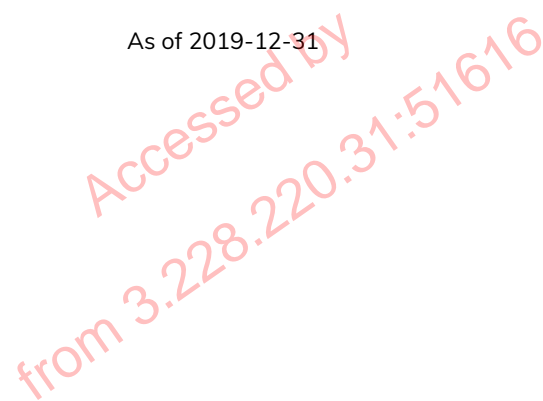




Valuation Report of Virtudes Company

As of 2019-12-31



Report generated on 28 Jul, 2020

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Company summary

Virtudes Company

🌐 United States

Industry: **Agricultural Chemicals**
 Business Activity: **Other Agricultural Chemicals**

Founders: **2**
 Employees: **2**
 Started in: **2019**
 Incorporated: **Yes**
 Year of incorporation: **2019**
 Founders' committed capital:
\$1000000



Opportunity

Business model: **B2B**
 Scalable Product: **Yes**
 Exit strategy: **Big market-players demonstrated strong interest in buying the company**



Current Operations

Stage of development: **Startup stage**
 Employees (excluding founders, interns and freelancers): **2**
 Profitability: **Yes**



Latest operating performance

12/2018 - 12/2019

	12/2018 - 12/2019
Revenues	-
EBITDA	-800,000
Ebitda margin	-
EBIT	-800,000
Ebit margin	-
Cash in hand	-

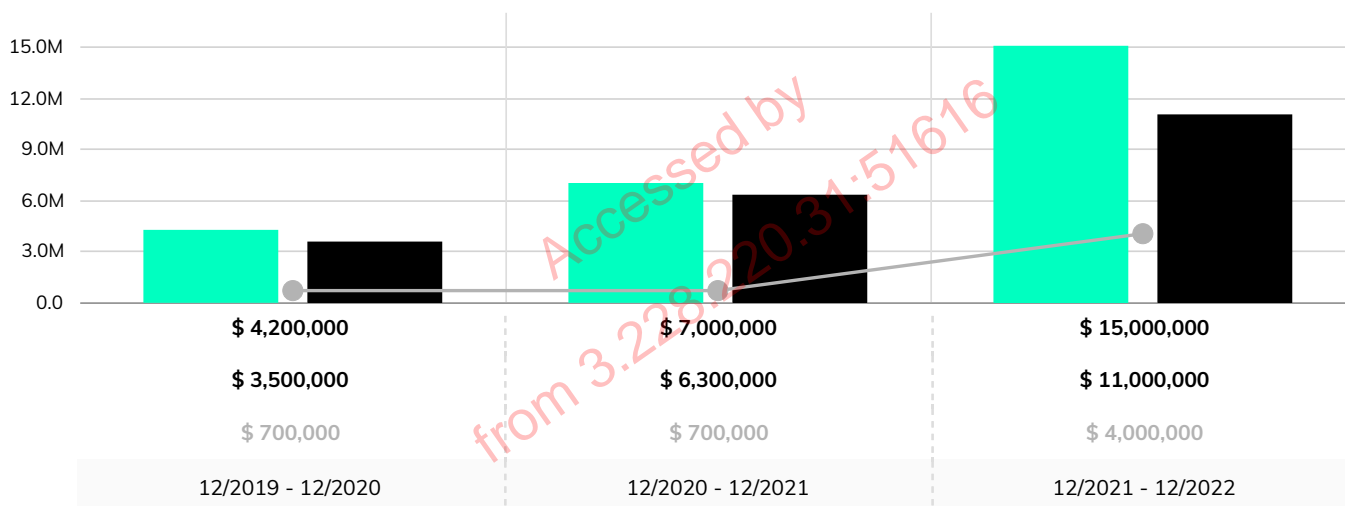
All numbers in \$

/// More information on the history, milestones, team, etc., (e.g. pitchdeck) can be requested to the company.

