



Department of *Economics and Finance*

Bachelor Thesis in *Corporate Finance*

# Asset-side market-based valuation in the wine industry: “Sesta di Sopra” case study.

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## INTRODUCTION

Evaluating a firm is important since it provides multiple facts and figures regarding the actual worth or value of the company in terms of market competition, asset values and income values. All business owners should know the value of their firm because it gives them a few benefits such as:

- A better knowledge of the company assets.
- Understand the company resale value,
- Obtain a true company value,
- A better knowledge during merger/acquisition
- The access to more investors.

Once a business valuation has been established, the owner can set new goals in order to increase the company's value over the future years.

Therefore, I decided to evaluate a small winery called Sesta di Sopra, to understand its organization and management through the WACC analysis. The reason that leads me to choose this topic is my involvement and interest in the wine industry. The research on this market sector underlines, not only the strength of the winery, but also its weaknesses and risks.

In the first chapter, I examine more specifically how does this sector works, which are the costs and revenues, which are the barriers to entry and the barriers to export. From the analyses reported, emerge that the wine market is increasing around the world, in particular, the Brunello's value has increased by almost 4,500% since 1966.

In the second chapter, I describe Sesta di Sopra and the business model canvas that I want to report in order to give an overall view of the firm and a better understanding of its core values. Consequently, some valuation methods to evaluate the business are explained, describing also their advantages and disadvantages.

Since the Asset Value Analysis is the most direct one, the following study is carried out using it. Moreover, the WACC calculation is also important to know how the capital of the firm is weighted.

Finally, after the valuation made, I am able to give to the firm some financial advice to be more efficient.

# CHAPTER 1 - Brunello's Market in Italy and Around the World

## 1.1 WINE INDUSTRY

The wine industry is one of the most grown roots in the agricultural sector, and it keeps growing in terms of demand and supply. Even if this sector has been influenced by the 2007-2008 crisis, nevertheless it has been able to recover since it has faced it in a better way than other industries.

The wine production around the world in 2018 was of about 282 million hectoliters<sup>1</sup>, the best level of wine produced ever reached. In fact, several countries achieved their highest production level. On average 270 million hl are consumed every year, in 2017 only 252 million hectoliters were processed leading to a deficit that was almost recovered by 2018 manufacturing. However, we can evince from Table 1.1 that there is a continuous deficit in this industry since there is an average demand that is higher than consumption.

Table 1.1: World Wine Production in million hectoliters

World Wine Production – million hectoliters										
Hl m	2010	2011	2012	2013	2014	2015	2016	2017E	2018E	Media
Italia	44.7	40.6	38.3	45.0	39.7	48.6	51.6	43.8	48.5	44.1
Francia	44.4	51.1	42.1	42.4	46.7	47.8	44.4	36.7	46.4	44.5
Spagna	34.8	32.5	30.4	44.7	38.2	37.2	38.8	32.1	40.9	36.5
Germania	6.9	9.1	9.0	8.4	9.2	8.9	9.0	7.7	9.8	8.9
Portogallo	7.1	5.6	6.3	6.2	6.2	7.0	6.0	6.6	5.3	6.2
Russia	7.6	7.0	6.2	5.3	4.9	5.6	5.2	4.7	NA	5.4
Romania	3.3	4.1	3.3	5.1	3.8	3.6	3.3	4.3	5.2	3.3
Ungheria	1.8	2.8	1.8	2.6	2.6	2.8	2.8	3.1	3.4	2.4
USA	20.9	19.1	21.7	23.6	23.7	21.7	23.6	23.3	23.9	21.7
Cina	13.0	13.2	13.5	11.1	11.1	11.5	11.4	10.8	NA	12.1
Australia	11.4	11.2	12.3	12.3	11.9	11.9	13.0	13.7	12.5	12.0
Argentina	16.3	15.5	11.8	15.0	15.2	13.4	9.4	11.8	14.5	13.6
Cile	8.8	10.5	12.6	12.8	10.5	12.9	10.1	9.5	12.9	10.5
Sud Africa	9.3	9.7	10.6	11.0	11.5	11.2	10.5	10.8	9.5	10.3
Other	29.5	33.1	31.5	35.2	28.8	29.5	32.4	33.8	33.7	34.0
<b>Total</b>	<b>260</b>	<b>265</b>	<b>251</b>	<b>281</b>	<b>264</b>	<b>274</b>	<b>271</b>	<b>252</b>	<b>282</b>	<b>266</b>

Fonte: I numeri del vino e OIV

<sup>1</sup> "I numeri del vino", available at: <http://www.inumeridelvino.it/2018/11/la-produzione-di-vino-nel-mondo-2018-prima-stima-oiv.html>

Table 1.1 records the biggest changes in East Europe where the production raised by almost 50% since 2017, and France and Spain gained almost 10 million hectoliters more in 2018. Germany had an implementation of more than 2 million hectoliters in wine manufacturing. Overall, Europe has covered the gap between supply and demand made last year with almost 164 million hectoliters produced in 2018, corresponding to an increase in production of 18% from 2017.

The positive variation in the wine industry is less evident in the rest of the world where the climate is not homogeneous and so the grapes are affected by this condition which could lead to a lower quality. In 2018 the best variation was made in the West part of the world (e.g., US, Argentina, and Chile) since the quantities increased compared to the East part (e.g., Russia, Australia, and New Zealand). In the USA, this year, was the “record” year because they had the maximum production registered with 23.9 million hectoliters. What comes up from data is that also Argentina re-reached quota 15 million hectoliters such as Chile that regained its history maximum level. While Russia and Australia lost almost 1 million hectoliters.

From the market value point of view, in 2017 the worldwide wine market worthed 302 billion dollars and, as it was mentioned, there will be an increase in demand. In fact, it has been evaluated that in 2023 the market value would be about 423 billion dollars, growing at a compound annual growth rate of almost 5.8%<sup>3</sup>.

## **1.2 ITALIAN WINE INDUSTRY**

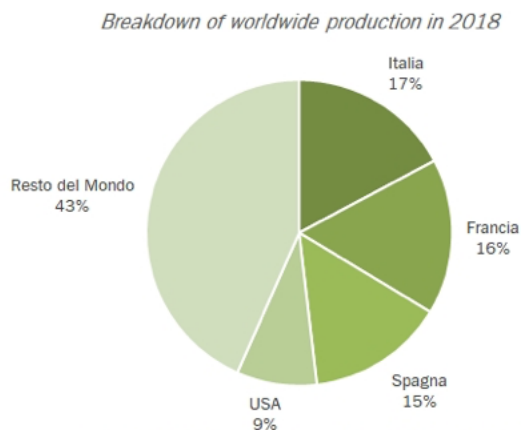
Italy has a central role in the wine market around the world. It owns 17% of the shares competing with France (16%), Spain (15%), USA (9%) and the rest of the globe (43%).<sup>4</sup>

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<sup>3</sup> <https://globenewswire.com/news-release/2018/04/09/1467083/0/en/Global-Wine-Market-Will-Reach-USD-423-59-Billion-by-2023-Zion-Market-Research.html>

<sup>4</sup> (<https://www.statista.com/topics/4041/wine-market-in-italy/>)

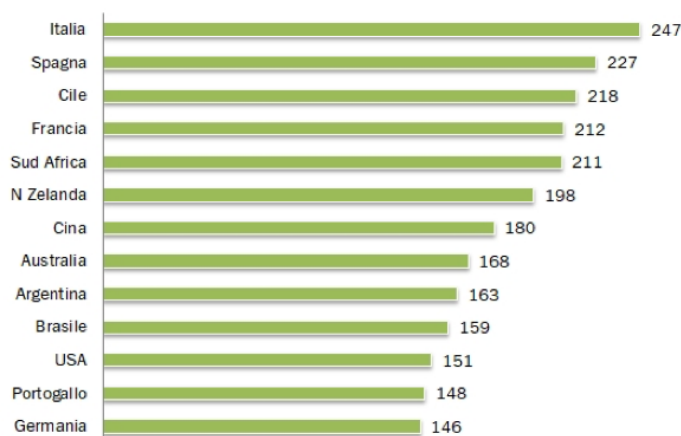
Table 1.2: Breakdown of worldwide production in 2018



The Italian great market power is granted by several competitive advantages. To analyze the competitiveness of each country a study made by Deloitte, on behalf of FranceAgriMer<sup>5</sup>, is reported. It is divided in 3 different categories each one with two factors:

- **Structural:**
  - Potential production;
  - Environment, atmospheric condition.

Table 1.3: Structural Competitiveness

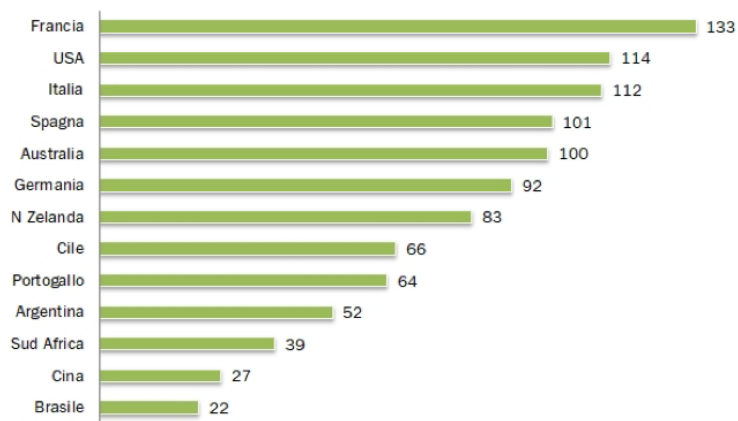


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<sup>5</sup> Deloitte on behalf of FranceAgriMer Study: <https://www.vitisphere.com/news-88586-Italy-ranks-as-the-worlds-most-competitive-country.htm>

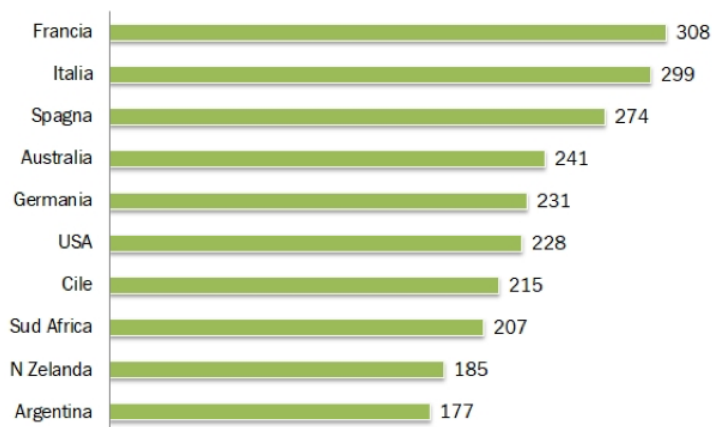
- **Competitive:**
  - Brand portfolio;
  - Competitive ability.

