# promontory

investment research

Lorem Ipsum

## Fiverr

## Union Pacific

## Vital Farms

# Spring 2022 Equity Report

# Foreword

Promontory Investment Research is proud to present its twelvth equity research report in print. Our Research Analysts have continued to deliver high quality reports, so we are thrilled to share our newest research with you.

Although going back to being in-person full force has presented us with many different challenges, Promontory has unwaveringly maintained the tight-knit community while producing quality research reports. Our Research Analysts delved into seven companies from different industries, and we have chosen the three best to publish: Fiverr, an online marketplace for freelance services, Union Pacific, North America's premier railroad franchise, and Vital Farms, an organic produce company.

Over the past nine weeks, each Research Analyst "pod" spent time brainstorming within their groups, working closely with our Research Committee, and creating their own quantitative models all to cultivate and support their respective investment thesis. We believe that this publication is a strong reflection of all the time and consideration our Research Analysts have put into their work and we hope you enjoy reading what they have to say.

We look forward to the future with excitement as always. Internally, we have hosted in-person engagement activities nearly every other week from pastries and photoshoots on campus to poker nights, as well as a fireside chat with Pat Dorsey, the founder of Dorsey Asset Management. We have continued to grow in numbers, though have never lost sight of our mission to maintain a welcoming environment. We especially hope to foster a stronger sense of community between the class years through our continued mentor-mentee initiative. We have continued to spearhead internal initiatives within Promontory to further strengthen our community and what we offer to our members. We are excited to see what the future will bring, and we hope you will keep an eye out for us.

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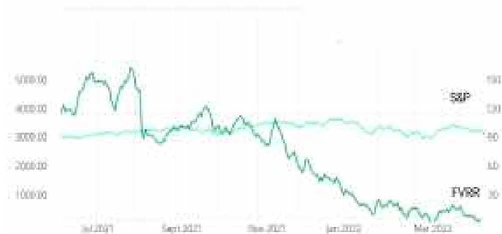
# Fiverr (NYSE: FVRR)

| Fiverr \| NYSE: FVRR | |
|---|---|
| Negative / **Neutral** / Positive | |
| Share price, 05/20/2022 | $38.93 |
| Market capitalization: | $1.38 Billion |
| Shares outstanding: | 32mm |
| 52-week range: | $29-$263 |
| EPS (FY21): | -1.55 |
| Average analyst opinion: | BUY |
| Price target: | $26.03 |

### Price Chart




### Financial Highlights

| *(Non-percent values in millions)* | 2019 | 2020 | 2021 |
|---|---|---|---|
| Revenue | $107.07 | $189.51 | $297.7 |
| *% Growth* | *42%* | *77%* | *57%* |
| EBIT | 35.01$ | $10.543 | $45.99 |
| *% Margin* | *-32.1%* | *-6.35%* | *-15.15%* |

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## Investment Overview

Fiverr (NYSE: FVRR) is a digital freelancer space that provides a platform for the exchange of short-term projects. The distinct nature of Fiverr is that most of the gigs have prices on the lower end, often under $5. Despite being established in 2010, Fiverr has become the leading platform in the freelancing space. Fiverr gained immense traction during COVID-19 in 2020 and 2021, with a revenue growth of 23% and 43%, respectively. Fiverr is highly favored by small businesses and part-time freelancers due to its flexibility and how friendly the platform is for beginners. Although Fiverr has a high customer retention rate, we recommend a **HOLD** on its stock as we believe that in the long term, it will not be able to attract corporational clients due to the gig nature of the platform and its customer acquisition cost is too high.

## Company Overview

**Company History**

Fiverr is a company that hosts a website by the same name, Fiverr. It was founded by Micha Kaufman and Shai Wininger in Tel Aviv, Israel. The website the company hosts "serves to allow listing and applying for small one-off jobs or gigs.online," with services starting at $5 that can go up to any price. By 2012, it was hosting over 1.3 million "gigs." In 2019, it announced it had generated $189.5 million in revenue. Currently, they have over 500 employees.

