proxied by physical distance between the parcel and the landlord) may be an indicator of less information on rental markets and, thus, less bargaining power.⁷

In an operational sale-and-leaseback this information asymmetry is not worrisome to the tenant, and, in fact, if the tenant tries to “oversell” the asset on its land qualities, it will very likely “overpay” in rents, thus we feel it is less prone to information biases than traditional isolated sales or isolated leases.

Land Valuation

Even though, as stated, land markets offer some complexity and usually derive from fundamental values due to market imperfections (asymmetric information, transaction costs⁸, bargaining power, thin trading, etc.) (Bigelow *et al*, 2020), they should still be thoroughly analyzed since, for instance, Falk & Lee (1998) believe these deviations may have importance in the short run, but not in the long run since they appear to be a combination of overreactions to temporary fundamental shocks and reactions to nonfundamental factors.

Like almost everything else, land prices are closely dependent on the rents that it can generate, while being both a production factor and an asset whose value rests on future economic returns. Returns and prices can traditionally be related using a Net Present Value framework whereas rents reflect the single period net value derived from productive uses and prices the benefits derived

⁷ It would be interesting to assess, in further studies, the hypothesis of confirmation of the absenteeism factor in institutional investors, or if these could somehow compensate for their lack of physical proximity.

⁸ Deaton & Lawley (2022) affirmed that transaction costs involved in transferring ownership of farmland in the US typically exceeded 7.5% of the farmland price.

from present and future use of the land. In the end, production costs, access to local agricultural infrastructure, crop prices, government payments and taxes will be a key determinant of farmland values (Deaton & Lawley, 2022; OECD,2008). As pointed out by Krause & Brorsen (1995) some authors found that most of the growth in real land prices could be explained by growth in net rent (and not by speculative forces or inflation⁹) and that these, despite being highly correlated are much less volatile than price movements. These net rents can be proxied by a lot of factors such as naïve expectations or moving averages of net income, net crop returns, rental rates, crop receipts and expenses (Deaton & Lawley, 2022).

How you discount the above-mentioned returns is a major determinant of new investments in agriculture and are of vital interest for a study, like the present, focused on optimal long-term capital accumulation. Since the majority of the returns from farmland occur in the future, a high discount rate (representing a high opportunity cost of capital) will diminish present value of these returns, thus dampening the present value of land itself (Deaton & Lawley, 2022).

Lagerkvist (1999) found that the cost of capital differed to a non-negligible extent between countries as well as between farm types and sizes, but reinforced that each asset category was characterized by different rates of price inflation, economic depreciation and fiscal allowances, for example. A specific cost of capital for the farmer can be derived as the point of indifference between investments in and outside the agricultural firm.

⁹ The discussion is rich in this field and a lot of empirical studies have been consulted regarding this matter. Moss (1997) explained land prices using inflation, return to agricultural assets and the cost of capital while also indicating land values to be more sensitive to asset returns in regions with higher government payments, Just & Miranowski (1993) focused their analysis on inflation and how land prices follow it with a short lag, Krause & Brorsen (1995) identified risk as a factor in explaining land price, Patton & McErlean (2003) found that agricultural land prices were not based solely on land intrinsic characteristics, but rather reflected the average local price per unit of area, and, more recently, Burnet *et al* (2024) stated that farm returns and interest rates were the main determinants of land values but confirmed that landowners acquired land values from their peer networks.

One characteristic that is indubitable in land markets and agriculture in general is that it may very well be a policy-driven industry where subsidies, tariffs and legislation drive profits. Particularly government policies can affect rentals through capitalization phenomenon and, as we've seen, these have a tight relation with land prices, even though interactions with the capital market, pressure from urbanization or land zoning restrictions all enter into the fuller understanding of land price formation (OECD, 2008).

Holding period

Underpinning this whole conversation about land prices has been the *holding period* of the land. It is known that non-farmers usually have a shorter holding period than farmers who intend to use land as a production factor – these usually buy, and hold (Kionka *et al*, 2021).

In geographies and periods where land values are increasing, owners of land are led to balance the need to use their land as a productive asset against their need to optimize the long-term benefit of its ownership via capital gains (Adelaja *et al*, 2010). In these contexts, it is easy to think that, for example, for any Malthusian thesis we can think of, combined with a fixed land supply, farmland prices are always to increase, which always ends up rebuffed.¹⁰ That said, economically, *holding* the land gives you access to the sum of the returns from its use and the speculative returns from its value evolution, and *selling* the land is equivalent to investing the proceeds of a sale, minus the transaction costs associated with the sale, in any other market instrument (Adelaja *et al*, 2010).

¹⁰ Theory would imply that increases in future farm and non-farm returns would increase farmland values and hasten the timing (all else equal) of land use transition (Deaton & Lawley, 2022), however, since “*greed is good*”, these market tendencies, in assets so immobile as land, can, and do, lead to some hoarding behavior from the point when the rate of appreciation exceeds the threshold of what owners of land might expect from selling the land and investing the proceeds in some other investment (Adelaja *et al*, 2010). Additionally, also important to note is that there is no such thing as “fixed supply of land” – nowadays, with rising land costs, it is cost efficient to dynamite a rocky terrain or level a whole hillock if you can irrigate it afterwards (note that no economical case could be made for that parcel before it got dynamited and/or leveled). In fact, Smil (2021) points that global irrigated land quintupled during the 20th century, of less than 50Mha to more than 250Mha, reaching *circa* 275Mha in 2015. During the 20th century, agricultural land expanded more than 40% and, in 2000, an average hectare of agricultural land received 90 times more energy apportion than it did in 1900.

The effects stated also implicate leaseholds and their durations, being quite intuitive that term will be a determinant of the contract price, that is, the leasing rate upon which tenant and landlord agree when the contract is concluded reflects the spot rent that is expected to prevail during the contract period which, in turn, is obtained by land availability in the future (alternatives) and expected cash flows from its use. With price of land rental contracts with different maturities which have thus to contain information about expected conditions on land rental markets in each different term, one should obtain something similar to the term structure of interest rates or commodity futures (Huttel *et al*, 2016a).

Either to land values or to rental rates, land that is more productive and produces higher yields for the same level of inputs will have higher cash returns per acre, leading to both value and rental appreciation (Burns. C *et al*, 2018).

Numerical analysis

In the same way P/E works for stocks, Price-to-Rent can be a simplistic valuation tool and allow for comparison amongst land values, growth expectations incorporated on present prices and to assess the market sentiment.

In this setting, typical capitalization models can be used to compare land to other investment opportunities, for example, comparing P/E ratios of stocks with the price to rent ratio of farmland as suggested in Deaton & Lawley (2022). From the author's knowledge of the market, the price to rent ratio of farmland (average capitalization rate of cropland rents into farmland values) varies between 20 and 25 while, for example, earnings' generating companies of the PSI-20 have an arithmetic P/E average of 12.2 and a sample of earnings' generation agricultural companies have

an arithmetic P/E average of 16.7¹¹. By this criterion, other stated investment opportunities might look more attractive in this specific point in time, as shown in Annex 2.

Burns *et al* (2018) went a step further and used capitalized rent values to estimate if current farm returns supported land values. To do that he divided the cash rent by the interest rate on the 10-year Treasury note, since both land and treasury notes are considered safe investments and, thus, comparable. In fact, one can also capitalize land assets using an interval for a net annual income from that asset and dividing it by different capital costs – be it the risk-free asset for Portugal, the risk-free asset for the world in general, a sample of agricultural listed companies or our own specific cost of capital. In this exercise, whereas rents reflect the single period net value derived from productive uses, prices will replicate the benefits derived from present and future use of the land discounted by your specific cost of capital. This will give *your* fundamental value for the land and your *buyer-lessor* fundamental value for the land. It all comes down to your cost of capital in a sale-and-leaseback.