Table 1.4: Brand & Ability Competitiveness



- **Economic/organizational:**
  - Macroeconomic environment;
  - Supply chain, government support.

Table 1.5: Economic/organizational Competitiveness



The result from Table 1.3-1.4-1.5 is that Italy is always ranked on the top 3 and it is summarized in the next table.

Table 1.6: Competitiveness Ranking

Competitiveness Ranking							
	Potential Production	Environment, Atmospheric Condition	Competitive Ability	Brand Portfolio	Supply Chain, GVT Support	Macroeconomic Environment	Total
Italia	152	95	153	146	67	45	659
Francia	119	93	174	134	87	46	653
Spagna	130	97	151	123	63	38	602
Australia	79	89	124	117	62	38	509
Cile	89	129	113	102	51	15	499
USA	102	49	131	97	68	46	492
Germania	66	80	134	97	46	46	469
N Zelanda	92	106	101	84	43	40	466
Sud Africa	94	117	124	83	32	7	457
Argentina	63	100	103	74	38	14	391
Portogallo	71	77	76	73	24	40	361
Cina	107	73	33	105	6	21	345
Brasile	62	97	61	69	4	18	312

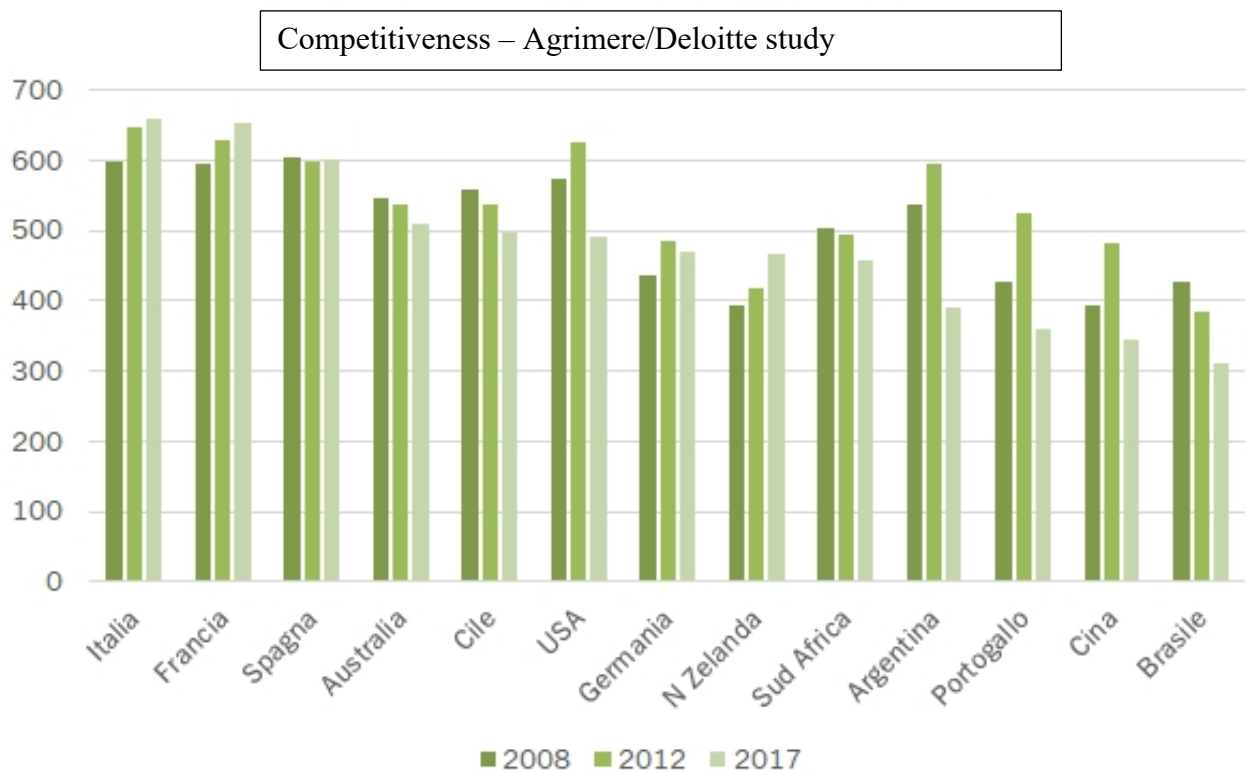
From Table 1.6, we can evince that Italy has a competitive advantage overall, mainly thanks to its structural factor because the climate is optimal to produce wine. In fact, “made in Italy” products are known around the world for their high quality, but Italian organization and government support are limited, this is the reason why France and the USA overcome Italy in this field. Thus, USA has lower quality products, but they succeed to raise their value exponentially through excellent marketing strategies, showing that what they are selling is the best finable good.

So, talking about potential production and brand portfolio, Italy is the first one in the world without rivalries.

These data are recorded year by year and they make clear that Italy is keeping growing and developing its competitive advantage. In fact, Deloitte study index shows that from 2008 to 2017 Italy has gained more than 50 points, increasing its dominant position and could raise the product prices in order to have higher revenues.



Table 1.7: Competitiveness in past years



Italy takes advantage of its position exporting its wine around the world. Last year was the best year ever for exports, in fact, the value of the exported wine was around 6,204 million Euros. Italy kept growing and since 2011 has increased the total export by 29%. The most developed countries are the main importer of Italian wine, like the USA, Germany, Switzerland and France. China is a new profitable market, it is developing and increasing its imports of wine, but they are still looking for high quantity and low quality at a low price and the Italian supply has the exact opposite values.

A very important fact is that in 2018 Italy has decreased the volume of wine exported by 9% from 2017, and still, the revenues increased. Therefore, the brand strategy to gain a higher profit was to increase prices. This strategy is a risk because firms could end up with too much wine to supply which is not demanded since it is expensive and not everybody can afford it.

Table 1.8: Italian Wine Exports <sup>9</sup>



Table 1.9: Italian Wine Exports - Value

Italian wine exports - value										
(EURm)	2010	2011	2012	2013	2014	2015	2016	2017	2018	Var %
Stati Uniti	827	948	1,006	1,077	1,124	1,280	1,351	1,407	1,463	4%
Germania	850	920	958	1,020	976	962	978	989	1,038	5%
Regno Unito	462	509	536	620	658	747	764	812	827	2%
Svizzera	259	268	299	314	319	324	338	360	377	5%
Canada	245	255	283	280	276	299	306	333	334	0%
Francia	87	110	128	139	132	143	155	170	187	10%
Svezia	85	98	122	141	144	150	154	165	177	8%
Giappone	102	121	155	154	153	158	151	163	161	-1%
Paesi Bassi	101	115	115	117	121	129	140	142	150	6%
Danimarca	132	141	125	133	141	145	147	148	140	-6%
Cina	41	67	77	75	76	89	101	130	127	-2%
Belgio	69	81	80	92	101	107	113	122	121	-1%
Russia	104	118	100	114	103	71	78	111	109	-2%
Austria	88	94	98	101	98	91	101	102	103	1%
Norvegia	60	66	78	87	96	95	94	94	94	0%
Polonia	21	23	26	31	37	38	48	50	62	24%
Australia	21	22	30	34	38	41	46	52	62	18%
Repubblica ceca	37	42	34	34	33	34	41	45	44	-2%
Spagna	36	35	36	40	41	41	41	40	44	10%
Finlandia	19	22	23	25	27	27	31	35	38	9%
Messico	11	14	17	20	23	25	29	33	36	7%
Brasile	31	36	31	30	30	26	24	39	35	-9%
Irlanda	24	26	26	29	30	32	31	36	34	-4%
Lettonia	7	8	20	25	39	26	27	33	34	2%
Corea del Sud	13	15	19	20	22	24	24	25	29	14%
<b>[Mondo]</b>	<b>3,918</b>	<b>4,405</b>	<b>4,695</b>	<b>5,041</b>	<b>5,114</b>	<b>5,392</b>	<b>5,623</b>	<b>5,993</b>	<b>6,204</b>	<b>4%</b>

Table 1.10: Italian Wine Exports – Volume

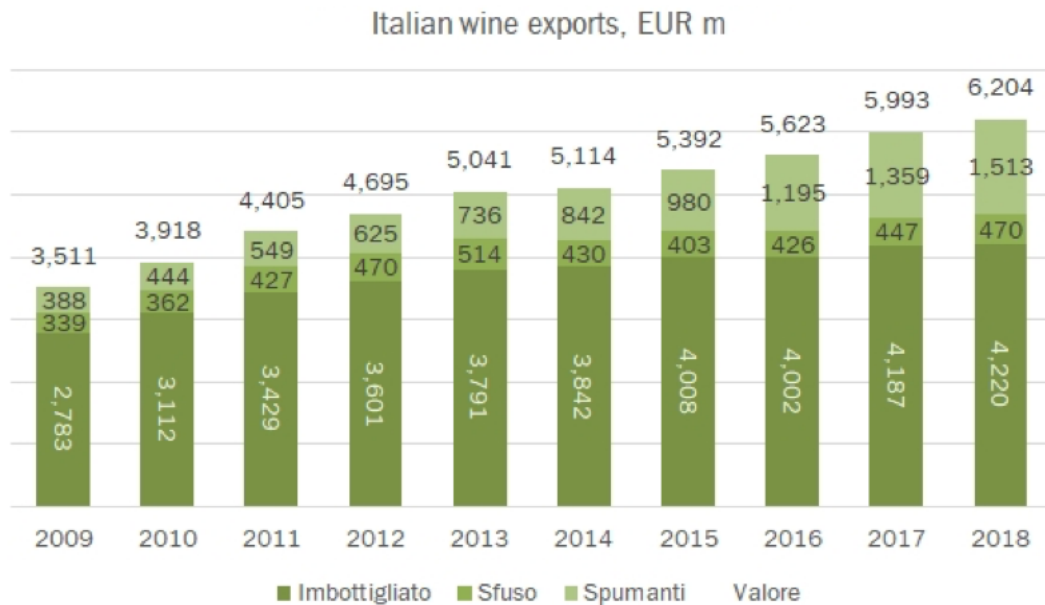
Italian wine exports - volume										
(hl/1000)	2010	2011	2012	2013	2014	2015	2016	2017	2018	Var %
Germania	7,012	7,060	6,201	5,936	5,942	5,581	5,609	5,676	5,170	-9%
Stati Uniti	2,636	2,918	2,935	2,960	2,980	3,190	3,292	3,347	3,394	1%
Regno Unito	3,042	3,001	2,898	2,934	3,033	3,342	3,115	3,189	2,923	-8%
Francia	1,063	1,112	974	851	856	883	991	1,059	867	-18%
Canada	669	684	712	690	685	699	729	796	771	-3%
Svizzera	699	699	710	677	710	692	723	757	707	-7%
Svezia	342	369	429	479	486	473	491	532	543	2%
Paesi Bassi	471	500	465	447	440	438	442	441	447	1%
Russia	1,082	685	560	439	411	293	335	479	420	-12%
Giappone	327	379	443	424	430	433	402	442	407	-8%
Austria	598	628	547	507	510	457	528	488	387	-21%
Danimarca	368	401	359	397	416	403	398	397	381	-4%
Belgio	309	342	277	287	302	315	328	368	362	-2%
Cina	229	308	326	218	255	269	299	377	332	-12%
Norvegia	179	189	222	232	257	244	241	232	228	-2%
Repubblica ceca	620	682	333	289	297	273	360	349	221	-37%
Polonia	168	163	158	141	172	161	229	211	214	1%
Spagna	311	286	253	214	234	227	247	219	207	-5%
Australia	76	64	81	84	92	96	106	115	139	21%
Messico	48	63	74	77	90	91	114	130	138	6%
Lituania	106	169	141	178	147	120	147	158	137	-13%
Grecia	81	123	127	70	81	85	140	128	134	4%
Brasile	137	137	111	101	96	88	92	148	117	-21%
Irlanda	141	117	109	116	121	127	114	124	115	-7%
Lettonia	33	29	70	77	100	83	99	113	104	-8%
Finlandia	71	78	72	73	81	77	84	92	96	4%
Ucraina	19	28	35	47	49	46	65	81	78	-4%
<b>[Mondo]</b>	<b>22,108</b>	<b>23,324</b>	<b>21,307</b>	<b>20,324</b>	<b>20,511</b>	<b>20,262</b>	<b>20,820</b>	<b>21,621</b>	<b>19,937</b>	<b>-8%</b>