**Business Model**

Fiverr provides a platform that allows for the listing of freelance services into gigs. Each gig has a well-defined scope of work, estimated time to delivery, price, and specification. By doing so it adds value by providing an easy to browse catalog of services to consumers, linking them with freelance service providers. In the exchange, Fiverr also upholds fair transactions for both customers and service providers by holding any payment in escrow until work is completed. For its services, Fiverr charges a 5.5% service fee to buyers on top of the service provider's list price, and takes 20% of all service provider proceeds. Additionally, an additional $2 small order fee will be applied for purchases under $50.

By providing traditionally sales-reliant services through a digital marketplace instead of an active sales force, it allows its listed services to be cost competitive for consumers. For example, for a video editor or graphic designer, Fiverr presents the opportunity to provide their services directly to willing buyers through the listing of gigs without the mediation of a salesperson or third party agency. Moreover, its high and growing volume of active buyers, which stands at 4.2 million as of Q4 2021, achieves a network effect that attracts more service providers and new buyers. New buyers are an essential aspect of Fiverr's current business model, accounting for 41% of revenue in 2021.

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Fiverr aims to increase revenue by bringing new buyers onto the platform through organic growth. It aims to do so through marketing with a simultaneous focus on platform improvement. While acquiring new buyers is important to Fiverr, it aims to be efficient in its use of marketing, keeping its time to return on performance marketing low at an estimated 4 months in FY2021. It spent a sizable 27% of operating income, 79.2 million dollars, on research and development in FY2021. While it is less than the 54% of operating income it spends on marketing, it shows the increasing focus Fiverr is placing on technical improvements in the long run. This has brought about improvements which have increased organic traffic such as increased content quality in listing pages, marketing automation, localisation, and more.

Fiver also aims to further increase revenue by increasing spending-per-buyer and cross-category purchases. Through the inclusion of minimum fees and seller tiers like top-rated or level 2 sellers, Fiverr aims to create more premium alternatives for its general pool of buyers. Fiverr Pro and Fiverr Business also leverages top-rated freelance talent on its platform, providing high-cost and quick turnover services to individuals and businesses respectively. Fiver has also expanded the categories of services it offers, with it providing over 200 categories of services in 6 overarching themes in an effort to capture a larger share of the freelance market. Ultimately, Fiverr views freelancing as a trend that will continue into the future and positions itself to capture that growth.

**Recent Acquisitions**

At the end of last year, Fiverr announced that they would be acquiring Stoke Talent, an all-in-one solution service to help companies manage their freelance teams. They acquired the company for $95 million. Stoke Talent will remain a standalone entity but the products will be integrated into the Fiverr ecosystem. Where freelancers will be onboarded and paid through Stoke Talent's all-in-one service.

Fiverr has also recently acquired CreativeLive, an entrepreneurial educational platform where freelancers can improve their skills. As of being acquired, CreativeLive had more than 10 million users. Before acquiring CreativeLive, Fiverr had an educational platform, Fiverr Learn, but now it is being folded into CreativeLive. CreativeLive will act as its own standalone entity.

**Competitive Positioning**

*Change in the status quo*

Until Fiverr came into existence more than ten years ago, most freelancers would bid for work that employers or customers were requesting. This was a tedious and time-consuming process that sometimes led nowhere since many freelancers would often use auto-spam and not take their bids seriously. Fiverr changed this model by making employers or customers come to the freelancer with requests. As a result, when the company started gaining traction in 2012, no other competitor was carrying out operations in such a manner. On top of this, the barriers to entry were shallow at the time, with no significant competitor altogether eating up the market share.

*Branded as a "COVID stock."*

Fiverr was one of the companies that hugely benefited from COVID-19. With more than "45% of US Businesses increasing their investments in freelance talent since COVID-19", it is no wonder that Fiverr did well during this period. Fiverr ended 2020 with 77% growth and $189.5 million in revenue. With more of the population working at home and becoming unemployed, this trend makes complete sense. However, now that the lingering effects of COVID-19 are starting to dissipate in countries like the US, what does this leave Fiverr with? Though it is easy to dismiss Fiverr as just a "COVID stock," Fiverr has reinvested much capital and conducted strategic acquisitions, so it could potentially just become larger and more efficient following the pandemic.