Hence, dividing how quickly an asset can pay for itself (cash rent of 5% indicates that farmland pays for itself, assuming its financed only through rent, in 20 years) for an equivalently risk-adjusted return should amount to 1 *if farm returns were supporting farmland values*. On the one hand, if this price-to-value ratio is above 1 it means that your capitalization on land is inferior to the capitalization on the equivalent asset, and therefore good timing for selling. On the other hand, if this price-to-value ratio is below 1 it means that the rents being paid (or that result from the asset's operations) are giving you a higher return than the equivalent asset. What Burns *et al* (2018) found was that farmland returns generally did not support farmland values and that, in the rare

¹¹ Data retrieved in October 2024.

periods where they did, they couldn't have in a period of rising interest rates (which, as stated, aid the alternatives).

The author roughly confirmed these findings, that is, as shown in Annex 3, for the market value of rents – usually between €1.000/ha and €1.200/ha – market value of land – usually at €20.000/ha - is only supported if you're considering alternative investments in government bonds, since, if you're considering your investment as riskier and, therefore demanding a higher return (increasing your cost of capital) you are not financing the whole value of the asset with the stated rents.

To further compare, not only rent-to-value, but also different capital structures when buying and operating land, the author compared four projects, per hectare, with common assumptions for:

- Operating margins - €5.000, with €10.000 for revenues and €5.000 for operating costs;
- Effective tax rate – 25%
- Minimum taxable income – 30%
- Land value - €20.000
- Inflation – 2%
- Rent CPI – 1.5%
- Risk-free asset – American 10Y T-Bond with a 4.09% yield
- Cost of equity – CAPM formula – $R_f + \beta * MRP$
 - Risk-free rate - American 10Y T-Bond with a 4.09% yield
 - β – Average of unlevered betas for selected agricultural listed companies – 1.03
 - $\beta_{levered} / (1+(1+ \text{Tax Rate})*(\text{Net Debt}/\text{Equity}))$
 - Market risk premium – 5.5%, based on Mckinsey – Valuation (2015), that is, considering the difference between the annualized arithmetic averages of the US stock returns and the US government bonds from 1900-2014 from Dimson, Marsh

and Staunton (1900-2002) and Morningstar SBBI (2003-2014) for a holding period of 10 years (coincident with the risk-free asset utilized)

The four scenarios consisted of

1. Buying land, fully owning it, with equity only
2. Renting land without owning it, with equity only
3. Buying land, fully owning it, but using debt
4. Buying land, finishing the project fully owning it, using a financial lease

For the remaining assumptions the author used market values based on his experience and best knowledge, namely:

- Annual rents - €1.100
- Loan-to-Value – 40%
- Loan Spread Rate – 2.42%
- Lease-to-Value – 75%
- Leasing Spread Rate – 5%

Debt has variable interest, is paid in fixed installments during ten years and has three years of grace period. The EURIBOR forward rate was extracted from Chatam Financial on October 10th.

The cash flows were first designed with constant prices and then adjusted for inflation, which is especially pertinent considering that most of the cash flows from agricultural activities in permanent crops (for which the cash flows were designed) take a few years to turn positive. In the end, separate cash flows were designed for simulation of different land appreciation scenarios.

Cash flows were designed using the typical structure to reach the Levered Free Cash Flow of the project, that is:

$$\text{Revenue} - \text{Operating Costs} = \text{Gross Margin}$$

$$\text{Gross Margin} - \text{Rent Payments} = \text{EBITDA}$$

$$\text{EBITDA} - \text{D\&A} = \text{EBIT}^{12}$$

$$\text{EBIT} - \text{Interest} = \text{EBT}$$

$$\text{EBT} - \text{NOL Shield} = \text{Taxable Income}$$

$$\text{Taxable Income} * \text{Effective Tax Rate} = \text{Income Taxes}$$

$$\text{EBT} - \text{Income Taxes} = \text{Net Income}$$

$$\text{Net Income} + \text{D\&A} = \text{Operating Cash Flow}$$

$$\text{CAPEX} = \text{Purchase} - \text{Sale} = \text{Investing Cash Flow}$$

$$\text{Operating Cash Flow} + \text{Investing Cash Flow} = \text{Unlevered Free Cash Flow}$$

$$\text{Debt Issuance/Amortization} + \text{Interest Expenses} = \text{Financing Cash Flow}$$

$$\text{Unlevered Free Cash Flow} + \text{Financing Cash Flow} = \text{Levered Free Cash Flow}$$

Bringing these levered free cash flows to present values and summing them, the NPV of each option was obtained. Solving for a 0 NPV, gave us the IRR.

The discount factor resulted from application of the CAPM and the WACC formula with the already mentioned assumptions resulted in the unlevered cost of equity for the two first options – 9.78% - and a weighted average cost of capital of 9.27% in the third scenario and 9.30% in the

¹² Note that since we're discussing land and the CAPEX involving the operations themselves is not incremental between projects, no D&A is materialized in any of the scenarios.

fourth scenario. The cost of equity in the leveraged scenarios was corrected using Modigliani & Miller 2nd Proposition (corrected for taxes). With this correction of the cost of equity and the cost of debt due to increased gearing (it affects both differently) the final cost of capital considering the raw beta (not adjusting for mean reverting properties of the asset) is quite similar, but still supporting that increased gearing reduces cost of capital in a world with taxes.

	Owned	Rental Land	Owned with Debt	Financial Leasing
Equity	100%	100%	60%	25%
Debt	0%	0%	40%	75%
Risk-free asset	4.09%	4.09%	4.09%	4.09%
Unlevered Equity Beta	1.03	1.03	1.03	1.03
Market Risk Premium	5.50%	5.50%	5.50%	5.50%
Cost of Equity	9.78%	9.78%	12.33%	15.46%
Tax rate	25%	25%	25%	25%
Pre-tax Cost of Debt	4.23%	4.23%	4.67%	7.25%
Cost of Debt	3.17%	3.17%	3.50%	5.44%
WACC	9.78%	9.78%	9.27%	9.30%

Results were ordered below according to increased NPV in the current prices cash-flow with the highest NPV generating scenario being the “financial leasing” followed by “owned with debt”, “rental” and “owned”. In fact, both the “financial leasing” and the “owned with debt” almost double the NPV generated by the “owned” scenario.

In the Land Appreciation Scenarios put together, land had to appreciate by 2.85 times in 25 years in order for the NPV of the fully equity owned scenario to be superior to the NPV of the rental scenario, and just barely. With the considered inflation of 2%, this would mean selling the land in 2048 at €91.681/ha.

All the corresponding cash flows are presented in Annex 4 and Annex 5.

		Current Prices		Land Appreciation Scenario	
Summary	Cost of Capital	NPV	IRR	NPV	IRR
Owned	9.78%	6,172 €	11.51%	12,516 €	12.69%
Rental Land	9.78%	12,514 €	17.44%	12,514 €	17.44%
Owned w/debt	9.27%	14,687 €	14.03%	21,782 €	15.05%
Financial Leasing	9.30%	18,393 €	16.46%	25,432 €	17.37%

Conclusion

It is interesting to note that typical asset pricing models such as the ones presented leave implicit a consistent departure of market returns on land fundamentals and others have also failed in explaining short run departures and long run reversions (Turvey, 2003). Kionka *et al* (2021) also stated that sellers (buyers) require a lower (higher) rent-to-price ratio before they optimally decide to sell (buy) land.

The author started this analysis from the standpoint of an agricultural market player – a big family office where the strategy focused on the assumed ability to generate superior returns from operations, mostly because of scale and geography (later also by diversification) with a long-term view. Pressure on its capital efficiency is leading to the contemplation of disposal of low-yielding assets, such as real estate, in this case, land, so as to obtain cash and invest it in their core business.

Nevertheless, capital gains from rising land prices can and may represent the most important element of long-term value-creation for agricultural landowners and, in fact, the author and the investors note there is, of course, an unrealized appreciation of value in the balance sheet in the form of land price increases.