The strength of “made in Italy” is evincible from Table 1.11 which shows that most of the exports are made in bottled wine and not the bulk wine, as other countries do. The

<sup>9</sup> <http://www.inumeridelvino.it/2019/02/esportazioni-di-vino-italiano-aggiornamento-novembre-2018.html>

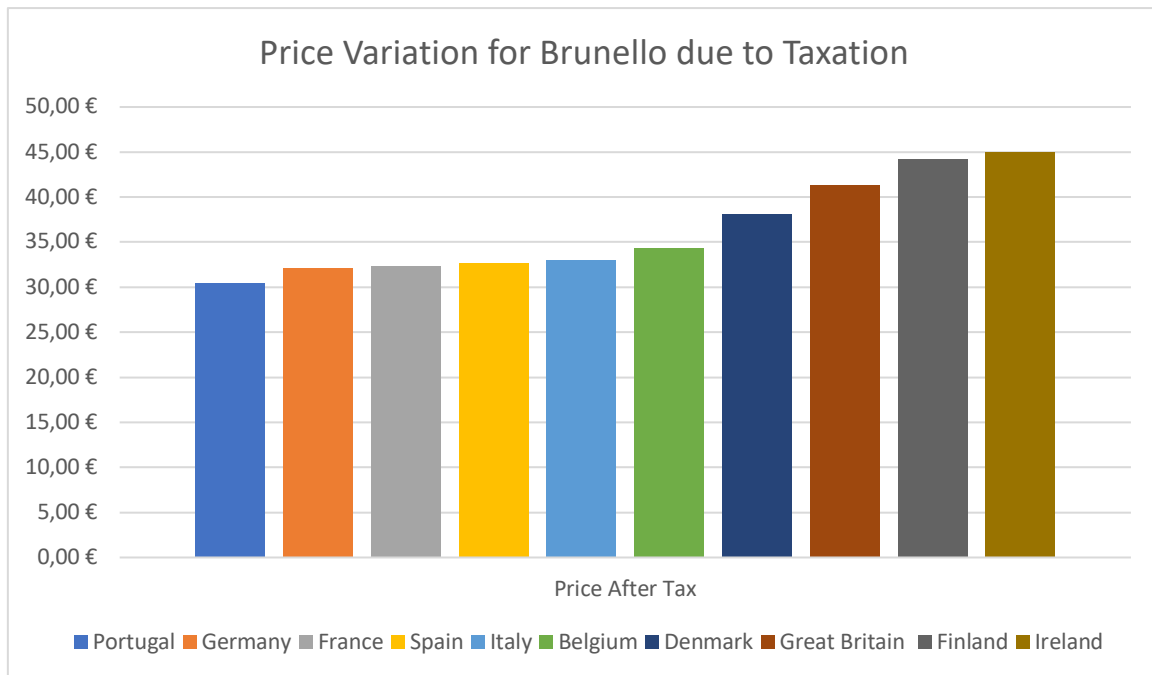
aim of this strategy is to let the world understand that Italian products are unique and that they cannot be found anywhere else. It increases the product value and the competitive advantage since it creates a “brand”.

Table 1.11: Italian Wine Export, report



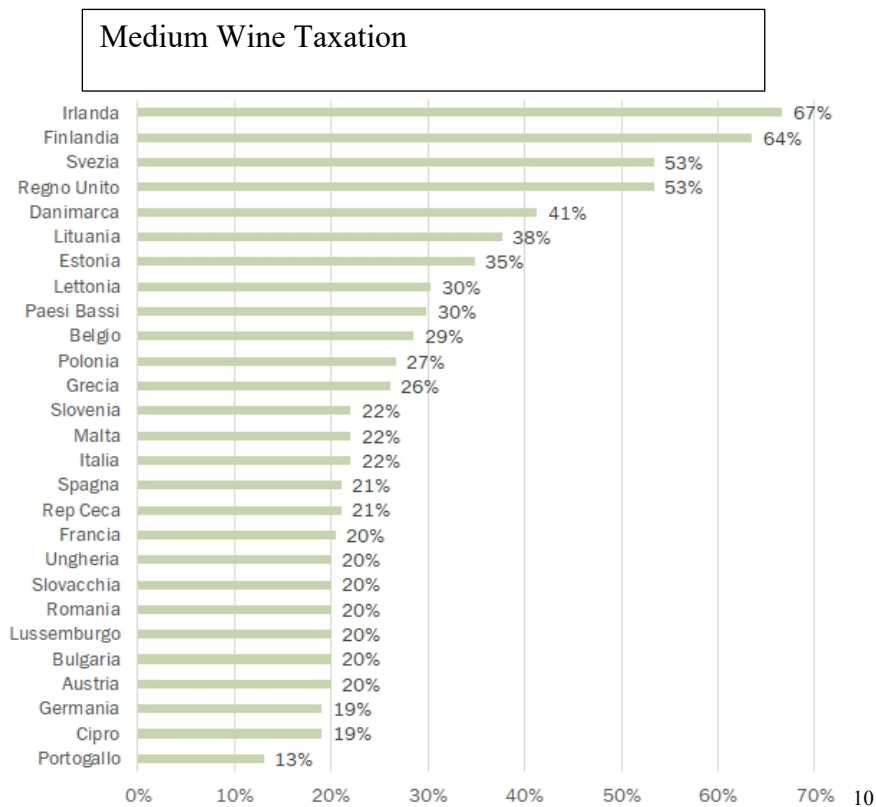
The export prices are highly affected by taxation and it is one of the biggest barrier problems since there is no coherence among countries. For example, in Europe taxation varies from 67% in Ireland to 13% in Portugal. This is a delicate issue since alcohol is the subject. Obviously, Italian producers are incentivized to export to countries where the taxation is “low”, in order to gain a higher profit. In fact, as stated before one of the Italian biggest importers is Germany where the Taxation is only 19% lower than in Italy itself (22%). For example, exporting a 27 Euros Brunello’s bottle to Ireland or Finland means that it would cost almost 45 Euro (Table 1.12), that, considering only the taxation without taking into account additional charges that retailers usually set. Thus, the wine bottle becomes so much more expensive that the consumers are not willing to pay for it.

Table 1.12: Price variation for Brunello due to Taxation



In the second chapter Sesta di Sopra will be analyzed. It exports in several countries, such as, Finland, Germany, Switzerland and Great Britain. Its marginal profit for each Brunello bottle exported is the same, no matter which country it is exporting to. In fact, the firm's policy is not to vary the price, so the breakeven point is reached every year. The importer pays the insurance, transportation, taxation for all the quantity booked. This process is called "franco cantina", it is a clause adopted by almost every cellar near Montalcino.

Table 1.13: Medium Wine Taxation



Italy is famous for its quality, territory and culture, and because of that, some quality classifications were created. These raised severely the wine price because they offer a guarantee to the final consumer over the purchased product. In the wine field there are three classifications<sup>11</sup>:

1. **DOC (Denomination of Controlled Origin):** this denomination is given to wines that are strictly regulated and made in a specific area, with some common microclimate characteristics. This area can be restricted to a fraction, to a winery or to a vineyard. Obviously the more defined the area, the less quantity can be produced, and this increases the quality of wine produced. The Denomination of Controlled Origin is given to firms, only if they pass some chemical-physical and organoleptic tests, carried out by a special commission. The policy document for DOC must establish:
  - Origin Denomination

<sup>10</sup> <http://www.inumeridelvino.it/2019/02/1a-tassazione-del-vino-nellunione-europea-dati-2018.html>

<sup>11</sup> [http://old.imtdoc.it/cms/vini.php?id\\_testo=134693594285937](http://old.imtdoc.it/cms/vini.php?id_testo=134693594285937)

- Grapes area production
- Maximum production per hectare
- The minimum alcoholic strength of the grapes
- Chemical-physical and organoleptic characteristic
- Production condition (weather, ground, altitude...)
- Vineyard composition, density and cultivation method
- The Minimum period of aging in the wood and in the bottle
- Eventual bottling in delimited areas

Examples: Rosso di Montalcino, Montepulciano d'Abruzzo, Lambrusco, Barbera.

2. **DOCG** (Denomination of Controlled and Guaranteed Origin): the DOCG follows the same policy document of the DOC, but some requirements are stricter. In fact, to be DOCG a wine has to be at least 5 years old and, moreover, there is a second exam in the bottling phase to guarantee the final customer that the wine in the bottle is the approved one. In addition, for the DOCG on the label there must be written the vintage, while for the DOC is not necessary.

Examples: Brunello, Barbaresco, Franciacorta, Barolo and Amarone.

3. **IGT** (Regional Geographical Indication): usually the area for this kind of wines is wider, but they are also regulated by a policy document which establish:

- The geographical indication
- The delimitation of the geographical area
- The list of allowed vines
- Oenological typologies, including color
- The maximum yield of grapes per hectare
- The minimum alcoholic strength of the grapes
- The minimum alcoholic strength of the wine
- Authorized corrective practices.