*Customer-oriented*

Given what has been said regarding employers and customers having to go to the freelancers to provide their service, it could be easy to misunderstand that Fiverr is freelancer-oriented. Fiverr is most definitely not; it is customer-oriented. Though Fiverr has tried to fix this narrative by offering better services to freelancers, they still take a large pot of the pie (20%) which is an industry norm. On top of this, as a freelancer, the usual payment clearance is 14 days and when it comes to resolving issues, Fiverr usually takes the customer's side. Not to include that this 20% cut that Fiverr takes also consists of the percentage of tips that freelancers receive. With the freelancing economy becoming supersaturated, the only way to enter the site and become successful is to create a niche. With this being said, many other alternatives that follow Fiverr's business model have started to appear, and whether freelancers decide to take off will be interesting to see.

**Market Sentiment**

The market remains optimistic about Fiverr due to the growth of the freelancing market, its consistently high take rate, and its incorporation of Stoke's freelancer management system. Analysts believe that the freelance market has significant room for growth despite its already large size. They believe that Fiverr's scale in both freelancer numbers and number of categories would allow it to capture this industry growth through network effects. Fiverr's consistently high and slightly increasing take rate has also assuaged worries that its higher take rate was a temporary feature instead of a permanent one. Analysts now believe that take rate has stabilized and would remain high. Finally, analysts also believe that Fiverr's acquisition of Stoke would allow them to help retain and acquire more coportational clients through the integration of Stoke's freelancer management systems to potential corporate clients.

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# Industry Overview

**Market Size and Growth**

The global freelance platform had a market size of $3.4 B in 2020 and is projected to grow at a CAGR of 15.3% and will reach $ 9.2 B in 2027. The growth is mainly driven by a growing gig economy, catalyzed by a shift to work from home during the COVID-19 pandemic, and the digitalization of freelance work. The global gig economy is estimated to be worth $347 B in 2021 and the figure is projected to grow with a CAGR of 17.4% to reach $455 B in 2023. However, despite the sheer size of the gig economy, 90% of the market is attributed to transportation-based services (eg. Uber and Lyft) and asset-sharing platforms (mainly short-term housing rentals, eg. Airbnb), while professional services account for only 3.8%. Freelance platforms like Fiverr tend to specialize in digital freelancing, mainly high-skilled work that requires customized services depending on customers' needs, which include graphic design, writing & translation, digital marketing, and software development. These digital freelancing jobs are among the highest-paying categories of gig economy occupations.

**Key Industry Trends**

*Continued high-skilled freelancing post COVID and the young population's preference for digital freelancing*

To adapt to the changes and uncertainty of COVID-19, many professionals entered the freelance workforce for the first time and are likely to stay. The pandemic accelerated the growth of full-time, high skilled remote positions in technology and finance/business operations. This trend led to an increase in freelancing. On the contrary, a contraction is seen in temporary, in-person freelancing that requires lesser education backgrounds. From the freelancer's perspective, the greater flexibility of location and working hours and autonomy in career choice remains attractive even after COVID restrictions are lifted. Experienced freelancers with non-industry-specific skills like coding and marketing can earn similar pay working fewer jobs. For example, a full-time freelancing graphic designer can easily earn above 100 K as 77% of the art and design industry engage in freelancing. Smaller businesses also prefer this temporary employment relationship as they can notafford to train talent in-house. Meanwhile, the freelance workforce is getting younger, as 50% of Generation Z and 44% of Millennials freelanced in 2021. This population has less experience in freelancing and are more likely to use online job marketplaces to get work/clients as it helps them keep marketing costs low.

*Freelancing is viewed as more of a long-term career path as professionals in the industry are increasingly choosing to work independently*

According to a survey conducted by Upwork in the freelancer community in 2019, 50% of the surveying population view freelancing as a long-term career choice as they do a temporary way to make money. Since 2014, the number of those saying they're freelancing long-term increased from 18.5M to 28.5M—up 10M in only 6 years. This is likely because of the flexibility that freelancing provides. Compared to other freelancing companies that focus on building a talent cloud and collaborating with corporations for potential long-term contracts, Fiverr encourages short-term, project-based transactions, which could potentially lead to unsustainability when more and more professional freelancers seek a long-term platform.