What needs to be assessed is, if, when the operational returns from large-scale economies, in an advantageous geography and with a diversified portfolio are confirmed, what would be the market conditions that allowed capitalization of the corresponding price appreciation gains through land sales (incorporated or not in a sale-and-leaseback). As Pritchard *et al* (2023) states, farm family offices can strategically position themselves as operators able to establish profitable assets at a scale ready to be incorporated in big institutions.

As an operational team has already been established with excellent levels of efficiency, the company is a considerably levered start-up with not a lot of financing alternatives and even though there is a long-term view in the company, a sale-and-leaseback could still be contemplated. Summarizing, the decision-making project for growth purposes (which is the main focus of this work), when considering a sale-and-leaseback, will depend on management's certainty of operational efficiency, the prospects for the sector and the specific project the proceeds will support – in the end, retaining capital in the firm is valid only if the anticipated return on that capital is greater than the returns the shareholders could get for comparably risky projects elsewhere – and that's why market costs of capital should be used in this appraisal. In this, two transactions need to be assessed: i) the seller-lessee receives cash from the sales of the asset¹³; ii) the seller-lessee pays periodic rent payments to the buyer-lessor to retain the use of the asset.

¹³ Note that, if considering the asset is sold at a fair price, one can, as done by Wells & Whitby (2012), compare the incremental cost of issuing debt against an SLB lease rate as a fund-raising mechanism (lease-to-value request by the buyer-lessor) and “be done with it” as done in our scenarios. The problem seems to be the valuation of the land.

It will, whatever the case may be, remain of significant importance to understand key determinants of farmland prices (Nickerson & Zhang, 2014), but in truthness, particularly in Portugal, researchers need to focus on increasing the availability of data in general and, specially, disaggregated data since, as stated throughout this paper, there are many factors (e.g. distance from urban centers or proximity to deliver-points) that can widely impact aggregated data.

Valuing land is the hardest part, particularly considering that market thinness, non-informative prices, information asymmetries¹⁴, high search and transaction costs, not being able to materialize a sale on your timings, asset heterogeneity (size, quality which is difficult to quantify, etc.), immobility, new cost reducing technologies, free trade agreements, new supply of land, biotechnologies and pharmaceuticals, unfound nutritional values, future conversion of land to non-agricultural uses (specific to plot location), government policies, economic conditions that are highly unpredictable over long horizons (such as price of inputs, commodity prices and technological changes) all reduce the relative benefits of sophisticated decision approaches. That is to say that, in a market as inefficient as is the land market, value creation and destruction can be found much more easily in the sources of the inefficiency and not as much in modulating and parametrizing sophisticated dynamic decision rules since, as Just & Miranowski affirm (1993), farmers have been slow to respond to wide swings in land markets, since they do not possess or employ the resources necessary to do just that and thus employ more naïve decision rules.

Besides giving a simple model which fits a certain offer for buying/selling land in the context of specific capital costs and according capitalized fundamental values, this paper presents an extensive overview of a number of factors that should impact the decision-making process in a

¹⁴ In a sale-and-leaseback this information asymmetry is not worrisome to the tenant, and, in fact, if the tenant tries to “oversell” the asset on its land qualities, it will very likely “overpay” in rents, thus we feel it is less prone to information biases than traditional isolated sales or isolated leases. Either way, these may exist.

market that is only “linear and direct”, when one does not account for a number of factors present in its intricacy and complexity. Additionally, it brings to the table a topic that is not common in academic literature which is the valuing of sale-and-leasebacks to agriculture, particularly directing land valuing and leases in agriculture research to this combined form of financing for an agricultural company.