Moreover, IGT's wines are obliged to write on the label all the indication required:

- That it is a table wine
- The "IGT" acronym written on it

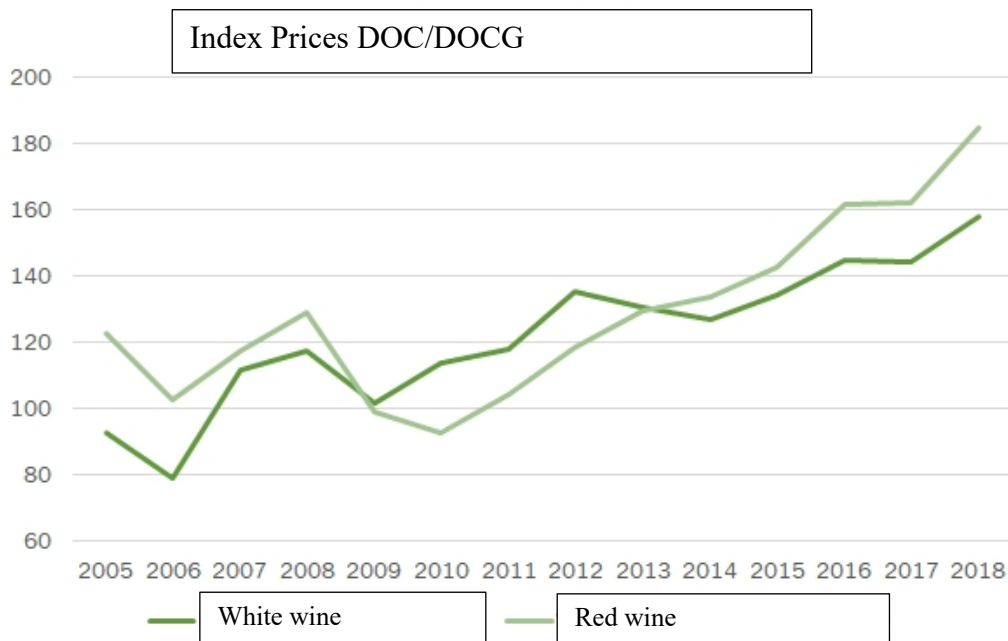
Examples: Toscana, Calabria, Veneto.

A firm that has one of these denominations is privileged not only in terms of the wine produced, but also in terms of the vineyard it owns. In fact, an enterprise that is in one of these restricted

areas, is able to produce something that others cannot do. For this reason, the value of the wine increases the more the area is restricted.

The most expensive wines are the DOCG because the guarantee adds value to the bottle, therefore increasing the price. For this reason, consumers are willing to pay more, as shown in Table 1.14.

Table 1.14: Index Prices with DOC/DOCG



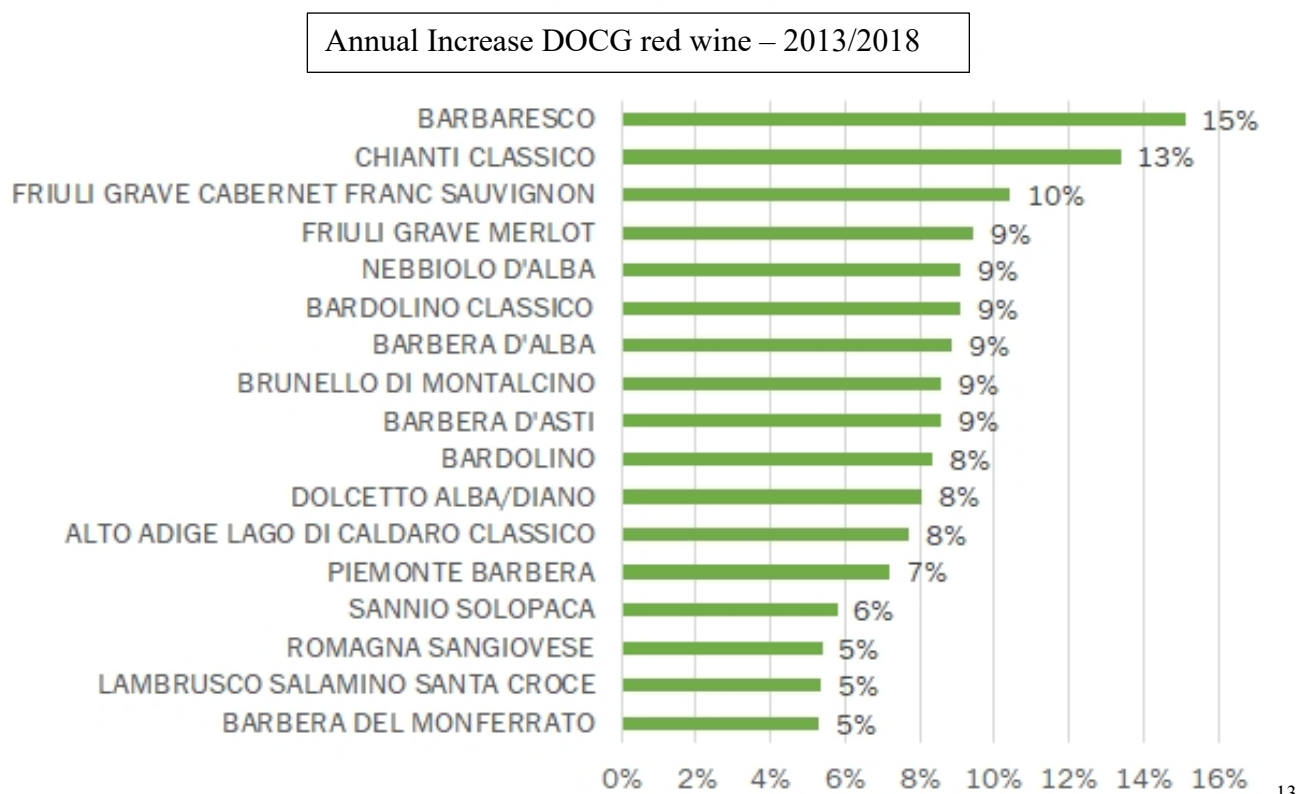
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### 1.3 BRUNELLO INDUSTRY

DOCG enhances the Brunello to have a competitive advantage with respect to other wines. In fact, its value has increased a lot during the past five years. The spread has been evaluated to be 9% per year since 2013 (table 1.15) giving him a fantastic reputation worldwide.

<sup>12</sup> <http://www.inumeridelvino.it/2019/01/vendite-di-vino-per-denominazione-nella-gdo-italiana-aggiornamento-2018.html>

Table 1.15: Annual Increase DOCG red wine



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The most impressive data is that the DOC/DOCG vineyard values boosted and now they have reached some unaffordable levels. This is bad news for little and family producers because it would be difficult to expand their vineyards, but at the same time, the return on product is higher.

One of the biggest increasement is recorded for Brunello. In 1966, when the brand Brunello was firstly recognized as DOCG, one-hectare value was about 15,000 €. While, in 2019 one hectare was sold at 900,000 €. On average, there was an increment of almost 4,500%<sup>14</sup> on each hectare of Brunello, but the biggest growth in value was registered from 2016 and 2019. In fact, in 2016 the average price was 350,000€ per hectare, now (2019) it is almost the double 650,000/700,000€ with peaks up to 900,000€ per hectare. This highlights that the territory value is keeping growing year on year due to the restricted area. In 1998 the limit of Brunello's hectares has been increased up to 2,000, while before was even more restricted, only 1,400 hectares. The restriction was made to guarantee the

<sup>14</sup> <https://www.ilsole24ore.com/art/impresa-e-territori/2019-01-16/vigneti-barolo-come-borgogna-un-ettaro-ci-vogliono-fino-25-milioni-172532.shtml?uuid=AEotbdGH>



quality to consumers and to protect the brand name, otherwise, everyone could produce Brunello, and it would have led to a loss of identity.

Brunello's price is very high not only for these reasons, but also because the production is costly. In fact, to obtain the final product the winemaker has to wait 4-5 years before entering the market. It is a long-term investment where the wine has to age in a big specific barrel that cost several thousand euros. The costs of production are high, because the quality matters to beat the market, as we are going to analyze in the following chapter with Sesta di Sopra's case.

## CHAPTER 2 - Sesta di Sopra Valuation

### 2.1 Sesta di Sopra

A winery value is mainly based on the wine it produces and the area in which it is produced. Sesta di Sopra<sup>15</sup> is in the south of the city of Montalcino and it produces high-quality wine since 1999. The winery, despite its small size, has been recognized by “Decanter”<sup>16</sup> (an important wine magazine), as one of the top ten places in Italy to produce wine.

The company produces Toscana IGT, Rosso di Montalcino DOC and Brunello di Montalcino DOCG using 100% Sangiovese, the native vine in Tuscany, with their own vineyard.

The strength of the company in terms of revenue is the Brunello, since the brand is known globally.

It is a family business and, being a small firm, in terms of innovation and technology, it is not the most developed one. In fact, nowadays in big companies with several hectares most of the harvests are made by machines. Sesta di Sopra does not have this type of advanced machinery, thus everything is done by hands. The firm is biological, without poisoning the nature in all the process up to the final product. So, chemicals in the vineyards are not used and they are not contaminated from outside pollution because they are protected by the forest. However, Sesta di Sopra is buying machinery to not have a competitive disadvantage with respect to other small enterprises.

The introduction of this little family business is important to understand better the whole analysis. Firstly, it is curious and important how the business started up and how does it work, Secondly, it is a business without any kind of debt to be paid off and a huge amount of revenues is plow back into the firm. So, Sesta di Sopra has a capital structure pointed at the equity side. The first entry in the market was with the Brunello 1999 gaining 95 points out of 100 from “wine spectator<sup>17</sup>”, an important lifestyle magazine that focuses on wine and wine culture. It gives rates of the top wines to the readers, so they can be informed about the best products around the world and where to find them. It permitted the firm to export in the US, that was an important meta at the time. Throughout the latest years, the winery has been implemented through new vineyard acquisition and the cellar expansion, in order to increase the production

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<sup>15</sup> <http://www.sestadisopra.it/>

<sup>16</sup> <https://www.decanter.com/>

<sup>17</sup> <https://www.winespectator.com/>

until reaching fifteen thousand bottles per year. Since it is a family business the owners are also the managers.

The analysis begins with the simple business model canvas of Sesta di Sopra.