Forecasts summary

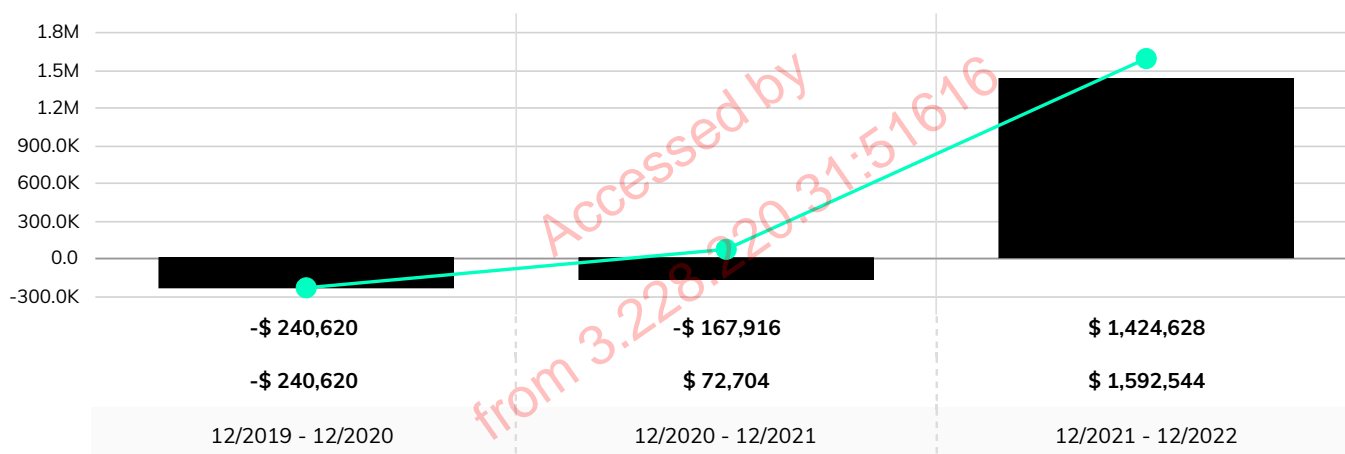
Future profitability

■ Revenues ■ Costs ● EBITDA



Cash forecast

■ Cash in hand ● Free cash flow to equity



/// Full profit and loss and cash flow forecast at page 14.

Past funding rounds

Here is an overview of the past funding rounds and valuations of the company.

No funding rounds to date

Current ownership

Here is an overview of the current shareholders in the company. More information on type of shares, unassigned shares, and in general a detailed cap table can be requested to the company in question.

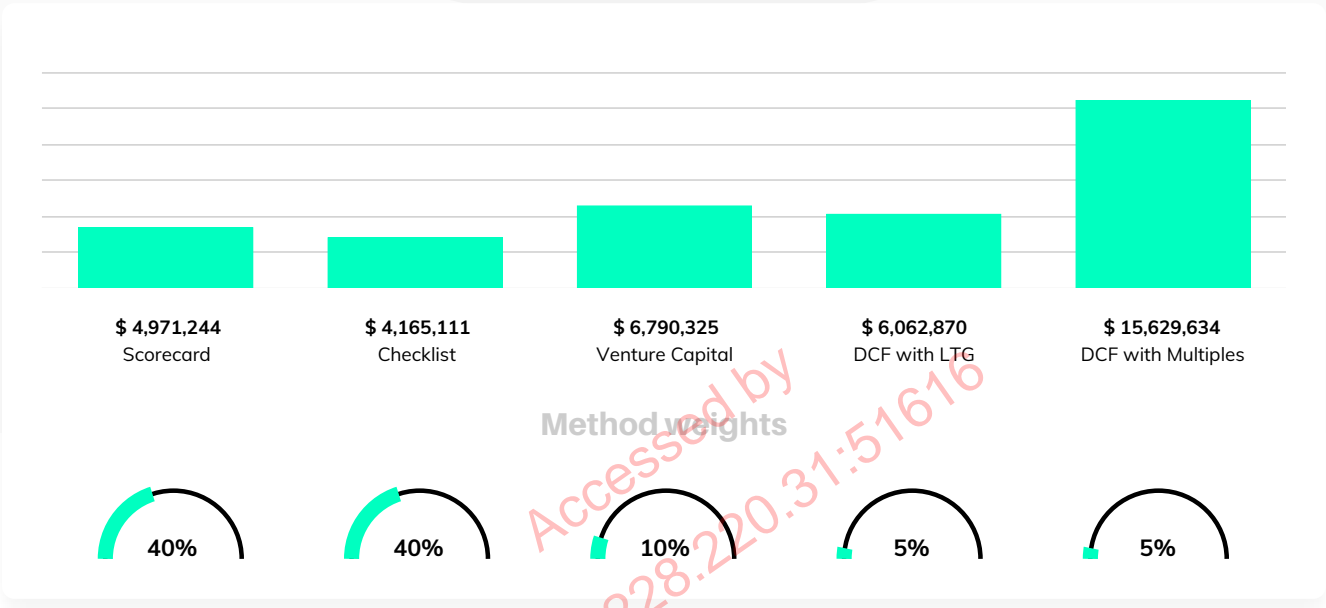


Valuation

The pre-money valuation displayed below is the result of the weighted average of different methods. The use of several methods is a best practice in company valuation, as looking at the business from different perspectives results in a more comprehensive and reliable view.

These methods are compliant with IPEV (International Private Equity Valuation) Guidelines and each of them will be explained in more detail in the following pages of the report.

More information on the weights can be found in the Appendix.