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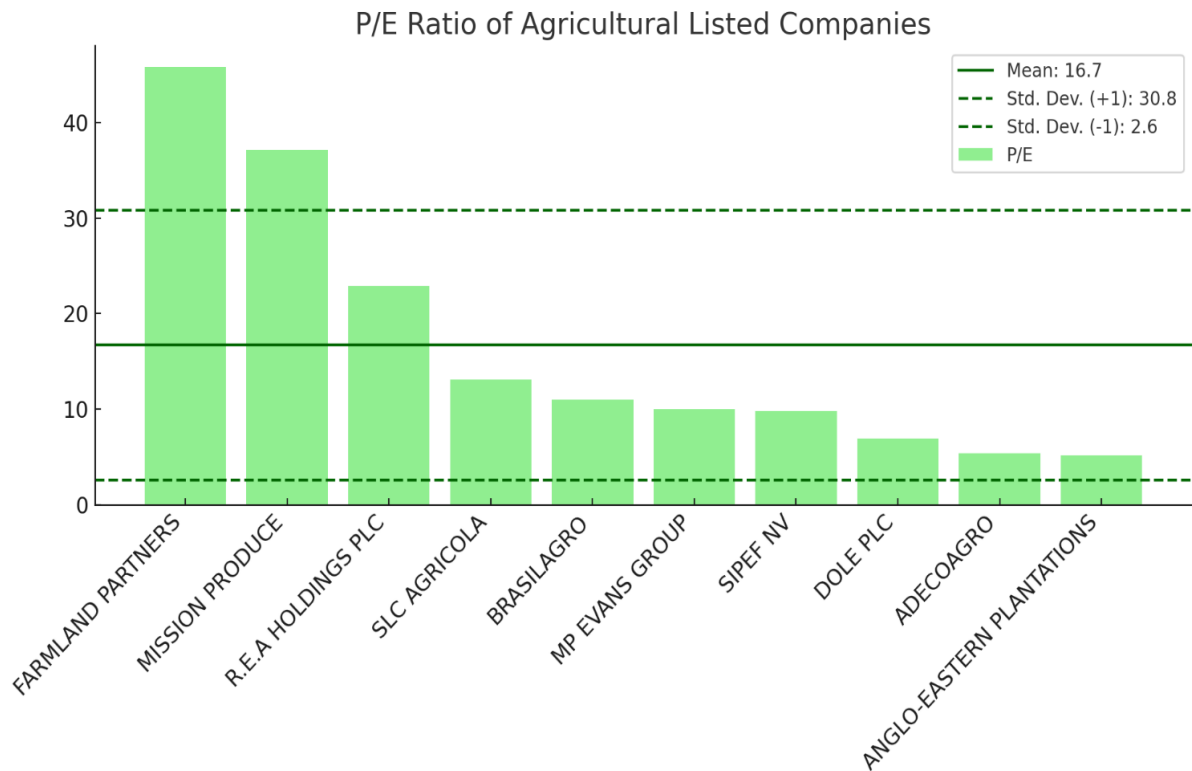
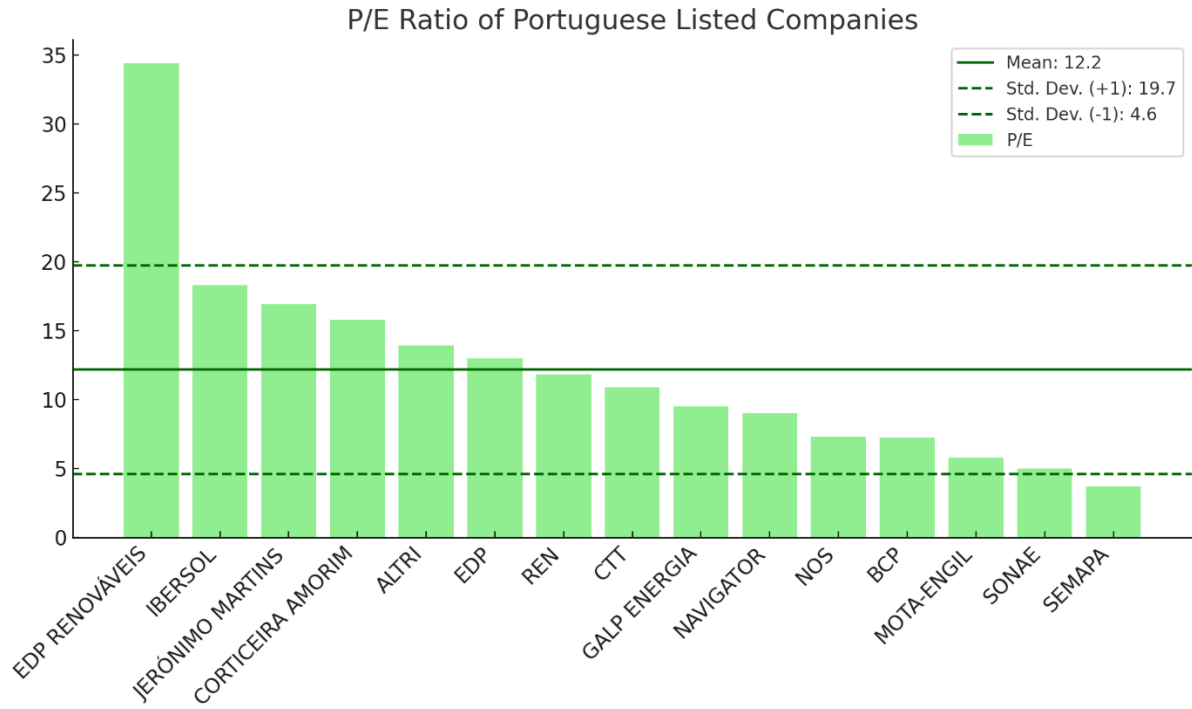
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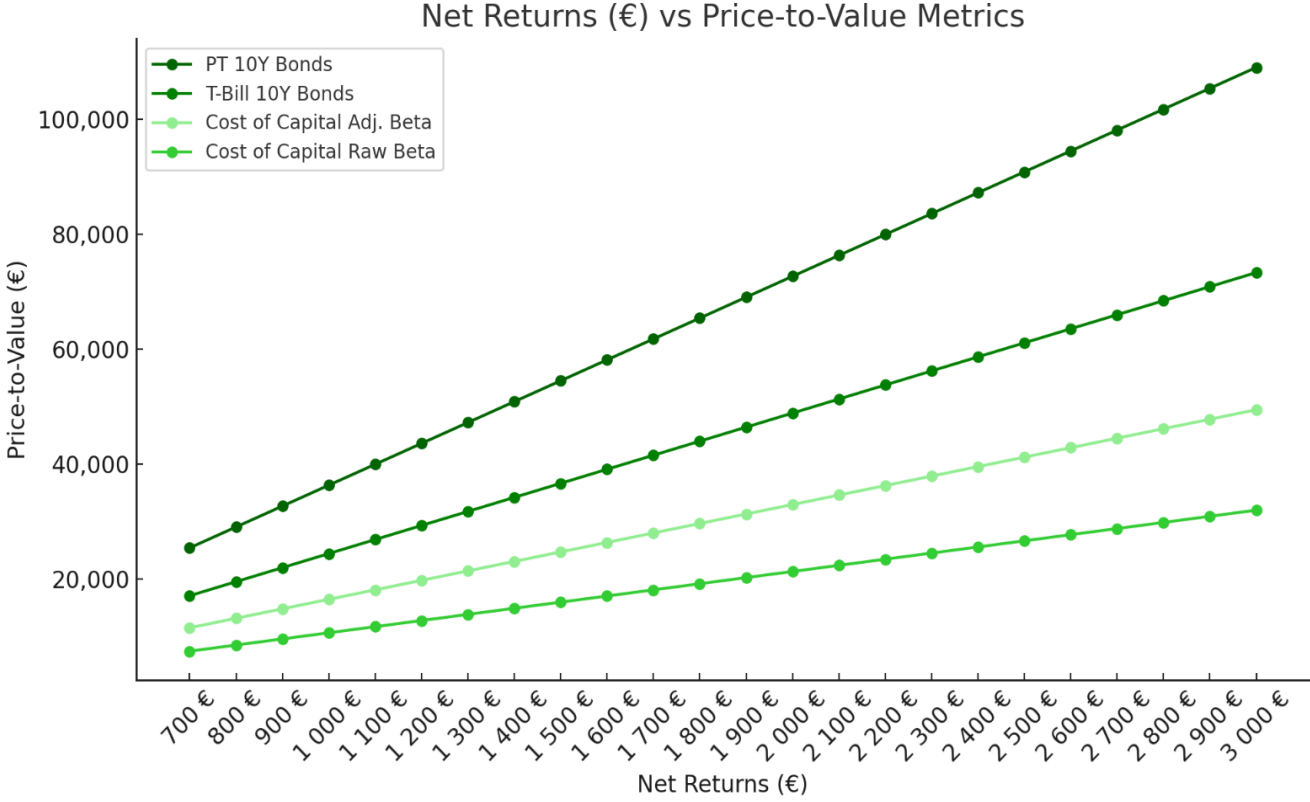
Annex 1 – Review on academic literature on sale-and-leasebacks

Author	Conclusions Regarding Sale-and-Leaseback
Rutherford (1990)	Sale-and-leaseback results in substantial benefits for the seller-lessee with insignificant losses for the buyer-lessor. No abnormal returns in perfect capital markets, but empirical evidence shows benefits.
Ezzell & Vora (2001)	Sale-and-leasebacks lead to significant positive market changes, especially when unlocking cash for growth, but less significant in direct leases. Markets value the liquidity unlocked by these transactions.
Devaney & Lizieri (2004)	Bondholders' reactions may erode the advantages due to loss of collateral in case of default, and the lease increases gearing. However, reinvested capital can enhance security and interest coverage.
Elayan et al. (2006)	More positive market reaction for firms with strong liquidity and higher-rated debt. Consistent with better financing terms for creditworthy seller-lessees. Sale-and-leasebacks are effectively zero NPV projects.
Sirmans & Slade (2010)	Sale-and-leaseback transactions occur at significantly higher prices than selloffs, with a premium relative to non-sale-and-leaseback properties.
Wells & Whitby (2012)	Market perceives funds from sale-and-leasebacks as value-enhancing when used for growth, but not when used for debt obligations. Returns correlate with price-to-earnings and negatively with debt structure.
Whitby (2013)	Positive abnormal returns on sale-and-leaseback announcements, especially for debt reduction motives. Higher returns associated with real estate over equipment. Sale-and-leaseback as an alternative to external financing for more leveraged firms with lower tax rates.

Annex 2 – P/E Ratio of selected stocks



Annex 3 – Capitalized land value given different net returns and costs of capital