Table 2.1: Business Model Canvas

Key Partners <a href="#">?</a> <a href="#">Insert</a>	Key Activities <a href="#">?</a> <a href="#">Insert</a>	Value Proposition <a href="#">?</a> <a href="#">Insert</a>	Customer Relationships <a href="#">?</a> <a href="#">Insert</a>	Customer Segments <a href="#">?</a> <a href="#">Insert</a>
K&L	comfortable welcoming to the winery	High quality product	Special wine tour at the winery	wine lovers
restaurants	Speak several languages	Give a unique experience, taking emotions out of the wine	"news-letter"	Wine magazines
Hotels	Have trained employees to make an high quality production process	Make the best wine in the market while respecting the nature	Word of mouth	wine experts
wine shops	being informed			Travelers
"Consorzio Del Brunello"				
Polimar				
Ecobox	<b>Key Resources <a href="#">?</a> <a href="#">Insert</a></b>		<b>Channels <a href="#">?</a> <a href="#">Insert</a></b>	
Vetruria	high qualified personnel		Social media	
Intercap	organized cellar		e-mail	
	perfect vineyards		Wine Shops	
	welcoming structure		K&L	
<b>Cost Structure <a href="#">?</a> <a href="#">Insert</a></b>			<b>Revenue Streams <a href="#">?</a> <a href="#">Insert</a></b>	
Salaries	Structure Maintenance		Wine Sales	
Raw Material	vineyard maintenance			

From Table 2.1 we can evince that the main value proposition of Sesta di Sopra is to produce a high-quality product being environment friendly.

The company is not still well known, it has not a powerful customer relationship and channels across which can expand its name. But the key factors are based on the winery tour which permits Sesta di Sopra to get wine lovers to become loyal consumers. The company aims to spread the word to their friends and family, and from this word to mouth, almost 20% of the visitors, is someone who has already visited and done the winery tour.

Sesta di Sopra reaches its customers through newsletters and its physical and online retailers. The latter is K&L they sell in total 12 million bottles per year just through the web. So, the key activities are being able to speak several languages and be openminded since most of the visitors are foreigners.

But before this, they must be informed about the weather (that is an important variable for this kind of activity), what is happening in the cellars and in the vineyard, otherwise, the wine won't

be as perfect as they would like it to be. There are some specialists that are paid to control that everything is going in the right direction, organizing the cellar, the welcoming structure.

The partners vary from importers (K&L<sup>18</sup>) to bottle producers, to the “Consortio del Brunello” which is the consortium that regulates all the legislation for the Brunello of Montalcino, Rosso of Montalcino and other wines. It organizes some important events to spread the Brand around the world.

The most important evidence is that this enterprise’s main costs are: maintenance cost and salaries, that are the two most expensive part of the firm. While, for the revenues, the income comes from just the wine sale. There is not a kind of diversification which will be taken into account later after having analyzed the firm’s valuation.

## 2.2 Main Valuation Methods

There are several ways to evaluate a company, each one with its strength and weaknesses, advantages and disadvantages, and it is not simple to know when, and which technique should be used. But who usually use the Valuation technique? Investment Banks. They must determine the value of a company to facilitate the two main services that they offer: intermediation and advice on M&A (Merger and Acquisition) and other major corporate actions. The first one is about creating a link between who demands capital (e.g. corporations) and who supply capital (e.g. investors) and this is mainly facilitated through debt and equity offerings by companies. While, for the second one, through these studies, they can give corporate information and advice.

The most common valuation techniques used are<sup>19</sup>:

- **Comparable Company Analysis (Public Comps):** It consists in evaluating similar companies’ current valuation metrics of a business with similar size in the same industry, determined by market prices, and applying them to the company being valued.
- **Discounted Cash Flow Analysis (DCF):** Valuing a company by studying the balance sheet and income statement to project its future cash flows and then using the Net Present Value (NPV) method to value the firm.

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<sup>18</sup> <https://www.klwines.com/>

<sup>19</sup> <https://corporatefinanceinstitute.com/resources/knowledge/valuation/valuation-methods/>

- **Precedent Transaction Analysis (M&A Comps):** It is a valuation method where the price paid for the acquisition of similar companies in the past is considered an indicator of a company's value. This analysis leads to the "control premium" paid by an acquirer to have control of the business.
- **Leverage Buyout "Ability to Pay" Analysis (LBO):** Valuing an enterprise by the acquisition of another company using a significant amount of borrowed money to meet the cost of acquisition. The assets of the company being acquired could be used as collateral for the loans, or with the assets of the acquiring company.

Frequently, however, more than one technique is needed to be used in a given situation to provide different valuation estimates, with the concept being to triangulate a company's value by looking at it from multiple angles. In Fact, investment banks don't usually use just one technique to evaluate a firm because they want to be sure of the real value, trying to lower as much as possible the error of these methods.

- **Asset Valuation Method:** refers to the value assigned to a specific property, including stocks, options, bonds, buildings, machinery, or land. The assets may be categorized into tangible and intangible assets. Tangible assets are the company's physical assets, which have been purchased to produce its products or to provide a service. they can be categorized as either fixed, such as structures, land, and machinery, or current, such as cash. While Intangible assets are assets that take no physical form. They include patents, logos, franchises, and trademarks.

## **When to Use Each Valuation Technique**

### **Comparable Company Analysis**

The Comparable Company valuation technique is generally the easiest, because It requires just the comparable companies to be the same size, in the same industry, to have some likeable metrics, such as publicly traded securities so that the value of both can be estimated properly. The best use of this analysis is when there is the acquisition of a minority (small, or non-controlling) stake in a company or new equity is released, but it won't cause a change in control.

## **Discounted Cash Flow Analysis (DCF)**

A DCF valuation attempts to calculate a company's worth through the current value of the cash it will generate in the future. DCF is the most theoretically correct of all the valuation methods because it is the most precise if calculations are right and there is nothing hidden or forgotten in the balance sheet and income statement. Analyzing the past cash flows, it can be evinced how much it would grow in the future. In fact, DCFs are exceedingly difficult to get right in practice, because they involve predicting future cash flows and all such predictions require assumptions and taking in count of all the variables.

## **Precedent Transaction Analysis**

The Precedent Transaction valuation technique is generally easy to perform. It requires that the specifics of a prior acquisition/divestiture deal are known such as: price per share, the number of shares acquired, amount of debt assumed, etc., but this is usually the case if the acquired company had publicly traded instruments prior to the transaction. However, relatively few truly comparable M&A transactions have been made, so the Precedent Transaction analysis maybe be difficult to conduct.

If the buyer acquires a majority stake in a company, a Precedent Transaction analysis is almost always the theoretically correct. When a majority stake is purchased, the buyer has control of the acquired entity. Having control over the business, there is more flexibility and more options about how to create value for the business, with less interference from other stakeholders. Therefore, when control is transferred, a control premium is typically earned. This method determines the difference between the market value of the company before the transaction is announced versus the amount paid for the company in a control-transferring purchase. This difference is the premium paid to acquire the controlling interest in the business.

## **Leverage Buyout Analysis (LBO)**

LBOs are used by private equity firms who are looking to buy companies inexpensively in the hopes that they can be sold at a profit in several years. LBO firms usually use borrowed capital to fund the acquisition of the company, minimizing the amount of equity capital that the sponsor must invest, trying to maximize their returns.

LBO analysis can be quite difficult to perform, especially as the model gets more and more detailed. Unfortunately, LBO valuations are highly subject to market conditions. In a specific period, this type of transaction is difficult to use. For example, in a poor market environment, so when there is low capital markets activity, high-interest rates, and/or high credit spreads for High Yield bond issuances. So, LBO investing is highly cyclical, and it depends on the external environment.

### **Asset Valuation Method**

Asset Valuation is one of the simplest for its readiness. It is almost entirely based on market value and book value to take value from. There are several methods to make an asset valuation:

#### **1. Cost Method**

The cost method is the easiest way to evaluate assets. It is done by basing the value on the price for which the asset was bought.

#### **2. Market Value Method**

The market value method is based on its market price or its projected price if it was sold in the open market.

#### **3. Base Stock Method**

The base stock method requires a company to keep a certain level of stocks whose value is assessed based on the value of base stock.

#### **4. Standard Cost Method**

The standard cost method uses the difference between expected costs instead of actual costs, based on the company's past experience.

### **Valuation Technique: Advantages and Disadvantages**

The valuation method, such as any other technique, can have advantages and disadvantages. Some are more reliable and correct, while others depend on the market changes. Shown below there are the main Pros and Cons of each method:

### **Comparable Company Analysis**

- **Pros:**

- Market efficiency ensures that trading values for comparable companies are used as a good indicator of value for the company being evaluated.
- Values obtained tend to be more accurate as of the indicator of the company's value whenever a non-controlling (minority) investment scenario is being considered.

- **Cons:**

- There aren't two company perfectly alike, and as such, their valuations generally should not be identical either. Thus, comparable valuation ratios are not the perfect match. Also, for some companies, finding a sample of comparison can be very challenging. So, the Comparable Companies analysis is always running the risk of comparing two different objects that are not similar, never being able to find a true comparable, or simply having an insufficient set of comparable valuations from which to have the best valuation possible.
- Illiquid comparable stocks that are traded in small parts, might have a price that does not reflect the fundamental value of that company.

### **Discounted Cash Flow (DCF) Analysis**

- **Pros:**

- Theoretically, the soundest method if one is very confident in the projections and assumptions because DCF values the individual cash streams directly.
- Temporary market conditions or non-economic factors don't influence much the DCF method.

- **Cons:**

- Growth rate, profit margin, and discount rate assumptions are some modeling assumptions that make the valuation very sensitive and so, different DCF analyses can lead to different valuations.
- The forecasting of future performance is a key factor for DCF. It is very subjective, and most of the value of the company is usually derived from



the “terminal value,” which is the set of cash flows that occurs after the detailed projection period.

### **Precedent Transaction/Premium Paid Analysis**

- **Pros:**

- Generally regarded as the best valuation tool for control-transferring transactions because the previous transaction has validated the valuation. So, a precedent has been established, whereby a previous buyer has paid the amount specified in the precedent transaction.
- If the required transaction data is available/public information, precedent transactions are typically an easy analysis to perform.

- **Con:**

- The valuation multiples found in prior transactions typically include control premium and synergy assumptions, which are not public knowledge and are often transaction-specific.
- Temporary market conditions influence Precedent Transaction valuations, which fluctuate over time. For example, some transactions might have been made in a more favorable environment for debt and equity issuance, or in better market stability.

### **Leverage Buyout (LBO) Analysis**

- **Pros:**

- An excellent means to establish a base valuation.
- LBO valuation is realistic since it does not require synergies to achieve the final result.

- **Cons:**

- On the other hand, ignoring synergies could lead to an underestimated valuation, particularly for a well-fitting strategic buyer.
- The valuation obtained is very sensitive to operating assumptions and financing cost assumptions

## Asset Valuation Analysis

Asset valuation is one of the most important things that need to be done by companies and organizations.

- **Pros:**

- **Right Price:** It helps you to find the right price for an asset, especially when it is offered to be bought or sold. It is beneficial to both the buyer and the seller because the former won't need to pay more than the asset's value nor will the latter be paid less than the asset's value.
- **Taxes:** Since taxes are needed to be paid in relation to the asset owned by the company has, doing the asset valuation, they are calculated accurately.
- **Company Merger:** If two companies are merging, asset valuation is important because it helps both parties to size up the business.
- **Loan Application:** Asset valuation is needed because when a company applies for a loan, the bank may require some collaterals against debt default, knowing the precise collateral helps both the bank and the firm to know the precise amount of loan covered.
- **Audit:** For public companies which are regulated and so they have to present financial audits and report for transparency, a part of this control consists of asset valuation.
- This method is easy to calculate, readily available and provide a minimum value of the company.