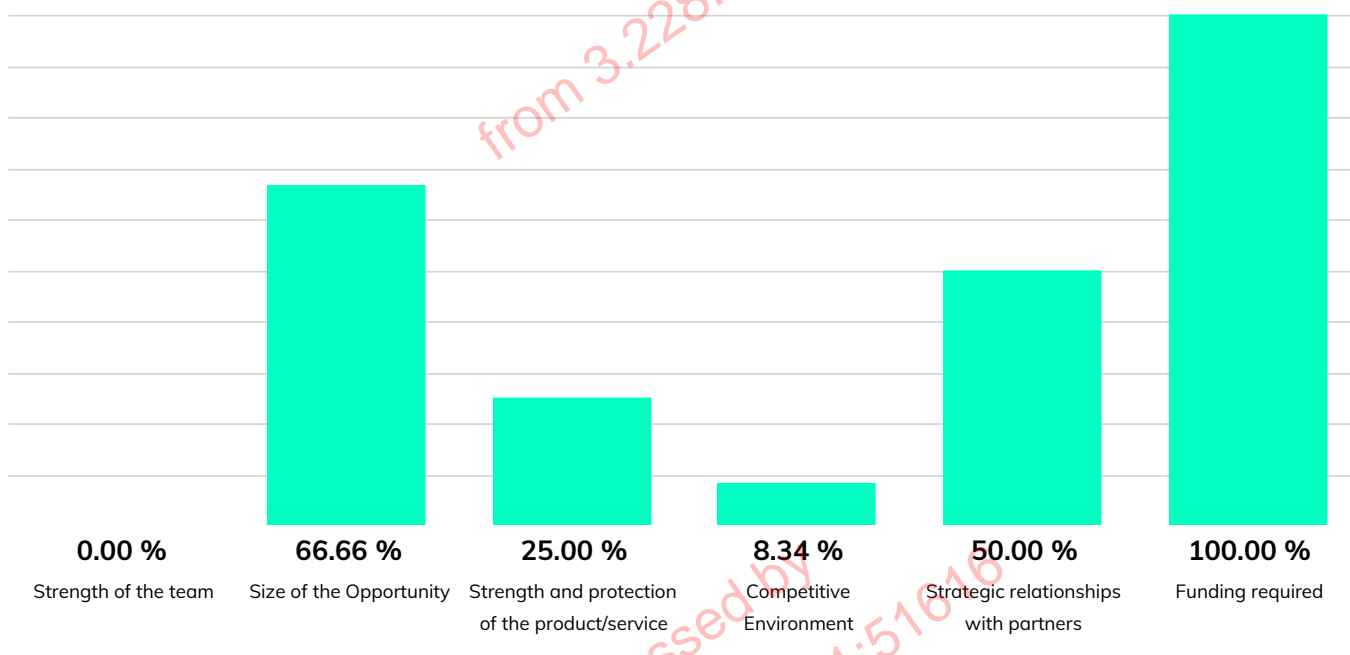
Qualitative methods

Scorecard Method: \$ 4,971,244

This method was conceived by William H. Payne of Ohio TechAngels group and endorsed by the Ewing Marion Kauffman Foundation. The valuation of the startup depends on how different this is from the assumed average of a set of comparable companies from the same region.

Startups' qualitative traits are divided in 6 criteria, compared with the assumed traits of the average company, and given a score according to whether it over- or under-performs the assumed average company. These scores are multiplied by weights that represent the impact of the criteria on the valuation. The sum of these weighted scores multiplied by the average valuation leads to the company's pre-money valuation.