**Revenue & Cost structure**

Freelance platforms typically consist of three key actors: platform owners who provide infrastructure and the network that intermediate work matching, freelance workers who submit project service and talent posting, and buyers who search for and purchase services that satisfy their project requirements. Although freelance work can be one-off projects or long-term contract work, on-demand project-based outsourcing is a more common freelance style and more relevant to Fiverr's current revenue model. Because Fiverr mainly generates revenue from service and transaction fees, it encourages customers and freelancers to engage in short-term projects rather than enter long-term contracts. However, because this measure incentivizes one-off purchases, it keeps the average order value low and may not be beneficial to generate recurring revenue. The nature of uncertainty involved in irregular freelancing also restricts customer/project scale to smaller gigs. While Fiverr has been actively targeting business customers and promoting repeated purchases by launching Business and Subscription segments, these initiatives have notbeen particularly successful given the project-based narrative. Fiverr Business only represents ~5% of Fiverr's overall revenue. Most of these buyers also skew toward the small-business side.

**Competitive Landscape/Barrier to Entry:**

There is a relatively low barrier to entry in the freelance marketplace sector, however, it is extremely difficult for the firm to scale up due to the intricate ratio needed between clients and talents. Many of the freelance marketplaces attempt to circumvent the issue by focusing on niche areas that have the most demand. For instance, CodementorX allows companies to hire freelance developers. The advantage of a niche focus is that these marketplaces could potentially build up more trust among the specific industry and thus attract more corporate clients, who are more likely to pay more and have a high potential that still remains unmined. The Intuit 2020 Report estimated that 80% of large corporations plan to increase the use of freelancers in the coming years. Another approach is to encourage (relatively) long-term relationships between sellers and buyers and build a talent cloud. Upwork, one of Fiverr's biggest competitors, takes this approach to attract corporate clients. According to Accenture Tech Vision 2017, 20% of Fortune 500 companies are already using Upwork, and the number is expected to grow even more. Fiverr, however, does neither of the two. Even though it grew tremendously during COVID (revenue grew 77%), the growth is likely to be unsustainable as people return to workplaces. Therefore, without neither the corporate connection nor the niche focus, Fiverr will witness a sharp downfall of talents. When supply and demand does notmeet, it might get stuck in a downward loop of losing both clients and sellers.

# Investment Thesis

**Relationship with current freelancers and customers**

Coupled with the growth of Fiverr and its extensive marketing campaign, from spending $94,379 in 2020 to $159 M in 2021, Fiverr is trying to establish itself as the go-to freelancer marketplace. Whether Fiverr continues to advertise heavily, it is clear that its freelancers will suffer more through the vast amount of competition combined with the outside pressure for Fiverr to continue growing. Fiverr's business model aims to both increase the cost of gigs and increase customer retention while increasing their already high take rate as part of its business model. Given that Fiverr relies on taking a share from the gigs of freelancers and users, their

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margins will never really change regarding needing to pay their freelancers because they do not pay them, to begin with. Their COGS are increasing, but Fiverr first takes all the money generated from gigs and pays out 80% of the revenue to freelancers. Nevertheless, if Fiverr does decrease its share of the revenue from gigs, they will see a significant increase in COGS.

On the freelancers' side, there is a large amount of competition with an oversaturation of peer sellers. If given the opportunity, current freelancers will most likely leave to other platforms if they could establish themselves with a similar amount of customers and increase prices while remaining price competitive. Fiverr should be aware that if the freelancers are not compensated for the company's growth, they will most likely relocate to another platform or focus more heavily on using another platform to succeed in this market. Fiverr has also not helped itself by advertising itself as providing gigs for $5, which makes it harder for freelancers to make a living or profit off the site. But on the other hand, a surplus of freelancers is fine in a gig economy where freelancers do not earn much. Additionally, an increase of freelancers (supply) in comparison to the customers (demand) is a good thing from Fiverr's perspective since they can scale up and reach larger demand without having to pay their freelancers. On top of this, having more competition forces freelancers to produce higher quality work as they have to differentiate themselves. The increase in freelancers (supply) in comparison to the customers (demand) also gives Fiverr more power over freelancers.