- **Cons:**

- Valuation of intangible assets is difficult such as patents in this case.
- Company's future earnings are ignored.

## 2.3 Asset Valuation Method for Sesta di Sopra

The most appropriate approach to evaluate Sesta di Sopra is the Asset Valuation method because its main value is based on the assets, in particular on the tangible assets relying on Property, Plant and Equipment. Regarding this analysis, all the prices are at the actual market value which is taken by the “Agenzia delle Entrate”<sup>20</sup> (an Italian public entity that controls all the function related to tax management and tax assessment), and it is one of the best ways to know the value of the property. Moreover, an old firm was evaluated near Sesta di Sopra, for this reason, the estimation would be more precise because we are going to use some of their assets value.

The company assets to take in count of, are:

- a) Vineyard
- b) Olive tree grove
- c) Forest
- d) Machinery
- e) Cellar & Annexes
- f) Cellar Equipment:
  - 1. Machinery
  - 2. Containers
- g) Inventories
- h) Home

- a) The most important asset for Sesta di Sopra are the vineyards, that represent 32% of the whole net asset value. The evaluation was made not only on the market value taken by the average of several newspaper articles, on the “Agenzia delle entrate” and other entities but also on the manutention, the health and the percentage of diseases in the vineyards. Moreover, all the surface is fenced, and this fact is taken into account in Table 2.2.

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[https://www.agenziaentrate.gov.it/mt/Osservatorio%20immobiliare/valori\\_agricoli\\_medi/toscana/SI\\_2018.pdf](https://www.agenziaentrate.gov.it/mt/Osservatorio%20immobiliare/valori_agricoli_medi/toscana/SI_2018.pdf)

Table 2.2: Vineyard Values

Vineyard			
Type	Area (Hectare)	€ per hectare	Total Value
Brunello	1	750,000.00 €	750,000.00 €
Rosso	1.2	125,000.00 €	150,000.00 €
Toscana (IGT)	0.5	50,000.00 €	25,000.00 €
Arable land	1.5	15,000.00 €	22,500.00 €
Enclosure	4.2	4,000.00 €	16,800.00 €
<b>TOT</b>	<b>4.2</b>		<b>964,300.00 €</b>

- b) A little part of the business is dedicated also to the olive oil, which is also known around the world. Even for the olive tree grove, the market value was taken by the Agenzia delle Entrate's document.

Table 2.3: Olive Tree Grove Value

Type	Area (Hectare)	€ per hectare	Total Value
Olive tree grove	2	22,300.00 €	44,600.00 €
<b>TOT</b>	<b>2</b>		<b>44,600.00 €</b>

- c) The forest surrounds the area, it is composed by coppice and tall forest, partially cut as it is subject to a multi-year plan, provided with roads that favor the cutting and removal.

Table 2.4: Forest Value

Type	Area (Hectare)	€ per hectare	Total Value
Forest	60	2,775.00 €	166,500.00 €
<b>TOT</b>	<b>60</b>		<b>166,500.00 €</b>

- d) The evaluation was made by taking count of the average price in the market, the book value and the maintenance. The machinery currently used are shown in Table 2.5.

Table 2.5: Machinery Value

Machinery	
Type	Market Value
Tractor	45,000.00 €
Tracked	15,000.00 €
Car	7,000.00 €
Transpallet	1,500.00 €
Trailer & Annexes	7,000.00 €
<b>TOT</b>	<b>75,500.00 €</b>

- e) The cellar is the fulcrum where all processing and sales activities take place. It was recently enlarged, reaching 250 square meters, and renovated in order not to lack in efficiency. The evaluation is based on the planimetry.

Table 2.6: Cellar & Annexes Value

CELLAR & ANNEXES		
Square meters	€ per SM	Total Value
250	1,000.00 €	250,000.00 €
100	700.00 €	70,000.00 €
<b>TOT</b>		<b>320,000.00 €</b>

- f) Concerning the cellar equipment, the whole value is given by the average of the prices found in the market and taking into count also the book values:

Table 2.7: Cellar Equipment Value

Cellar Equipment - Machinery		Cellar Equipment – Container				
Type	Market Value	Type	Capacity	N°	Market Value	Total Value
Bottling Machine	45,000.00 €	Steel Vat	500 l	2	1,000.00 €	2,000.00 €
Pump	15,000.00 €	Steel Vat	1000 l	2	1,500.00 €	3,000.00 €
Pressure Washer	7,000.00 €	Steel Vat	2000 l	2	2,000.00 €	4,000.00 €
Destalker	5,000.00 €	Steel Vat	3100 l	1	3,000.00 €	3,000.00 €
Containers	1,500.00 €	Steel Vat	3200 l	1	3,100.00 €	3,100.00 €
Generator Set	7,000.00 €	Steel Vat	4000 l	1	3,500.00 €	3,500.00 €
Air Conditioning	10,000.00 €	Steel Vat	5400 l	2	4,500.00 €	9,000.00 €
Alarm System	2,500.00 €	Barriques	300 l	3	900.00 €	2,700.00 €
Press	2,000.00 €	Barriques	225 l	25	750.00 €	18,750.00 €
<b>TOT</b>	<b>95,000.00 €</b>	Big Barrels	3000 l	3	12,000.00 €	36,000.00 €
		Big Barrels	1000 l	2	4,000.00 €	8,000.00 €
		<b>TOT</b>				<b>93,050.00 €</b>

- g) The inventories' prices were taken by comparing Sesta di Sopra price of bottled and bulk wine with respect to the competitors' one and then making an average between them. In the end, including the accessories, a precautionary provision has been applied in order to comprehend eventual losses.

Tables 2.8: Inventory Value

Bulk Wine				
	liters	n°	market price	Total value
Brunello 2015	4,300		12.00 €	51,600.00 €
2016	4,000		12.00 €	48,000.00 €
2017	3,275		10.00 €	32,750.00 €
2018	4,225		10.00 €	42,250.00 €
Rosso 2017	2,200		8.00 €	17,600.00 €
2018	3,075		8.00 €	24,600.00 €
Toscana 2018	2,250		4.00 €	9,000.00 €
Table wine	750		2.00 €	1,500.00 €
<b>TOT</b>				<b>227,300.00 €<sup>21</sup></b>

Bottled Wine				
	Type	n°	Market Price	Total Value
Brunello from 1999 to 2013		414	30.00 €	12,420.00 €
Rosso 2015		33	12.00 €	396.00 €
2015	Magnum	2	24.00 €	48.00 €
2016		4,571	12.00 €	54,852.00 €
2016	Magnum	14	24.00 €	336.00 €
Toscana 2016		60	5.00 €	300.00 €
Brunello 2011	Magnum	8	60.00 €	480.00 €
2012	Magnum	4	60.00 €	240.00 €
2013	Magnum	8	60.00 €	480.00 €
2014		4,025	20.00 €	80,500.00 €
2014	Magnum	60	40.00 €	2,400.00 €
2004	Magnum	34	90.00 €	3,060.00 €
2006		42	45.00 €	1,890.00 €
2007		47	45.00 €	2,115.00 €
2008		43	45.00 €	1,935.00 €
2010		74	45.00 €	3,330.00 €
2010	Magnum	18	90.00 €	1,620.00 €
Grappa		621	14.00 €	8,694.00 €
Grappa Barricade		401	24.00 €	9,624.00 €
Oil		83	12.00 €	996.00 €
<b>TOT</b>				<b>185,716.00 €</b>



Accessories		
		<b>Market Value</b>
Bottle	Wine	50.00 €
	Oil	345.00 €
Cork	Wine	50.00 €
	Oil	250.00 €
Capsules	Wine	300.00 €
Boxes	Cardboard	5,910.00 €
	Wood	500.00 €
	Polystyrene	45.00 €
Depliants		290.00 €
Corkscrew		750.00 €
Bags		1,000.00 €
T-shirts		1,000.00 €
<b>TOT</b>		<b>10,490.00 €</b>

Total inventories' value is 423,506.00 €, but with 20% less of the precautionary provision, the final evaluation is **338,000.00 €**.

h) The house value is calculated by taking the price per square meter data from “Poggio Antico” (a winery recently evaluated):

Table 2.9: Home Value

HOME		
Square meters	€ per SM	Total Value
380	2,200.00 €	836,000.00 €
20	700.00 €	14,000.00 €
<b>TOT</b>		<b>850,000.00 €</b>

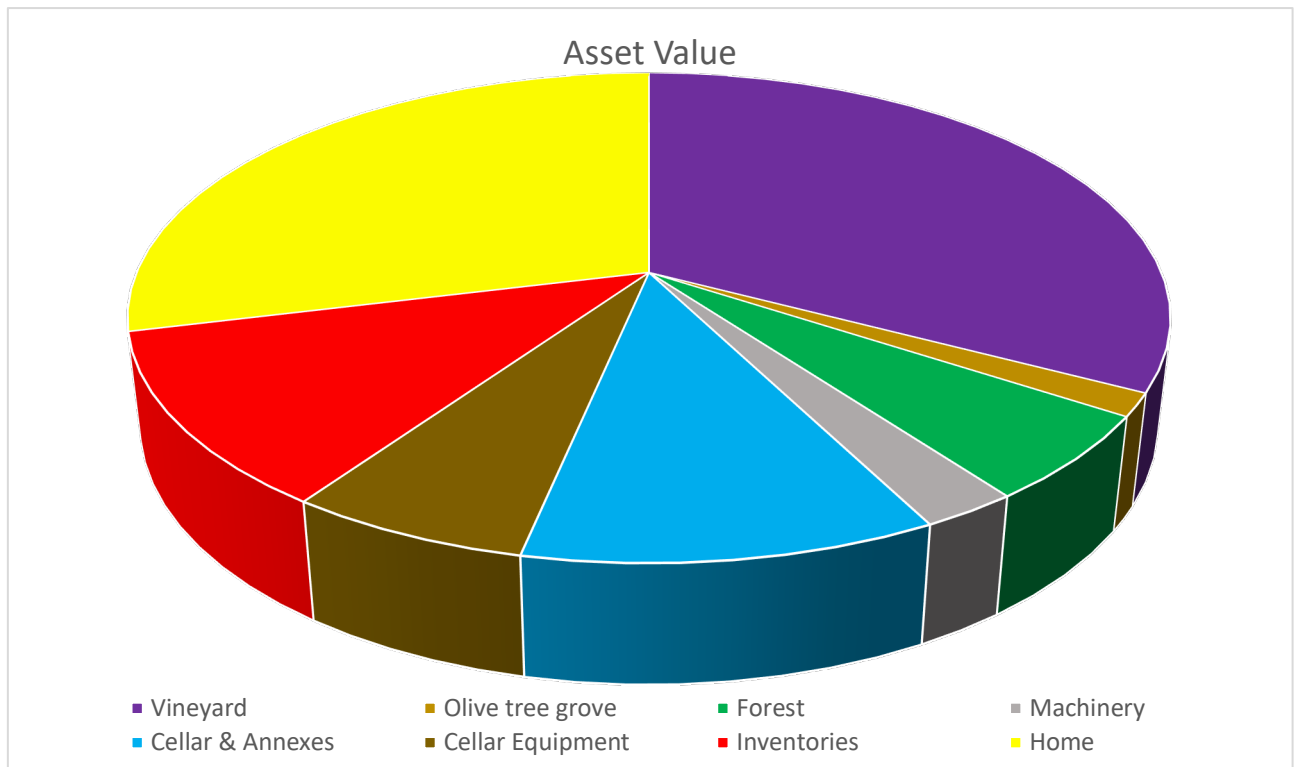
Table 2.10: Total Market Based Valuations Asset Side

Vineyard	964,300.00 €
Olive tree grove	44,600.00 €
Forest	166,500.00 €
Machinery	75,500.00 €
Cellar & Annexes	320,000.00 €
Cellar Equipment	188,050.00 €
Inventories	338,800.00 €
Home	850,000.00 €
<b>TOT</b>	<b>2,947,750.00 €</b>

Adding up all these values, the net asset value obtained is **2,947,750.00 €**, as shown in Table 2.10.