Normalized scores of the company for each criteria



Parameters

Average valuation (United States): \$ 3,918,222

Weights of the criteria

Strength of the team: 30%

Size of the Opportunity: 25%

Strength and protection of the product/service: 15%

Competitive Environment: 10%

Strategic relationships with partners: 10%

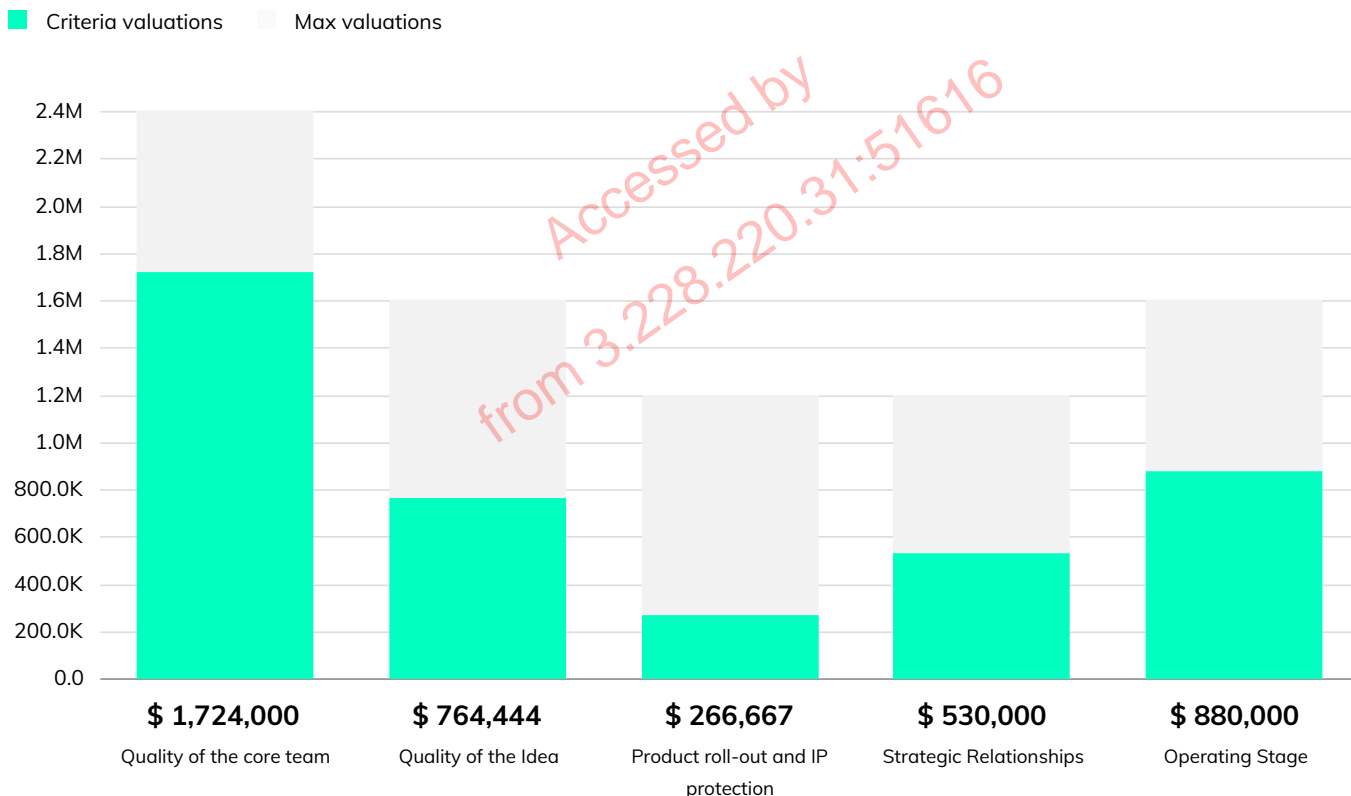
Funding required: 10%

/// Please see appendix for data sources, defaults, and breakdown of the traits

Checklist Method: \$ 4,165,111

The creator of the method is Dave Berkus, one of the most prominent Californian angel investors. The valuation of the startup consists of intangible building blocks that sum up to the assumed maximum pre-money valuation.

The maximum pre-money valuation is split in 5 criteria according to their weight. The startup obtains portions of these maximum criteria valuations according to how close its qualitative traits are to the most desirable ones. Their sum is the startup pre-money valuation.



Parameters

Maximum valuation (United States): \$ 8,000,000

Criteria maximum valuations

Quality of the core team: \$ 2,400,000 (30%)

Strategic Relationships: \$ 1,200,000 (15%)

Quality of the Idea: \$ 1,600,000 (20%)

Operating Stage: \$ 1,600,000 (20%)

Product roll-out and IP protection: \$ 1,200,000 (15%)

/// Please see appendix for data sources, defaults, and breakdown of the traits

Qualitative traits summary

Below a summary of the traits at the basis of the scores for the two qualitative methods. Please see appendix for detailed breakdown of which trait is used in which method.



Team

Founders

Time commitment: **Full time**

Average age: **Between 35 and 45**

Founded other companies before: **Yes, with successful exit(s)**

Core team skills and expertise

Working together for: **More than 5 years**

Years of experience in the industry: **20**

Business and managerial background: **Mid-level management experience**

Technical skills: **Most technical skills are outsourced**



Network

Board of advisors: **Advisors not organized in a board**

Legal consultants: **Yes**

Current shareholders: **Business angel**



Market

Total Addressable Market (TAM): **\$ 5,000,000,000**

Annual growth rate of the market: **34.00 %**

Demand validated: **Demand validated by competitors**

Internationalization: **Local focus now, international expansion planned**



Product

Product roll-out: **Prototype**

Feedback received: **Mainly positive**

Loyalty to the product/service: **High retention**

Partners: **Informal agreements with key strategic partners**



Competition

Level of competition: **Dominated by single player**

Competitive products are: **On the same level**

Differentiation from current solutions: **We innovate in terms of execution**

International competition: **Growing, but not yet as developed as locally**



Protection

Barriers to entry of the market: **Modest**

Applicable IP: **Trademark and/or domain names**

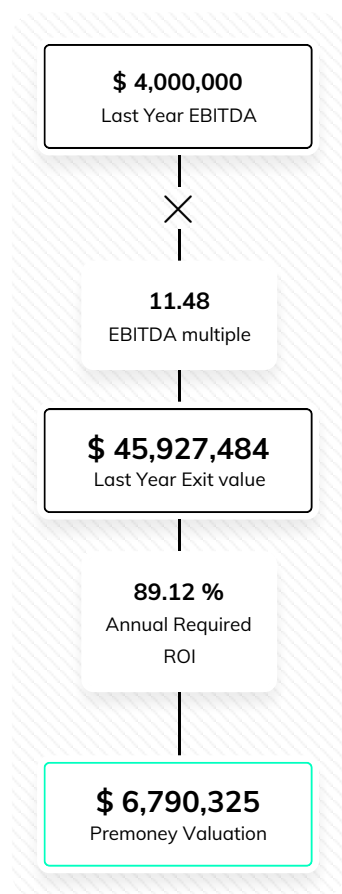
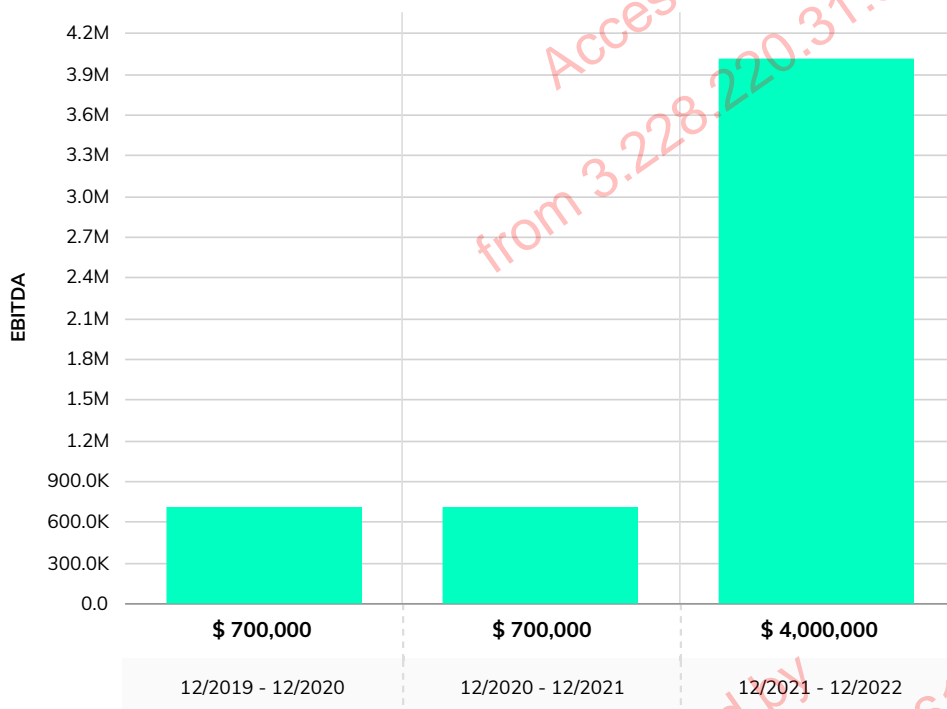
Current IP protection: **IP protection secured at regional level**