On the customer side, Fiverr's transparent fee structure allows customers to understand that they are paying at least 25.5% more than what is necessary for an already expensive service, which makes customers more price sensitive to gigs. This issue is compounded by the fact that Fiverr aims to focus on customer retention, which effectively gives freelancers a stable and potentially loyal customer base, making the choice of leaving the platform or performing payments outside of the platform more feasible for both freelancers and Fiverr's customers.

Overall, market sentiment is bullish on Fiverr due to the growth in the freelancing market. However, this sentiment does not factor in Fiverr's inability to capture potential freelancer and customer growth. Analysts believe that the freelancing market is still in its infancy and that there will be future growth in both freelancer and customer numbers. However, we believe that Fiverr would not be able to efficiently capture growth in freelancer numbers due to its lower compensation of its freelancers, the oversaturation of peer sellers, and the presence of alternative gig platforms. Moreover, Fiverr's higher take rate and the transparency of its higher fee structure is a concern in capturing customer growth in the freelancing market.

**Project-based revenue model is unsustainable in the long-term with a lack of corporational clients**

As opposed to the traditional freelancing marketplace which focuses on talent acquisition and employing freelancers by contract, Fiverr is more like an E-commerce platform in that it prioritizes selling projects over selling talents. Though some analysts may believe that Fiverr has a moat, the long-term sustainability of this approach is questionable. Fiverr only saw a spike of revenue during COVID period (revenue up by 43%) because of the overflow of many small projects. Given Fiverr's current transactional model, buyers and sellers are charged based on one-time project orders where 5.5% and 20% of the order value are paid by buyers and sellers respectively. Although this revenue model may be well suited for short-term gigs and encourage repeat purchases to increase spend per buyer and LTV, a focus on increasing transaction costs could incentivise off-platform transactions in the long run, and it also does not align well with the needs of larger businesses that expect a consistent working style and systematic workflow. Fiverr is unable to attract corporational clients due to its one-time project nature. Fiverr has a total of 830,000 freelancers in 2019 already, however, according to a recent report by Priceonomics, 96.3% of sellers on Fiverr make less than $500 or less per month, with the majority (70%) making less than $100. This indicates that there is an oversaturation of freelancers on Fiverr–most of them are part-time and likely do not rely on the platform to make the majority of their revenue, which could lead to low user stickiness and activeness. Additionally, in order to attract freelancers, Fiverr does not scrutinize the background of freelancers, thus driving away corporational clients. In the past Fiverr established the reputation for low-cost gigs (priced as low as $5) tailored for small and medium sized businesses that cannot afford to train and employ talent in-house for such work. This model has differentiated Fiverr from the long-term employment pattern promoted by Upwork. However, the freelancer industry as a whole is shifting to more professional projects as 50% of the surveying population view freelancing as a long-term career choice as they do a temporary way to make money, so Fiverr's E-commerce moat is unlikely to be successful in the long run in retaining users.

In summary, market sentiment is optimistic about Fiverr's acquisition of corporate clients due in part to its incorporation of Stoke's freelancer management software. However, we believe that this sentiment does not sufficiently account for the prevalence of one-time project orders, the low-retention of freelancers, and the lack of background checks of freelancers on Fiverr disincentivizing corporational clients from utilizing the platform.

**LTV and CAC of customers (impacts Rev and OpEx)**

Fiverr's customer acquisition costs and thus growth remain unsustainable. Fiverr is yet to be profitable due to its large operating expenses. A significant portion of these expenses stem from selling and marketing expenses - the money that Fiverr spends on acquiring customers. In 2017 Fiverr spent 57.9% of its total operating expenses on marketing. Despite Fiverr's management acknowledgement of and efforts in improving marketing expenses, Fiverr still spends 54.7% of its total operating expenses, that is 53.5% of its revenue, on marketing. Fiverr's reliance on its expensive network effect and the lifetime values of its customers makes it difficult for it to reduce its customer acquisition efforts. Fiverr's sizable customer base helps to attract and retain its freelancers while its revenue gained per customer cohort increases. Thus, Fiverr needs to reduce the cost of acquisition or increase the lifetime value of its customers in the long run in order to become profitable. However, it is our belief that they will be unsuccessful.