Cost of Capital		9.27%																							
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Revenue	- €	- €	- €	10,612 €	10,824 €	11,041 €	11,262 €	11,487 €	11,717 €	11,951 €	12,190 €	12,434 €	12,682 €	12,936 €	13,195 €	13,459 €	13,728 €	14,002 €	14,282 €	14,568 €	14,859 €	15,157 €	15,460 €	15,769 €	16,084 €
Operating Costs	- 5,000 €	- 5,100 €	- 5,202 €	- 5,306 €	- 5,412 €	- 5,520 €	- 5,631 €	- 5,743 €	- 5,858 €	- 5,975 €	- 6,095 €	- 6,217 €	- 6,341 €	- 6,468 €	- 6,597 €	- 6,729 €	- 6,864 €	- 7,001 €	- 7,141 €	- 7,284 €	- 7,430 €	- 7,578 €	- 7,730 €	- 7,884 €	- 8,042 €
Gross Margin	- 5,000 €	- 5,100 €	- 5,202 €	5,306 €	5,412 €	5,520 €	5,631 €	5,743 €	5,858 €	5,975 €	6,095 €	6,217 €	6,341 €	6,468 €	6,597 €	6,729 €	6,864 €	7,001 €	7,141 €	7,284 €	7,430 €	7,578 €	7,730 €	7,884 €	8,042 €
Rent Payments	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
EBITDA	- 5,000 €	- 5,100 €	- 5,202 €	5,306 €	5,412 €	5,520 €	5,631 €	5,743 €	5,858 €	5,975 €	6,095 €	6,217 €	6,341 €	6,468 €	6,597 €	6,729 €	6,864 €	7,001 €	7,141 €	7,284 €	7,430 €	7,578 €	7,730 €	7,884 €	8,042 €
D&A	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
EBIT	- 5,000 €	- 5,100 €	- 5,202 €	5,306 €	5,412 €	5,520 €	5,631 €	5,743 €	5,858 €	5,975 €	6,095 €	6,217 €	6,341 €	6,468 €	6,597 €	6,729 €	6,864 €	7,001 €	7,141 €	7,284 €	7,430 €	7,578 €	7,730 €	7,884 €	8,042 €
Interest	- €	- 381 €	- 389 €	- 396 €	- 357 €	- 331 €	- 300 €	- 265 €	- 228 €	- 188 €	- 145 €	- 100 €	- 51 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
EBT	- 5,000 €	- 5,481 €	- 5,591 €	4,910 €	5,055 €	5,189 €	5,331 €	5,478 €	5,631 €	5,788 €	5,950 €	6,117 €	6,290 €	6,468 €	6,597 €	6,729 €	6,864 €	7,001 €	7,141 €	7,284 €	7,430 €	7,578 €	7,730 €	7,884 €	8,042 €
Net Operating Losses Shield	- €	- €	- €	- 3,437 €	- 3,539 €	- 3,632 €	- 3,732 €	- 3,828 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
Taxable Income	- 5,000 €	- 5,481 €	- 5,591 €	1,473 €	1,517 €	1,557 €	1,599 €	2,450 €	5,631 €	5,788 €	5,950 €	6,117 €	6,290 €	6,468 €	6,597 €	6,729 €	6,864 €	7,001 €	7,141 €	7,284 €	7,430 €	7,578 €	7,730 €	7,884 €	8,042 €
Minimum Taxable	- €	- €	- €	1,473 €	1,517 €	1,557 €	1,599 €	1,643 €	1,689 €	1,736 €	1,785 €	1,835 €	1,887 €	1,940 €	1,979 €	2,019 €	2,059 €	2,100 €	2,142 €	2,185 €	2,229 €	2,273 €	2,319 €	2,365 €	2,413 €
Income Taxes	- €	- €	- €	- 368 €	- 379 €	- 389 €	- 400 €	- 613 €	- 1,408 €	- 1,447 €	- 1,487 €	- 1,529 €	- 1,572 €	- 1,617 €	- 1,649 €	- 1,682 €	- 1,716 €	- 1,750 €	- 1,785 €	- 1,821 €	- 1,857 €	- 1,895 €	- 1,932 €	- 1,971 €	- 2,011 €
Net Income	- 5,000 €	- 5,481 €	- 5,591 €	4,541 €	4,676 €	4,800 €	4,931 €	4,866 €	4,223 €	4,341 €	4,462 €	4,588 €	4,717 €	4,851 €	4,948 €	5,047 €	5,148 €	5,251 €	5,356 €	5,463 €	5,572 €	5,684 €	5,797 €	5,913 €	6,032 €
Net Operating Losses	5,000 €	10,581 €	16,383 €	13,274 €	10,001 €	6,569 €	2,968 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
Net Income	- 5,000 €	- 5,481 €	- 5,591 €	4,541 €	4,676 €	4,800 €	4,931 €	4,866 €	4,223 €	4,341 €	4,462 €	4,588 €	4,717 €	4,851 €	4,948 €	5,047 €	5,148 €	5,251 €	5,356 €	5,463 €	5,572 €	5,684 €	5,797 €	5,913 €	6,032 €
D&A	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
Operating Cash Flow	- 5,000 €	- 5,481 €	- 5,591 €	4,541 €	4,676 €	4,800 €	4,931 €	4,866 €	4,223 €	4,341 €	4,462 €	4,588 €	4,717 €	4,851 €	4,948 €	5,047 €	5,148 €	5,251 €	5,356 €	5,463 €	5,572 €	5,684 €	5,797 €	5,913 €	6,032 €
Purchase	- 12,000 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
Sale	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
Investing Cash Flow	- 12,000 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
Unlevered Free Cash Flow	- 17,000 €	- 5,481 €	- 5,591 €	4,541 €	4,676 €	4,800 €	4,931 €	4,866 €	4,223 €	4,341 €	4,462 €	4,588 €	4,717 €	4,851 €	4,948 €	5,047 €	5,148 €	5,251 €	5,356 €	5,463 €	5,572 €	5,684 €	5,797 €	5,913 €	38,200 €
PV	- 17,000 €	- 5,016 €	- 4,683 €	3,481 €	3,281 €	3,082 €	2,898 €	2,617 €	2,078 €	1,955 €	1,840 €	1,731 €	1,629 €	1,533 €	1,431 €	1,336 €	1,247 €	1,164 €	1,087 €	1,015 €	947 €	884 €	825 €	770 €	4,555 €
Debt Issuance/Amortisation	8,000 €	- €	- €	- 849 €	- 866 €	- 883 €	- 901 €	- 919 €	- 937 €	- 956 €	- 975 €	- 995 €	- 1,015 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
Interest Expenses	- €	- 381 €	- 389 €	- 396 €	- 357 €	- 331 €	- 300 €	- 265 €	- 228 €	- 188 €	- 145 €	- 100 €	- 51 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
Financing Cash Flow	8,000 €	- 381 €	- 389 €	- 1,245 €	- 1,223 €	- 1,215 €	- 1,200 €	- 1,184 €	- 1,165 €	- 1,144 €	- 1,121 €	- 1,095 €	- 1,066 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
Levered Free Cash Flow	- 9,000 €	- 5,862 €	- 5,979 €	3,296 €	3,453 €	3,585 €	3,731 €	3,681 €	3,058 €	3,197 €	3,342 €	3,493 €	3,651 €	4,851 €	4,948 €	5,047 €	5,148 €	5,251 €	5,356 €	5,463 €	5,572 €	5,684 €	5,797 €	5,913 €	38,200 €
PV	- 9,000 €	- 5,365 €	- 5,008 €	2,527 €	2,423 €	2,302 €	2,192 €	1,980 €	1,505 €	1,440 €	1,378 €	1,318 €	1,261 €	1,533 €	1,431 €	1,336 €	1,247 €	1,164 €	1,087 €	1,015 €	947 €	884 €	825 €	770 €	4,555 €