VC Method

Premoney Valuation: \$ 6,790,325

The VC (Venture Capital) method is one of most common approaches among financial practitioners in the private company market. The startup is given the valuation that will grant investors a predetermined return at the exit.

The potential exit value of the company is computed with an industry-based EBITDA multiple. The valuation is equal to this value discounted by a required ROI (Return On Investment). This depends on the startup's stage of development, higher for early stage riskier companies, lower for more mature ones. It is the minimum rate that will allow investors to have positive returns from portfolios where most companies fail and gains come from a selected few.



Parameters

Industry Multiple: **11.48**

Annual Required ROI: **89.12 %**

/// Please see appendix for data sources and defaults

DCF Methods

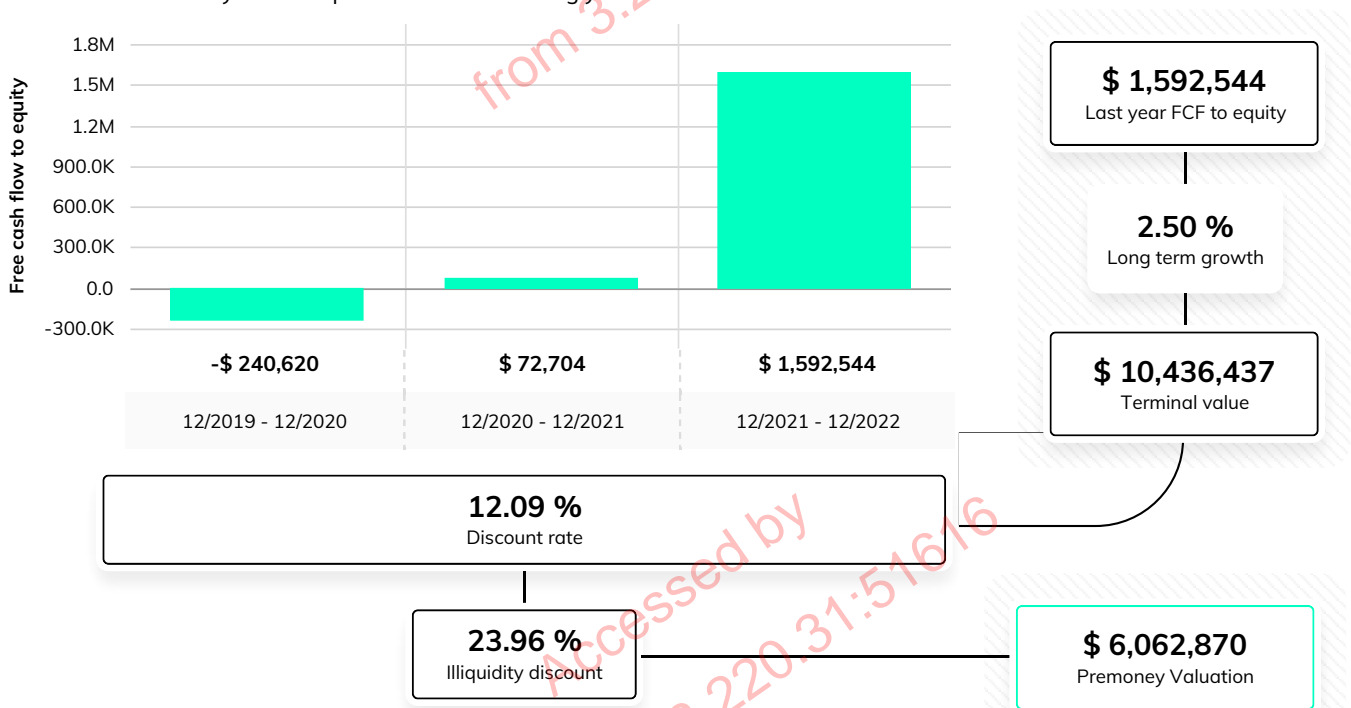
The DCF (Discounted Cash Flow) methods represent the most renowned approach to company valuation, recommended by academics and a daily tool for financial analysts. The valuation is the present value of all the free cash flows to equity the startup is going to generate in the future, discounted by its risk.