Most of this value comes from the Brunello brand which has risen a lot in recent decades, becoming known worldwide. In fact, even the vineyard prices have reached the highest level. This has its impact on the whole firm since the vineyard value it's 33% of the total net asset value and regarding the Brunello it is 25%.

Table 2.11: Asset Value Distribution



From the cash flows that are going to be shown later, it can be inferred that the Brunello's sales have a huge impact on the business revenues, mostly due to the brand name of the wine. Selling a brand doesn't require too much effort in looking for clients, because they already know directly or indirectly the product, so they trust it. Consumers find in brands certainty of a quality already approved by a large group of people, becoming more and more confident in purchasing it, in this case, the Brunello.

After the brand is known, there is customer loyalty factor, so consumers are probably willing to pay more for a specific item and it permits the firms to raise prices, and this allows them to raise their income and reach the break-even point at a lower level of output.

The same reasoning is applied to Sesta di Sopra, but it has maintained all the prices at the same level to sell more quantity without carrying too much inventory and, in the meanwhile, it delivers quality reaching the break-even point without difficulties. The problem, not only for this firm, but for almost every firm in Montalcino, is the diversification. In fact, several companies rely too much on the brand without considering that there could be some variables which could modify the outcome (e.g. bad weather, some accident in the cellars) leading to a loss in quantity produced and so revenues would fall.

Thus, Brunello in this area is a double edge weapon which has a huge impact on the firm's profit and on the property value.

## 2.4 WACC

Sesta di Sopra's Weighted Average Cost of Capital ends up being just the cost of equity since the firm's capital is fully weighted in it, but how is it calculated?

The asset value obtained from the data is 2,947,750.00 €, and it is also the business value on the market. To find WACC the analysis will proceed following several steps.

Starting from the formula:

$$\text{Firm value} = \frac{\text{FCFF}_1}{\text{WACC}-g} = \frac{\text{FCFF}_0(1+g)}{\text{WACC}-g}$$
22

To proceed with this analysis, we must study the cash flows (Table 2.14 - 2.15- 2.16) of the previous years to get some conclusions and to understand which are the key factors that affect the firm. But, as known, balance sheets and income statements are needed (Table 2.12 - 2.13). They are simple since it is a small enterprise and all the values are taken at the market value. In fact, there are just a few voices, for example, the financial part is not relevant in the years 2015, 2016, 2017,2018 because there were no loans, so all the phases regarding the interface with banks are not studied. The account payables are very low, while the account receivables are always higher than the previous year one and, in terms of cash flow, this is not efficient leading the whole value to decrease, because of these missing cash in. The bank account and the cash are always low because they are invested back into the winery for maintenance or for the implementation of it. Inventories are on the average, always at the same level and they depend on how much the previous vintages are bought by consumers, but it seems always increasing. This fact is due to a little increase in the quantity produced in 2016, when the new brand wasn't known, and for this reason, the inventory grew a lot in 2017 and reduced a bit in 2018. In the Inventory voice there is all the wine unsold (willingly and not) the boxes, and the depliants.

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<sup>22</sup> Firm Value Formula which helps to study the WACC

Why sales in 2016 were that high and inventory decreased that much? Because it was the year of the “Riserva” 2010. The “Riserva” is the Brunello taken to aging one year more to make the perfumes and the flavors more “round” and more likable. However, this also means more maintenance costs for the winery in the previous years, but also more revenues later since one Riserva bottle’s price is the double of one Brunello. The only stream of cash of the firm comes from the wine sales and the biggest part from Brunello. Talking about costs, general expenses, wages & salaries are the two biggest voices. In the first one, there are all the maintenance, insurance, transportation costs, while, the second grew around 16,000€ in 2017, since a new employee has been enrolled.

Most of the raw materials bought are used in the cellars, for the aging or in the vineyard, for grapes, and they keep the same cost level.

Regarding the taxation, this firm is not taxed for the product sold, nevertheless they are very low due to some incentives for agriculture given by the government. In fact, the owner has the IAP (Imprenditore Agricolo a titolo Principale) title, it permits to pay taxes only on the ground property that usually it very low, in this case, the entire Sesta di Sopra value is 1,912€ and the tax percentage is 23%, for a total of 440€ to be paid as taxes.

From the Balance sheet and Income statement, we can find the Cash flows using the direct and indirect method. The direct one creates the cash flow statement in which is used the actual cash flow information from the company's operations segment, instead of accrual accounting values. While the indirect method is used to create a statement of cash flows which could be use during any given reporting period. Accrual accounting information are used to present the cash flow.

The use of both is just to check if the results are right.

Table 2.12: Sesta di Sopra Balance Sheet from 2015 to 2018

	2015	2016	2017	2018
<b>ASSETS</b>				
Current assets:				
Cash and marketable securities	23,124	27,290	29,538	23,958
Account receivable	40,844	65,503	24,586	26,370
Inventories	332,600	318,170	348,000	338,800
Other current assets				
<b>TOTAL CURRENT ASSETS</b>	<b>396,568</b>	<b>410,963</b>	<b>402,124</b>	<b>389,128</b>
Fixed assets:				
Tangible fixed assets	43,525	33,043	31,459	26,180
Property, plant, and equipment				
<i>Less accumulated depreciation</i>	- 14,222	- 9,138	- 10,499	- 7,007
<b>NET TANGIBLE FIXED ASSETS</b>	<b>29,303</b>	<b>23,905</b>	<b>20,960</b>	<b>19,173</b>
<b>TOTAL ASSETS</b>	<b>425,871</b>	<b>434,868</b>	<b>423,084</b>	<b>408,301</b>
<b>LIABILITIES AND SHAREHOLDERS' EQUITY</b>				
Current liabilities:				
Debt due for repayment				
Account Payable	3,707	5,779	5,478	4,963

Other current liabilities	13,381	15,700	18,000	20,000
TOTAL CURRENT LIABILITIES	17,088	21,479	23,478	24,963
Long-term debt				
Deffered income taxes	440	440	440	440
Other long-term liabilities				
TOTAL LIABILITIES	17,528	21,919	23,918	25,403
Common stock and other paid-in-capital	100,237	100,237	100,237	100,237
Retained earnings and capital surplus	222,236	193,386	221,699	262,529
TOTAL SHAREHOLDERS EQUITY	322,473	293,623	321,936	362,766
<b>TOTAL LIABILITIES AND SHAREHOLDERS EQUITY</b>	<b>340,001</b>	<b>315,542</b>	<b>345,854</b>	<b>388,169</b>

Table 2.13: Sesta di sopra Income statement from 2015 to 2018

INCOME STATEMENT	2015	2016	2017	2018
Net sales	264,255	296,354	247,322	225,052
Cost of good sold	123,995	120,341	96,964	133,360
Selling, general, administrative expenses	53,951	56,246	72,688	71,120
Depreciation				
EBIT	86,309	119,766	77,670	20,572
Interest expenses				
Tax income	440	440	440	440
<b>Net income</b>	<b>85,869</b>	<b>119,326</b>	<b>77,230</b>	<b>20,132</b>
Dividends	85,869	119,326	77,230	20,132
Addition to retained earnings	222,236	193,386	221,699	262,529

## CASH FLOWS<sup>23</sup>

Table 2.14

2015-2016	
INDIRECT METHOD	
Net Income	119,326
Depreciation Expenses	9,138
Increase in Account Receivable	-24,659
Increase in Account Payable	2,072
Decrease in Inventories	14,430
<b>CASH FLOW</b>	<b>120,307</b>
DIRECT METHOD	
Sales	296,354
Increase in Account Receivable	-24,659
<b>CASH RECEIVED FROM CUSTOMERS</b>	<b>271,695</b>
Total Expenses	167,450
Decrease in Inventories	-14,430
Decrease in Account Payable	-2,072
<b>CASH PAYMENT FOR MERCHANDISE</b>	<b>150,948</b>
Income Tax Expenses	440
<b>CASH PAYMENT FOR INCOME TAXES</b>	<b>440</b>
<b>CASH FLOW</b>	<b>120,307</b>

Table 2.15

2016-2017	
INDIRECT METHOD	
Net Income	77,230
Depreciation Expenses	10,499
Decrease in Account Receivable	40,917
Increase in Account Payable	-301
Increase in Inventories	-29,830
<b>CASH FLOW</b>	<b>98,515</b>
DIRECT METHOD	
Sales	247,322
Increase in Account Receivable	40,917
<b>CASH RECEIVED FROM CUSTOMERS</b>	<b>288,239</b>
Total Expenses	159,153
Decrease in Inventories	29,830
Decrease in Account Payable	301
<b>CASH PAYMENT FOR MERCHANDISE</b>	<b>189,284</b>
Income Tax Expenses	440
<b>CASH PAYMENT FOR INCOME TAXES</b>	<b>440</b>
<b>CASH FLOW</b>	<b>98,515</b>