Cost of Capital		9.30%																							
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048
Revenue	- €	- €	- €	10,612 €	10,824 €	11,041 €	11,262 €	11,487 €	11,717 €	11,951 €	12,190 €	12,434 €	12,682 €	12,936 €	13,195 €	13,459 €	13,728 €	14,002 €	14,282 €	14,568 €	14,859 €	15,157 €	15,460 €	15,769 €	16,084 €
Operating Costs	- 5,000 €	- 5,100 €	- 5,202 €	- 5,306 €	- 5,412 €	- 5,520 €	- 5,631 €	- 5,743 €	- 5,858 €	- 5,975 €	- 6,095 €	- 6,217 €	- 6,341 €	- 6,468 €	- 6,597 €	- 6,729 €	- 6,864 €	- 7,001 €	- 7,141 €	- 7,284 €	- 7,430 €	- 7,578 €	- 7,730 €	- 7,884 €	- 8,042 €
Gross Margin	- 5,000 €	- 5,100 €	- 5,202 €	5,306 €	5,412 €	5,520 €	5,631 €	5,743 €	5,858 €	5,975 €	6,095 €	6,217 €	6,341 €	6,468 €	6,597 €	6,729 €	6,864 €	7,001 €	7,141 €	7,284 €	7,430 €	7,578 €	7,730 €	7,884 €	8,042 €
Rent Payments	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
EBITDA	- 5,000 €	- 5,100 €	- 5,202 €	5,306 €	5,412 €	5,520 €	5,631 €	5,743 €	5,858 €	5,975 €	6,095 €	6,217 €	6,341 €	6,468 €	6,597 €	6,729 €	6,864 €	7,001 €	7,141 €	7,284 €	7,430 €	7,578 €	7,730 €	7,884 €	8,042 €
D&A	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
EBIT	- 5,000 €	- 5,100 €	- 5,202 €	5,306 €	5,412 €	5,520 €	5,631 €	5,743 €	5,858 €	5,975 €	6,095 €	6,217 €	6,341 €	6,468 €	6,597 €	6,729 €	6,864 €	7,001 €	7,141 €	7,284 €	7,430 €	7,578 €	7,730 €	7,884 €	8,042 €
Interest	- €	- 1,109 €	- 1,131 €	- 1,154 €	- 1,046 €	- 963 €	- 867 €	- 764 €	- 654 €	- 537 €	- 414 €	- 284 €	- 146 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
EBT	- 5,000 €	- 6,209 €	- 6,333 €	4,152 €	4,366 €	4,557 €	4,764 €	4,979 €	5,205 €	5,438 €	5,681 €	5,933 €	6,196 €	6,468 €	6,597 €	6,729 €	6,864 €	7,001 €	7,141 €	7,284 €	7,430 €	7,578 €	7,730 €	7,884 €	8,042 €
Net Operating Losses Shield	- €	- €	- €	- 2,906 €	- 3,056 €	- 3,190 €	- 3,335 €	- 3,486 €	- 3,196 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
Taxable Income	- 5,000 €	- 6,209 €	- 6,333 €	1,246 €	1,310 €	1,367 €	1,429 €	1,494 €	5,438 €	5,681 €	5,933 €	6,196 €	6,468 €	6,597 €	6,729 €	6,864 €	7,001 €	7,141 €	7,284 €	7,430 €	7,578 €	7,730 €	7,884 €	8,042 €	
Minimum Taxable	- €	- €	- €	1,246 €	1,310 €	1,367 €	1,429 €	1,494 €	1,561 €	1,632 €	1,704 €	1,780 €	1,859 €	1,940 €	1,979 €	2,019 €	2,059 €	2,100 €	2,142 €	2,185 €	2,229 €	2,273 €	2,319 €	2,365 €	2,413 €
Income Taxes	- €	- €	- €	- 311 €	- 327 €	- 342 €	- 357 €	- 373 €	- 502 €	- 1,360 €	- 1,420 €	- 1,483 €	- 1,549 €	- 1,617 €	- 1,649 €	- 1,682 €	- 1,716 €	- 1,750 €	- 1,785 €	- 1,821 €	- 1,857 €	- 1,895 €	- 1,932 €	- 1,971 €	- 2,011 €
Net Income	- 5,000 €	- 6,209 €	- 6,333 €	3,841 €	4,038 €	4,215 €	4,407 €	4,606 €	4,702 €	4,079 €	4,261 €	4,450 €	4,647 €	4,851 €	4,948 €	5,047 €	5,148 €								

Annex 5 – Cash flow at current prices w/land appreciation – i) owned; ii) owned w/debt; iii) financial leasing

Cost of Capital	9.27%																									
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	
Revenue	- €	- €	- €	10,612 €	10,824 €	11,041 €	11,262 €	11,487 €	11,717 €	11,951 €	12,190 €	12,434 €	12,682 €	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	#####	16,084 €
Operating Costs	- 5,000 €	- 5,100 €	- 5,202 €	- 5,306 €	- 5,412 €	- 5,520 €	- 5,631 €	- 5,743 €	- 5,858 €	- 5,975 €	- 6,095 €	- 6,217 €	- 6,341 €	- 6,468 €	- 6,597 €	- 6,729 €	- 6,864 €	- 7,001 €	- 7,141 €	- 7,284 €	- 7,430 €	- 7,578 €	- 7,730 €	- 7,884 €	- 8,042 €	- 8,042 €
Gross Margin	- 5,000 €	- 5,100 €	- 5,202 €	5,306 €	5,412 €	5,520 €	5,631 €	5,743 €	5,858 €	5,975 €	6,095 €	6,217 €	6,341 €	6,468 €	6,597 €	6,729 €	6,864 €	7,001 €	7,141 €	7,284 €	7,430 €	7,578 €	7,730 €	7,884 €	8,042 €	8,042 €
Rent Payments	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
EBITDA	- 5,000 €	- 5,100 €	- 5,202 €	5,306 €	5,412 €	5,520 €	5,631 €	5,743 €	5,858 €	5,975 €	6,095 €	6,217 €	6,341 €	6,468 €	6,597 €	6,729 €	6,864 €	7,001 €	7,141 €	7,284 €	7,430 €	7,578 €	7,730 €	7,884 €	8,042 €	8,042 €
D&A	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
EBIT	- 5,000 €	- 5,100 €	- 5,202 €	5,306 €	5,412 €	5,520 €	5,631 €	5,743 €	5,858 €	5,975 €	6,095 €	6,217 €	6,341 €	6,468 €	6,597 €	6,729 €	6,864 €	7,001 €	7,141 €	7,284 €	7,430 €	7,578 €	7,730 €	7,884 €	8,042 €	8,042 €
Interest	- €	- 381 €	- 389 €	- 396 €	- 357 €	- 331 €	- 300 €	- 265 €	- 228 €	- 188 €	- 145 €	- 100 €	- 51 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
EBT	- 5,000 €	- 5,481 €	- 5,591 €	4,910 €	5,055 €	5,189 €	5,331 €	5,478 €	5,631 €	5,788 €	5,950 €	6,117 €	6,290 €	6,468 €	6,597 €	6,729 €	6,864 €	7,001 €	7,141 €	7,284 €	7,430 €	7,578 €	7,730 €	7,884 €	8,042 €	8,042 €
Net Operating Losses Shield	- €	- €	- €	- 3,437 €	- 3,539 €	- 3,632 €	- 3,732 €	- 3,028 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
Taxable Income	- 5,000 €	- 5,481 €	- 5,591 €	1,473 €	1,517 €	1,557 €	1,599 €	2,450 €	5,631 €	5,788 €	5,950 €	6,117 €	6,290 €	6,468 €	6,597 €	6,729 €	6,864 €	7,001 €	7,141 €	7,284 €	7,430 €	7,578 €	7,730 €	7,884 €	8,042 €	8,042 €
Minimum Taxable	- €	- €	- €	- 1,473 €	- 1,517 €	- 1,557 €	- 1,599 €	- 1,643 €	- 1,689 €	- 1,736 €	- 1,785 €	- 1,835 €	- 1,887 €	- 1,940 €	- 1,979 €	- 2,019 €	- 2,059 €	- 2,100 €	- 2,142 €	- 2,185 €	- 2,229 €	- 2,273 €	- 2,319 €	- 2,365 €	- 2,413 €	- 2,413 €
Income Taxes	- €	- €	- €	- 368 €	- 379 €	- 389 €	- 400 €	- 613 €	- 1,408 €	- 1,447 €	- 1,487 €	- 1,529 €	- 1,572 €	- 1,617 €	- 1,649 €	- 1,682 €	- 1,716 €	- 1,750 €	- 1,785 €	- 1,821 €	- 1,857 €	- 1,895 €	- 1,932 €	- 1,971 €	- 2,011 €	- 2,011 €
Net Income	- 5,000 €	- 5,481 €	- 5,591 €	4,541 €	4,676 €	4,800 €	4,931 €	4,866 €	4,223 €	4,341 €	4,462 €	4,588 €	4,717 €	4,851 €	4,948 €	5,047 €	5,148 €	5,251 €	5,356 €	5,463 €	5,572 €	5,684 €	5,797 €	5,913 €	6,032 €	6,032 €
Net Operating Losses	5,000 €	10,581 €	16,383 €	13,274 €	10,001 €	6,569 €	2,968 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
Net Income	- 5,000 €	- 5,481 €	- 5,591 €	4,541 €	4,676 €	4,800 €	4,931 €	4,866 €	4,223 €	4,341 €	4,462 €	4,588 €	4,717 €	4,851 €	4,948 €	5,047 €	5,148 €	5,251 €	5,356 €	5,463 €	5,572 €	5,684 €	5,797 €	5,913 €	6,032 €	6,032 €
D&A	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
Operating Cash Flow	- 5,000 €	- 5,481 €	- 5,591 €	4,541 €	4,676 €	4,800 €	4,931 €	4,866 €	4,223 €	4,341 €	4,462 €	4,588 €	4,717 €	4,851 €	4,948 €	5,047 €	5,148 €	5,251 €	5,356 €	5,463 €	5,572 €	5,684 €	5,797 €	5,913 €	6,032 €	6,032 €
Purchase	- 12,000 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
Sale	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	91,681 €
Investing Cash Flow	- 12,000 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	91,681 €
Unlevered Free Cash Flow	- 17,000 €	- 5,481 €	- 5,591 €	4,541 €	4,676 €	4,800 €	4,931 €	4,866 €	4,223 €	4,341 €	4,462 €	4,588 €	4,717 €	4,851 €	4,948 €	5,047 €	5,148 €	5,251 €	5,356 €	5,463 €	5,572 €	5,684 €	5,797 €	5,913 €	97,713 €	97,713 €
PV	- 17,000 €	- 5,016 €	- 4,683 €	3,481 €	3,281 €	3,082 €	2,898 €	2,617 €	2,078 €	1,955 €	1,840 €	1,731 €	1,629 €	1,533 €	1,431 €	1,336 €	1,247 €	1,164 €	1,087 €	1,015 €	947 €	884 €	825 €	770 €	11,651 €	11,651 €
Debt Issuance/Amortisation	8,000 €	- €	- €	- 849 €	- 866 €	- 883 €	- 901 €	- 919 €	- 937 €	- 956 €	- 975 €	- 995 €	- 1,015 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
Interest Expenses	- €	- 381 €	- 389 €	- 396 €	- 357 €	- 331 €	- 300 €	- 265 €	- 228 €	- 188 €	- 145 €	- 100 €	- 51 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
Financing Cash Flow	8,000 €	- 381 €	- 389 €	- 1,245 €	- 1,223 €	- 1,215 €	- 1,200 €	- 1,184 €	- 1,165 €	- 1,144 €	- 1,121 €	- 1,095 €	- 1,066 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
Levered Free Cash Flow	- 9,000 €	- 5,862 €	- 5,979 €	3,296 €	3,453 €	3,585 €	3,731 €	3,681 €	3,058 €	3,197 €	3,342 €	3,493 €	3,651 €	4,851 €	4,948 €	5,047 €	5,148 €	5,251 €	5,356 €	5,463 €	5,572 €	5,684 €	5,797 €	5,913 €	97,713 €	97,713 €
PV	- 9,000 €	- 5,365 €	- 5,008 €	2,527 €	2,423 €	2,302 €	2,192 €	1,980 €	1,505 €	1,440 €	1,378 €	1,318 €	1,261 €	1,533 €	1,431 €	1,336 €	1,247 €	1,164 €	1,087 €	1,015 €	947 €	884 €	825 €	770 €	11,651 €	11,651 €