These methods weight the projected free cash flow to equity by the probability the startup will survive. Then, the flows are discounted to present by a rate that represents risks related to industry, size, development stage and profitability. Lastly, an illiquidity discount is applied to the sum of the discounted cash flows to compute the valuation.

The value of cash flows beyond the projected ones is represented by the TV (Terminal Value) and the way it is calculated is the difference between the following two methods.

DCF with LTG: \$ 6,062,870

The DCF with LTG (Long Term Growth) assumes the cash flows beyond the projected ones will grow forever at a constant rate based on the industry and computes the TV accordingly.



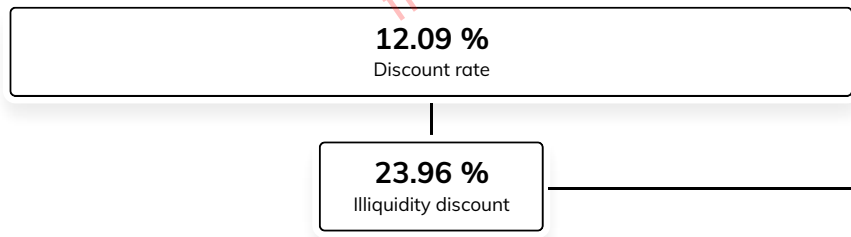
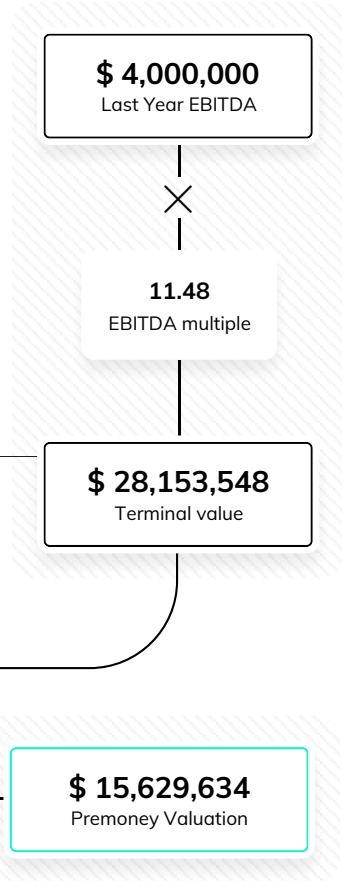
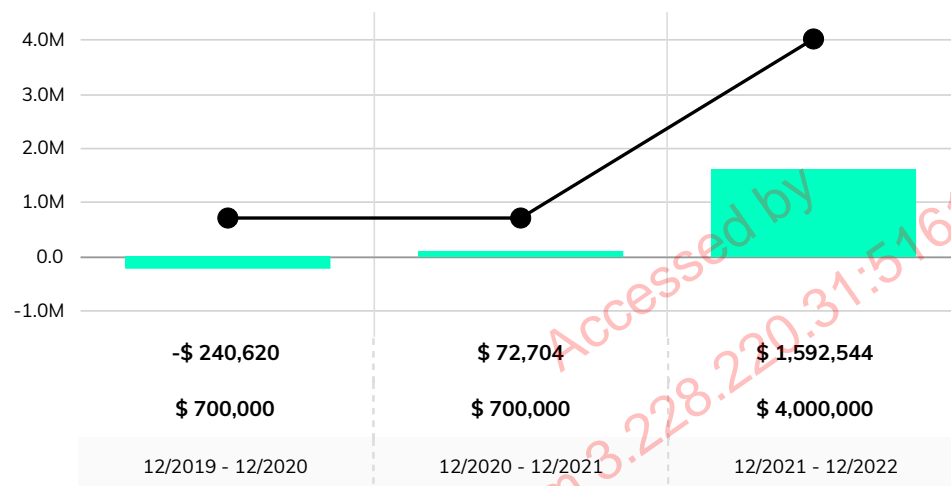
Parameters		
Long term growth:	2.50 %	Discount rate
Illiquidity discount:	23.96 %	Risk free rate: 1.82 %
		Beta: 1.98
		Market Risk Premium: 5.20 %
		Survival rates
		Year 1: 79.60 %
		Year 2: 68.80 %
		Year 3: 61.30 %

/// Please see appendix for data sources and defaults

DCF with Multiples: \$ 15,629,634

The DCF with Multiple assumes the TV (Terminal Value) is equal to the exit value of the company computed with an industry-based EBITDA multiple.

■ Free cash flow to equity ● EBITDA



Parameters

EBITDA multiple: 11.48	Discount rate	Survival rates
Illiquidity discount: 23.96 %	Risk free rate: 1.82 %	Year 1: 79.60 %
	Beta: 1.98	Year 2: 68.80 %
	Market Risk Premium: 5.20 %	Year 3: 61.30 %

/// Please see appendix for data sources and defaults

Financial Projections

Profit & Loss

The profit & loss projections are displayed below. Data about revenues and operating costs are provided by the company. Depreciation and amortization, interest, and taxes are either provided by the company or estimated by Equidam. Please consult our methodology document for more details.