Table 2.16

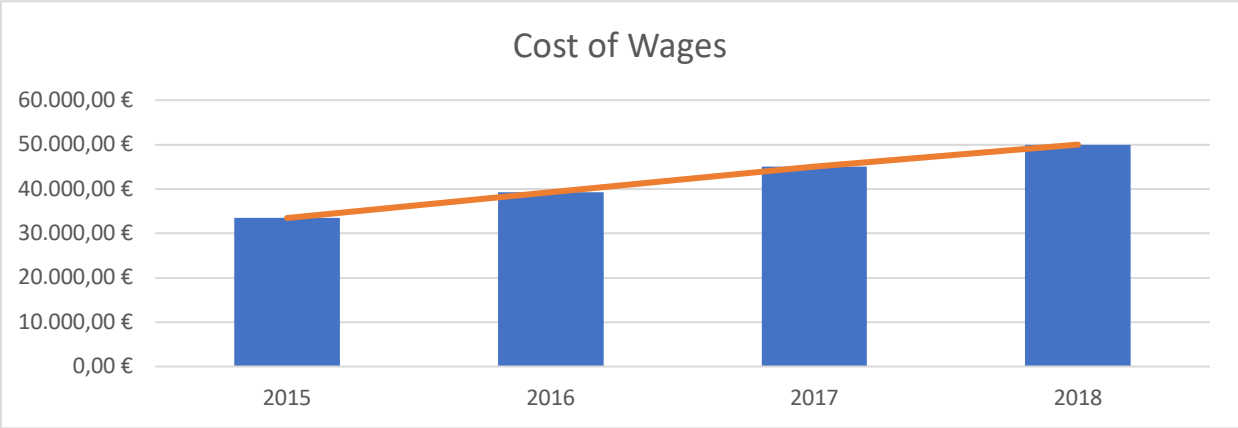
2017-2018	
INDIRECT METHOD	
Net Income	20,132
Depreciation Expenses	7,006
Increase in Account Receivable	-1,783
Decrease in Account Payable	-515
Decrease in Inventories	9,200
<b>CASH FLOW</b>	<b>34,040</b>
DIRECT METHOD	
Sales	225,052
Increase in Account Receivable	-1,783
<b>CASH RECEIVED FROM CUSTOMERS</b>	<b>223,269</b>
Total Expenses	197,474
Decrease in Inventories	-9,200
Decrease in Account Payable	515
<b>CASH PAYMENT FOR MERCHANDISE</b>	<b>188,789</b>
Income Tax Expenses	440
<b>CASH PAYMENT FOR INCOME TAXES</b>	<b>440</b>
<b>CASH FLOW</b>	<b>34,040</b>

<sup>23</sup> Sesta di Sopra Cash Flows from 2015 to 2018



These cash flows show that there was a significant decrease in cash, almost 75% less from 2015-2016 and around 65% less from 2016-2017. This is due to, looking at the direct method, a decrease in sales and an increase in total expenses. This variation can be explained in many ways. First, the expenses are raised for the new employment, so, obviously there is more cash out that decreases the whole cash flow. The increases in the cost of workers is clear and this has raised roughly of 65% in the last few years because of a new part-time hired that now is almost working full time in the firm. Most of the job is done in the vineyard and cellar as expected, but there are two voices that come up in Table 2.18-2.19: the hours spent in organizing the inventory and the time spent in maintenance of the winery. Probably the winery must work on making them more efficient because they are too elevated for such a small business.

Table 2.17: Cost of Wages Study to understand how it increased



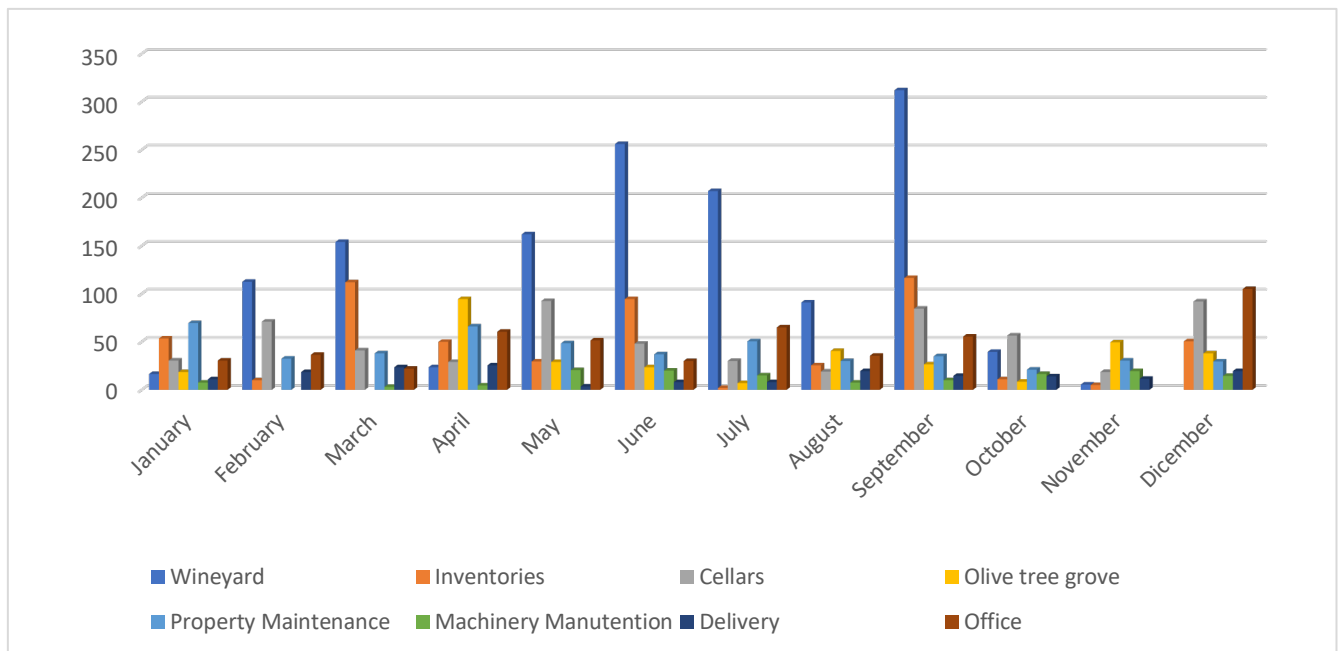
The employees work mainly in these sectors (hours/month), shown in Table 2.18-2.19:

Table 2.18: Hours of Work used in different areas

		SECTORS							
		Wineyard	Inventories	Cellars	Olive tree grove	Property Maintenance	Machinery Manutention	Delivery	Office
MONTHS	January	16.5	53.5	30.5	18.5	69.5	7.5	11	30.5
	February	112.5	10	71		31.5		18.5	36.5
	March	154	112	41		38	3	23.5	22
	April	23,55	50	29	94.5	66	4.5	25.5	60.5
	May	162	29.5	92.5	29	48.5	20.5	3.5	51.5
	June	256	94.5	48	23.5	37	20	8	30
	July	207	2	30	7	50.5	15	8	65
	August	91	25.5	19	40.5	30	7.5	19.5	35.5
	September	312	116.5	84.5	26.5	35	10	14.5	55.5
	October	39.5	11	56.5	8.5	21	16.5	14	
	November	5.5	5	18.5	49.5	30.5	19.5	11.5	
	December		50.5	92	38	29.5	14.5	19.5	105
TOT		1,379.5	560	612.5	335.5	488	138.5	177	492

→ 4,183

Table 2.19: Let us understand where the hour worker is spent the most



However, it could not be the only reasons, in fact, the 2013/2014 vintage wasn't good, because the weather compromised the harvest, causing damages and diseases, and Sesta di Sopra had to cut off the 25% of their production.

Looking at these data, there could be made some assumption for future cash flows. This year the enterprise decided to produce the Riserva once again, so for sure, the first 5 years the total costs will be a little bit higher, how demonstrated with the Riserva 2010, part of

the wine has to rest one year more. We are talking about 3% more for 5 years and then a big return of 20% more on sales the sixth year.

Once found all the cash flows, the average of these three is made in order to have general esteem for all the previous cash flow to calculate the perpetuity and to find the costs of equity. But the rate of growth is missing, and it is calculated on the past data available. As shown in Table 2.20, to find the growth of the firm, the plowback ratio (1 - (dividends paid/Net Income)) and the Return on Equity (Net Income/Average Shareholders Equity) are needed. The first one refers to how much earnings are retained after dividends are paid out, and so how much money earned by the company are reinvested. The latter is a financial performance which measures how effectively assets are used to generate profit from the manager.

By multiplying ROE and the plowback ratio, year on year from 2015 to 2018 there will be four different growth rates for each year. A hypothetical forecast for the future growth keeping investing the same amount will be 52,8%, this result comes from the simple growth rate average of the previous years. But for the analysis, the right growth rate to use is around 20% since during 2015-2016-2017 were sold Riserva bottles and so the “g” was higher.

Table 2.20: Variables to find the growth rate and then the average Growth Rate

g	g2018	g2017	g2016	g2015	AVG g
g=ROE*pbr	0.187	0.571	0.736	0.618	0.528
ROE	ROE2018	ROE2017	ROE2016	ROE2015	
net income/equity	0.201	0.770	1.190	0.857	
PBR	PBR2018	PBR2017	PBR2016	PBR2015	
(earning-dividend)/ earning	0.929	0.742	0.618	0.721	

Now proceeding with a backward analysis, the WACC is:

$$\begin{aligned}
 \text{WACC} &= \frac{\text{FCF}_1}{\text{FIRM VALUE}} + g \\
 \\ \\
 \text{WACC} &= \frac{84,287.00}{2,947,750.00} + 0.2 = 0.229
 \end{aligned}$$

## CONCLUSION

The Wine sector is developing, and the Brunello era has just begun; the brand is known worldwide, and these advantages are visible from the valuation made before.

The evaluation of a firm is a challenging operation, but fundamental to understand the current situation of it. In fact, from this analysis a firm has the possibility to have an overview of its strengths and weaknesses.

The starting point of the research is to find the market values of the wine sector in which arises the Italian “power”. The rest of the analysis is on an Italian family business: Sesta di Sopra. Being in the Brunello’s area is a competitive advantage that must be used, and Sesta di Sopra is aware of it. However, this family business had incomplete balance sheets and cash flows. Therefore, in addition to the market research presented, information and data have been collected from internet and from recent relation with a winery like Sesta di Sopra, in order to find the missing data. It made possible the balance sheets and income statement reconstruction, including the assets analysis and the WACC.

The evaluation underlined the weaknesses and risks which the winery is exposed to. In fact, Sesta di Sopra’s capital structure is based only on equity and it is not the best efficient way to manage a business. Moreover, the enterprise is not a diversified business and, in case of a year of bad weather, the profit of the entire year could be compromised just by it.

Obviously, the high-quality is important in this sector, but Sesta di Sopra should increase the number of bottles produced, to spread risk and profit over more output. In order to reduce risks and weaknesses, Sesta di Sopra could change the capital structure and increase the debt applying for a loan to buy new arable lands, in this way the production would be higher leading me to the second advice: implementing the wine bottle number to have a higher return, spreading the risk. The loan could be made also for opening a new activity, such as, a restaurant or a bed and breakfast, giving the business the opportunity to improve its diversification.

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