Cost of Capital	9.78%																									
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	
Revenue	- €	- €	- €	10,612 €	10,824 €	11,041 €	11,262 €	11,487 €	11,717 €	11,951 €	12,190 €	12,434 €	12,682 €	12,936 €	13,195 €	13,459 €	13,728 €	14,002 €	14,282 €	14,568 €	14,859 €	15,157 €	15,460 €	15,769 €	16,084 €	16,084 €
Operating Costs	- 5,000 €	- 5,100 €	- 5,202 €	- 5,306 €	- 5,412 €	- 5,520 €	- 5,631 €	- 5,743 €	- 5,858 €	- 5,975 €	- 6,095 €	- 6,217 €	- 6,341 €	- 6,468 €	- 6,597 €	- 6,729 €	- 6,864 €	- 7,001 €	- 7,141 €	- 7,284 €	- 7,430 €	- 7,578 €	- 7,730 €	- 7,884 €	- 8,042 €	- 8,042 €
Gross Margin	- 5,000 €	- 5,100 €	- 5,202 €	5,306 €	5,412 €	5,520 €	5,631 €	5,743 €	5,858 €	5,975 €	6,095 €	6,217 €	6,341 €	6,468 €	6,597 €	6,729 €	6,864 €	7,001 €	7,141 €	7,284 €	7,430 €	7,578 €	7,730 €	7,884 €	8,042 €	8,042 €
Lease/Rent Payments	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
EBITDA	- 5,000 €	- 5,100 €	- 5,202 €	5,306 €	5,412 €	5,520 €	5,631 €	5,743 €	5,858 €	5,975 €	6,095 €	6,217 €	6,341 €	6,468 €	6,597 €	6,729 €	6,864 €	7,001 €	7,141 €	7,284 €	7,430 €	7,578 €	7,730 €	7,884 €	8,042 €	8,042 €
D&A	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
EBIT	- 5,000 €	- 5,100 €	- 5,202 €	5,306 €	5,412 €	5,520 €	5,631 €	5,743 €	5,858 €	5,975 €	6,095 €	6,217 €	6,341 €	6,468 €	6,597 €	6,729 €	6,864 €	7,001 €	7,141 €	7,284 €	7,430 €	7,578 €	7,730 €	7,884 €	8,042 €	8,042 €
Interest	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
EBT	- 5,000 €	- 5,100 €	- 5,202 €	5,306 €	5,412 €	5,520 €	5,631 €	5,743 €	5,858 €	5,975 €	6,095 €	6,217 €	6,341 €	6,468 €	6,597 €	6,729 €	6,864 €	7,001 €	7,141 €	7,284 €	7,430 €	7,578 €	7,730 €	7,884 €	8,042 €	8,042 €
Net Operating Losses Shield	- €	- €	- €	- 3,714 €	- 3,789 €	- 3,864 €	- 3,942 €	- 1,149 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €
Taxable Income	- 5,000 €	- 5,100 €	- 5,202 €	1,592 €	1,624 €	1,656 €	1,689 €	4,595 €	5,858 €	5,975 €	6,095 €	6,217 €	6,341 €	6,468 €	6,597 €	6,729 €	6,864 €	7,001 €	7,141 €	7,284 €	7,430 €	7,578 €	7,730 €	7,884 €	8,042 €	8,042 €
Minimum Taxable	- €	- €	- €	- 1,592 €	- 1,624 €	- 1,656 €	- 1,689 €	- 1,723 €	- 1,757 €	- 1,793 €	- 1,828 €	- 1,865 €	- 1,902 €	- 1,940 €	- 1,979 €	- 2,019 €	- 2,059 €	- 2,100 €	- 2,142 €	- 2,185 €	- 2,229 €	- 2,273 €	- 2,319 €	- 2,365 €	- 2,413 €	- 2,413 €
Income Taxes	- €	- €	- €	- 398 €	- 406 €	- 414 €	- 422																			