Fiverr's efforts to reduce customer acquisition costs have been centered around creating organic customer growth. This arguably stems from its early experiences as a company that experienced viral success in selling gigs that cost 5 dollars. Fiverr aims to recapture its prior success through its affiliate marketing program targeted at website owners, social media influencers, content creators, and anyone that has a platform and is willing to promote the company. It also aims to return to putting an emphasis on community events, with it holding over 200 events per year before the pandemic.

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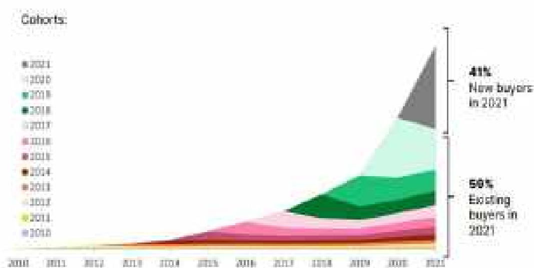
Despite Fiverr's efforts to induce organic growth, it has become more inefficient in customer acquisition costs. Fiverr measures its customer acquisition costs through time to return on performance marketing (tROI). From 2019 to 2020 its tROI was 3 months but it has since increased to more than 4 months in 2021. Observing how it has not significantly changed its strategy of seeking viral organic growth since its IPO in 2019, this worsening of tROI could increase into the future.

To improve tROI and lifetime customer value, Fiverr aims to go upmarket. Fiverr measures its lifetime customer value through cumulative revenue to performance marketing investment ratios. These ratios look at the return on sales and marketing investment made per cohort over the years. While Fiverr has enjoyed a 350% return on the performance marketing of its 2017 cohort, it is notable that consistent growth in return on marketing investment is not guaranteed as is observed by the 2018 and 2019 cohorts .

Fiverr's attempts to go upmarket may yield limited returns due to the competition they face. Its major competitors Upwork and Toptal specialize in more expensive gigs and have a better reputation for quality. Beyond reputation, both Upwork and Toptal have more processes in place that ensure that work is manually reviewed and that freelancers are screened to ensure better quality. This is in contrast to Fiverr's level system where level 2 and level 1 sellers are given their title automatically based on metrics like reviews and gigs done. Moreover, Upwork significantly decreases its take rate for higher cost gigs to as low as 5% as opposed to Fiverr's flat 20% fee. Thus, moving upmarket would be a considerable challenge for Fiverr.

# Investment Risks




**Higher customer retention rate and CAC could be generated through revenue**

According to the revenue composition by annual cohort graph, Fiverr's clients have different spending habits in each cohort. Regardless of how much spending the clients have, there is a common trend: the spending of each cohort would always go down first and then go back up. One hypothesis that might explain this is that some new users would leave the platform within a short time period after discovering that Fiverr cannot offer them what they want, hence the dip.

However, the rest of the clients will stick with the platform with high retention rates. Therefore, the high CAC rate could potentially be overset by the revenues generated from this population, and Fiverr could make profits in the long-run.

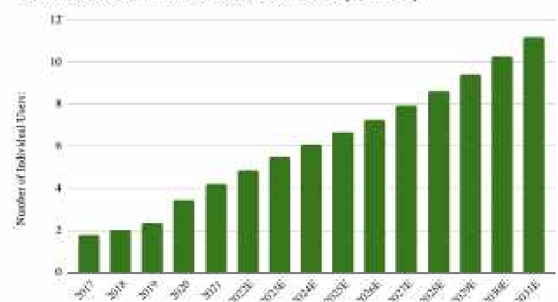
**Fiverr should choose to stay within the non-corporational side and monopolize the gig-based economy**

Fiverr has had huge success within the non-corporational side of the gig-based economy. With lack of corporate networks established and no niche focus, Fiverr might spread itself too far and fail. Additionally, we know Fiverr does not sufficiently background check freelancers and they tend to offer one-time projects. With this in mind it is not an attractive company to hire for large corporations.