	12-2018 - 12-2019	12-2019 - 12-2020	12-2020 - 12-2021	12-2021 - 12-2022
Revenues	-	4,200,000	7,000,000 +67%	15,000,000 +2X
Cost of Goods Sold	800,000	3,500,000 +4X	6,300,000 +80%	11,000,000 +75%
Salaries	-	-	-	-
Operating Expenses	-	-	-	-
EBITDA	-800,000	700,000	700,000 0%	4,000,000 +6X
Ebitda margin	-	16 %	10 %	26 %
D&A	-	284,578	474,297 +67%	1,016,350 +2X
EBIT	-800,000	415,422	225,703 -46%	2,983,650 +13X
Ebit margin	-	9 %	3 %	19 %
Interest	-	-	19,250	32,683 +70%
EBT	-	415,422	206,453 -50%	2,950,967 +14X
Taxes	-	112,164	55,742 -50%	796,761 +14X
Nominal tax rate	-	27 %	27 %	27 %
Effective tax payable	-	112,164	55,742	796,761
Deferred tax assets	-	-	-	-
Net profit	-800,000	303,258	150,710 -50%	2,154,205 +14X
Net profit margin	-	7 %	2 %	14 %

All numbers in \$

Cash Flow

The cash flow projections are displayed below. Capital expenditure, debt at the end of the year, and equity fundraising are provided by the company. Account payables, account receivables, inventory and D&A are either provided by the company or estimated by Equidam based on the average percentage of revenues for public companies in the company's industry.

	12/2018 - 12/2019	12/2019 - 12/2020	12/2020 - 12/2021	12/2021 - 12/2022
Net profit	-800,000	303,258	150,710 -50%	2,154,205 +14X
Change in Working Capital	-	828,456	552,304	1,578,012
Working capital	-	828,456	1,380,760 +67%	2,958,772 +2X
Account Payables	-	517,896	863,160	1,849,629
Account Receivables	-	705,498	1,175,830	2,519,635
Inventory	-	640,854	1,068,090	2,288,764
D&A	-	284,578	474,297 +67%	1,016,350 +2X
Capital expenditures	-	-	-	-
Change in outstanding debt	-	-	-	-
Debt at the end of the year	-	-	-	-
Free cash flow to equity	-	-240,620	72,704	1,592,544 +22X
Equity fundraising	-	-	-	-
Free cash flow	-	-240,620	72,704	1,592,544 +22X
Beginning of the year cash	-	-	-240,620	-167,916 +30%
End of the year cash	-	-240,620	-167,916	1,424,628

All numbers in \$

Conclusion

Legal Notes

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Appendix

Weights of the methods

The default weight of each method is determined by Equidam based on the stage of development, and they are shown below. They can be manually adjusted by the company.

Default weights of the 5 methods

Stage of development	Checklist Method	Scorecard Method	VC Method	DCF with LTG	DCF with Multiples
Idea stage	38%	38%	16%	4%	4%
Development stage	30%	30%	16%	12%	12%
▶ Startup stage	15%	15%	16%	27%	27%
Expansion stage	6%	6%	16%	36%	36%

Virtudes Company stage of development: **Startup stage**

These are determined according to the following principles:

- Qualitative information is more important in early stage companies, where performance uncertainty is extremely high, so qualitative methods are weighted in more
- The investors' view is equally important across all stages, so the weight of the VC method does not change
- Quantitative information is more reliable in later stages, when a company already has a proven financial track record. Therefore, it is possible to use the DCF methods more extensively as projected results get founded in past performance

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Qualitative methods

Default average and maximum valuations data sources

Dataset: Pre-money market valuations from transactions in the last 30 months of company in all industries, all countries, and at seed funding stage

Datasource: Crunchbase

Usage: Computation of average and maximum (net of outliers) pre-money valuations in given geographic areas for the qualitative methods (Scorecard and Checklist respectively)

Update: Biannual

Average valuation (Scorecard Method) in United States: **\$ 3,918,222**

Maximum valuation (Checklist Method) in United States: **\$ 8,000,000**

Scorecard Method

Default weights of the criteria and breakdown in their traits

<p>Strength of the team 30%</p> <ul style="list-style-type: none"> Time commitment of the founders Number of employees Team spirit and comradeship Years of industry experience of the core team Business and managerial background of the core team 	<p>Size of the Opportunity 25%</p> <ul style="list-style-type: none"> Estimated revenues in the third year according to the stage of the development Estimated size of the market in three years Geographical scope of the business
<p>Competitive Environment 10%</p> <ul style="list-style-type: none"> Stage of the product/service roll-out Degree of loyalty of customers Type of IP protection applicable IP protection in place (if any) 	<p>Strength and protection of the product/service 15%</p> <ul style="list-style-type: none"> Level of competition in the market Quality of competitive products/services Competitive advantage over other products/services Barriers to entry of the market Threat of international competition
<p>Strategic relationships with partners 10%</p> <ul style="list-style-type: none"> Strength of the relationships with key strategic partners 	<p>Funding required 10%</p> <ul style="list-style-type: none"> Capital required according to the stage of development

Checklist Method

Default weights of the criteria and breakdown in their traits

Quality of the core team analyzes:

30%

Average age of the founders
 Presence in the team of serial, successful entrepreneurs
 Time commitment of the founders
 Team spirit and comradeship
 Years of industry experience of the core team
 Business and managerial background of the core team
 Technical skills of the core team

Quality of the idea analyzes:

20%

Validation of the demand for the product/service
 Feedback received by early adopters/industry experts
 Level of competition in the market
 Competitive advantage over other products/services
 Geographical scope of the business
 Threat of international competition
 Degree of loyalty of customers

Product roll-out and IP protection analyzes:

15%

Stage of the product/service roll-out
 Type of IP protection applicable
 IP protection in place (if any)

Strategic relationships analyzes:

15%

Presence of an advisory board and number of advisors
 Presence and type of current shareholders
 Relationship with legal counselors
 Strength of the relationships with key strategic partners

Operating stage

20%

Stage of development
 Current profitability

VC method

Below the sources of the valuation parameters used in the VC Method: EBITDA Multiple and Annual Required ROI, and their default values provided by Equidam

EBITDA multiple

Description: Enterprise value on EBITDA multiples computed over a dataset of global, publicly listed firms organized by industry

Datasource: Prof. A. Damodaran, NYU Stern School of Business

Update: Annual

Notes: We favor the use of EBITDA multiple, as we believe revenue multiples fail to capture the ability of startups to generate cash flow, i.e. the ultimate determinant of value.

Virtudes Company industry: **Other Agricultural Chemicals**

Other Agricultural Chemicals EBITDA multiple: **11.48**

Annual Required ROI

The default annual required ROI rates are determined by Equidam based on the returns investors require for companies at different stage of development, and are shown below. They can be manually adjusted by the company.

Virtudes Company stage of development: **Startup stage**

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DCF Methods

Below the sources of the valuation parameters used in the DCF Methods: Discount Rate, Survival Rates and Illiquidity Discounts, and their default values provided by Equidam.

Discount rate

Risk Free Rate

Description: 10Y government rates

Datasource: Trading Economics (tradingeconomics.com), various public databases

Update: Bi-annual (but more frequent if macroeconomic conditions are more volatile)

Notes: For the Eurozone we apply the German 10Y Bond rate

Virtudes Company country: **United States**

United States risk free rate: **1.82%**

Industry betas

Description: Industry beta computed over industry specific portfolios of global, public listed companies (same as in EBITDA multiple)

Datasource: Prof. A. Damodaran, NYU Stern School of Business

Update: Annual

Virtudes Company industry: **Other Agricultural Chemicals**

Other Agricultural Chemicals default beta: **1.98**

Market Risk Premium

Description: Country based total equity risk premium as implied in the previous 12 trailing months.

Datasource: Prof. A. Damodaran, NYU Stern School of Business

Update: Biannual

Virtudes Company country: **United States**

United States default market risk premium: **5.20%**

Survival Rate

Dataset: Country-level survival probabilities of the latest cohort of companies with three years of data available.

Datasource: European Office of Statistics (<http://ec.europa.eu/eurostat>), U.S. Bureau of Labor Statistics (<https://www.bls.gov/>), specific academic research and public offices of statistics for different countries.

Update: Annual

Virtudes Company year of incorporation: **2019**

Default survival rate Year 1: **79.60%**

Default survival rate Year 2: **68.80%**

Default survival rate Year 3: **61.30%**

Default survival rate Year 4: **56.85%**

Default survival rate Year 5: **53.16%**

Default survival rate Year 6: **50.14%**

Default survival rate Year 7: **47.59%**

Default survival rate Year 8: **45.38%**

Default survival rate Year 9: **43.43%**

Default survival rate Year 10: **41.69%**

Illiquidity discount

The default illiquidity discount is assigned based on current profitability and projected revenues, according to the approach suggested by William L. Silber.

Virtudes Company illiquidity discount: **23.96%**

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DCF with LTG

Long term growth

Dataset: Global, publicly listed companies organized by industry (same as in EBITDA multiple)

Datasource: Prof. A. Damodaran, NYU Stern School of Business

Update: Annual

Notes: The value is winsorized over a 0% - 2.5% range. We do not want the long term growth to be above world GDP growth expectations, as it would mean the company is going to overgrow world economy at some point in time

Virtudes Company industry: **Other Agricultural Chemicals**

Other Agricultural Chemicals default long term growth: **0.03**

DCF with Multiples

EBITDA multiple

Dataset: Global, publicly listed companies organized by industry

Datasource: Prof. A. Damodaran, NYU Stern School of Business

Update: Annual

Notes: We favor the use of EBITDA multiple, as we believe revenue multiples fail to capture the ability of startups to generate cash flow, the ultimate determinant of value.

Virtudes Company industry: **Other Agricultural Chemicals**

Other Agricultural Chemicals default EBITDA multiple: **11.48**

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Last Available Balance Sheet

Below the simplified, last available balance sheet of the company.

	12/2018 - 12/2019
Cash and equivalents	-
Tangible assets	-
Intangible assets	-
Financial assets	-
Deferred tax assets	-
<hr style="border-top: 1px dashed #ccc;"/>	
Total Assets	-
Debts due within one year time	-
Debt due beyond one year time	-
Equity	-
<hr style="border-top: 1px dashed #ccc;"/>	
Total Liabilities and Shareholder's Equity	-

All numbers in \$

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