Cost of Capital	9.30%																									
	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	
Revenue	- €	- €	- €	10,612 €	10,824 €	11,041 €	11,262 €	11,487 €	11,717 €	11,951 €	12,190 €	12,434 €	12,682 €	12,936 €	13,195 €	13,459 €	13,728 €	14,002 €	14,282 €	14,568 €	14,859 €	15,157 €	15,460 €	15,769 €	16,084 €	
Operating Costs	- 5,000 €	- 5,100 €	- 5,202 €	- 5,306 €	- 5,412 €	- 5,520 €	- 5,631 €	- 5,743 €	- 5,858 €	- 5,975 €	- 6,095 €	- 6,217 €	- 6,341 €	- 6,468 €	- 6,597 €	- 6,729 €	- 6,864 €	- 7,001 €	- 7,141 €	- 7,284 €	- 7,430 €	- 7,578 €	- 7,730 €	- 7,884 €	- 8,042 €	
Gross Margin	- 5,000 €	- 5,100 €	- 5,202 €	- 5,306 €	- 5,412 €	- 5,520 €	- 5,631 €	- 5,743 €	- 5,858 €	- 5,975 €	- 6,095 €	- 6,217 €	- 6,341 €	- 6,468 €	- 6,597 €	- 6,729 €	- 6,864 €	- 7,001 €	- 7,141 €	- 7,284 €	- 7,430 €	- 7,578 €	- 7,730 €	- 7,884 €	- 8,042 €	
Rent Payments	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	
EBITDA	- 5,000 €	- 5,100 €	- 5,202 €	- 5,306 €	- 5,412 €	- 5,520 €	- 5,631 €	- 5,743 €	- 5,858 €	- 5,975 €	- 6,095 €	- 6,217 €	- 6,341 €	- 6,468 €	- 6,597 €	- 6,729 €	- 6,864 €	- 7,001 €	- 7,141 €	- 7,284 €	- 7,430 €	- 7,578 €	- 7,730 €	- 7,884 €	- 8,042 €	
D&A	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	
EBIT	- 5,000 €	- 5,100 €	- 5,202 €	- 5,306 €	- 5,412 €	- 5,520 €	- 5,631 €	- 5,743 €	- 5,858 €	- 5,975 €	- 6,095 €	- 6,217 €	- 6,341 €	- 6,468 €	- 6,597 €	- 6,729 €	- 6,864 €	- 7,001 €	- 7,141 €	- 7,284 €	- 7,430 €	- 7,578 €	- 7,730 €	- 7,884 €	- 8,042 €	
Interest	- €	- 1,109 €	- 1,131 €	- 1,154 €	- 1,046 €	- 963 €	- 867 €	- 764 €	- 654 €	- 537 €	- 414 €	- 284 €	- 146 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	
EBT	- 5,000 €	- 6,209 €	- 6,333 €	- 4,152 €	- 4,366 €	- 4,557 €	- 4,764 €	- 4,979 €	- 5,205 €	- 5,438 €	- 5,681 €	- 5,933 €	- 6,196 €	- 6,468 €	- 6,597 €	- 6,729 €	- 6,864 €	- 7,001 €	- 7,141 €	- 7,284 €	- 7,430 €	- 7,578 €	- 7,730 €	- 7,884 €	- 8,042 €	
Net Operating Losses Shield	- €	- €	- €	- 2,906 €	- 3,056 €	- 3,190 €	- 3,335 €	- 3,486 €	- 3,196 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	
Taxable Income	- 5,000 €	- 6,209 €	- 6,333 €	- 1,246 €	- 1,310 €	- 1,367 €	- 1,429 €	- 1,494 €	- 2,008 €	- 5,438 €	- 5,681 €	- 5,933 €	- 6,196 €	- 6,468 €	- 6,597 €	- 6,729 €	- 6,864 €	- 7,001 €	- 7,141 €	- 7,284 €	- 7,430 €	- 7,578 €	- 7,730 €	- 7,884 €	- 8,042 €	
Minimum Taxable	- €	- €	- €	- 1,246 €	- 1,310 €	- 1,367 €	- 1,429 €	- 1,494 €	- 1,561 €	- 1,632 €	- 1,704 €	- 1,780 €	- 1,859 €	- 1,940 €	- 1,979 €	- 2,019 €	- 2,059 €	- 2,100 €	- 2,142 €	- 2,185 €	- 2,229 €	- 2,273 €	- 2,319 €	- 2,365 €	- 2,413 €	
Income Taxes	- €	- €	- €	- 311 €	- 327 €	- 342 €	- 357 €	- 373 €	- 502 €	- 1,360 €	- 1,420 €	- 1,483 €	- 1,549 €	- 1,617 €	- 1,649 €	- 1,682 €	- 1,716 €	- 1,750 €	- 1,785 €	- 1,821 €	- 1,857 €	- 1,895 €	- 1,932 €	- 1,971 €	- 2,011 €	
Net Income	- 5,000 €	- 6,209 €	- 6,333 €	- 3,841 €	- 4,038 €	- 4,215 €	- 4,407 €	- 4,606 €	- 4,702 €	- 4,079 €	- 4,261 €	- 4,450 €	- 4,647 €	- 4,851 €	- 4,948 €	- 5,047 €	- 5,148 €	- 5,251 €	- 5,356 €	- 5,463 €	- 5,572 €	- 5,684 €	- 5,797 €	- 5,913 €	- 6,032 €	
Net Operating Losses	5,000 €	11,309 €	17,869 €	15,320 €	12,570 €	9,632 €	6,489 €	3,133 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	
Net Income	- 5,000 €	- 6,209 €	- 6,333 €	- 3,841 €	- 4,038 €	- 4,215 €	- 4,407 €	- 4,606 €	- 4,702 €	- 4,079 €	- 4,261 €	- 4,450 €	- 4,647 €	- 4,851 €	- 4,948 €	- 5,047 €	- 5,148 €	- 5,251 €	- 5,356 €	- 5,463 €	- 5,572 €	- 5,684 €	- 5,797 €	- 5,913 €	- 6,032 €	
D&A	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	
Operating Cash Flow	- 5,000 €	- 6,209 €	- 6,333 €	- 3,841 €	- 4,038 €	- 4,215 €	- 4,407 €	- 4,606 €	- 4,702 €	- 4,079 €	- 4,261 €	- 4,450 €	- 4,647 €	- 4,851 €	- 4,948 €	- 5,047 €	- 5,148 €	- 5,251 €	- 5,356 €	- 5,463 €	- 5,572 €	- 5,684 €	- 5,797 €	- 5,913 €	- 6,032 €	
Purchase	- 5,000 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	
Sale	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	
Investing Cash Flow	- 5,000 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	
Unlevered Free Cash Flow	- 10,000 €	- 6,209 €	- 6,333 €	- 3,841 €	- 4,038 €	- 4,215 €	- 4,407 €	- 4,606 €	- 4,702 €	- 4,079 €	- 4,261 €	- 4,450 €	- 4,647 €	- 4,851 €	- 4,948 €	- 5,047 €	- 5,148 €	- 5,251 €	- 5,356 €	- 5,463 €	- 5,572 €	- 5,684 €	- 5,797 €	- 5,913 €	- 6,032 €	
PV	- 10,000 €	- 5,681 €	- 5,301 €	- 2,941 €	- 2,829 €	- 2,702 €	- 2,584 €	- 2,471 €	- 2,308 €	- 1,832 €	- 1,751 €	- 1,673 €	- 1,598 €	- 1,526 €	- 1,424 €	- 1,329 €	- 1,240 €	- 1,158 €	- 1,080 €	- 1,008 €	- 941 €	- 878 €	- 819 €	- 764 €	- 11,557 €	
Debt Issuance/Amortisation	15,000 €	- €	- €	- 1,592 €	- 1,624 €	- 1,656 €	- 1,689 €	- 1,723 €	- 1,757 €	- 1,793 €	- 1,828 €	- 1,865 €	- 1,902 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	
Interest Expenses	- €	- 1,109 €	- 1,131 €	- 1,154 €	- 1,046 €	- 963 €	- 867 €	- 764 €	- 654 €	- 537 €	- 414 €	- 284 €	- 146 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	
Financing Cash Flow	15,000 €	- 1,109 €	- 1,131 €	- 2,746 €	- 2,670 €	- 2,619 €	- 2,556 €	- 2,487 €	- 2,411 €	- 2,330 €	- 2,243 €	- 2,149 €	- 2,048 €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	- €	
Levered Free Cash Flow	5,000 €	- 7,319 €	- 7,465 €	1,095 €	1,369 €	1,596 €	1,851 €	2,119 €	2,291 €	1,749 €	2,018 €	2,301 €	2,599 €	4,851 €	4,948 €	5,047 €	5,148 €	5,251 €	5,356 €	5,463 €	5,572 €	5,684 €	5,797 €	5,913 €	97,713 €	
PV	5,000 €	- 6,696 €	- 6,248 €	838 €	959 €	1,023 €	1,085 €	1,137 €	1,125 €	785 €	829 €	865 €	894 €	1,526 €	1,424 €	1,329 €	1,240 €	1,158 €	1,080 €	1,008 €	941 €	878 €	819 €	764 €	11,557 €	