On the other hand, Fiverr has already invested a large sunk cost in order to expand into corporational side of the gig economy. With the market for freelancers also rapidly growing within corporations if Fiverr can efficiently establish a strong freelancer network they could succeed.

# Valuation

**Unit Economics Assumptions**




Given Fiverr's project-based transaction fee revenue model, the total revenue for individuals can be computed as the number of users multiplied by spend per buyer. Given the already high level take rate charged for buyers and freelancers, we assume Fiverr will maintain a stable take rate in the future, if not lower. To drive total revenue growth, the main indicators are number of individual users and spend per buyer. Prior to 2021, Fiverr's revenue is all individual customer-driven so we can divide the total revenue by spend per buyer to derive the number of users. But because we lacked revenue retention, CAC and LTV data, we could not calculate more nuanced level metrics to project recurring revenue performance. Although in the past three years both users and spend per buyer had grown more than 20% annually, we believe this growth is unsustainable, as the COVID effect of facilitating remote work has faded and people are switching back to in-person work. Therefore, in the 10-year projection period, the growth rate of users starts at 15% and stabilizes around 9% in the latter half 5; the growth rate of spend per buyer starts at 17% and falls to 2% as Fiverr finishes category expansion and unleashes the upsell/cross-sell potential for existing customers. On the corporate clients side, as Thesis #1 indicates, we do not think Fiverr is positioned well to compete with Upwork in grabbing market share for large-size companies with its current project-based model versus the long-term contract model adopted by the competitor. Therefore, given that 5% of 2021's total revenue was attributed to Fiverr Business, we maintain the same projection for the rest of the years. On the expense side, given the software nature of the digital marketplace platform, D&A,

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R&D and G&A are projected to remain at a stable percentage of total revenue throughout. One exception is the gradually lowered marketing expense that starts out at 50% and drops to 30% at the end of the projection period. This trend corresponds to a slowed growth projection in user and spend per buyer indicators. The fall in marketing expenses is also critical for Fiverr to turn cashflow positive in the long run, as we see in the last three years of the projection period.

**WACC Assumptions**

The record-high risk-free rate 3.1% contributed to the high cost of equity. A beta of 0.98 is taken following the guidance for software (internet) companies. In October 2020, Fiverr issued $400 Million of 0% Convertible Senior Notes due 2025, contributing to the majority of debt in the balance sheet. Due to the convertible nature, the cost of debt is similar to that of equity, therefore a 6% is taken for cost of debt based on 9.47% for cost of equity instead of the 0% coupon rate.

**Exit Multiples**

Because of negative FCF derived in the majority of the projection period, it is not practical to use Gordon Growth method to compute terminal value. Therefore, an EV/Revenue Exit Multiple method is adopted based on three sets of comparable companies in three categories: Freelancer Marketplace, E-commerce Platforms and Online marketplace platforms. Because Fiverr and Upwork are the two major freelance marketplaces in the field, we believe Fiverr will place in the top quartile of the multiple table or even higher. Based on the calculation, implied price per share is $26.03, which is -33.14% lower than current share price. Therefore, it is evident that the stock may still be overvalued despite growth potential.

| | | Comps | | | |
|---|---|---|---|---|---|
| Category | Name | Ticker | EPS | EV/EBITDA | EV/Revenue |
| | Freelancer | FLN | -0.005 | 82.89 | 2.57 |
| | Upwork | UPWK | -0.57 | -39.55 | 4.28 |
| | Crowdworks | 3900 | 50.89 | 13.57 | 1.35 |
| Freelancer Marketplace | Freelance.com | ALFRE | 0.18 | 29.49 | 0.9 |
| | Geechs | 7060 | 66.17 | 4.97 | 1.07 |
| | Lancers | 4484 | -15.83 | -10.24 | 0.43 |
| | Angi | ANGI | -0.21 | -61.44 | 1.43 |
| | Amazon | AMZN | 41.69 | 18.9 | 2.38 |
| Ecommerce Platforms | Etsy | ETSY | 3 | 22 | 4.85 |
| | Shopify | SHOP | 1.45 | 212.99 | 8.23 |
| | 9 Spokes International | 9SP | -0.004 | -0.08 | 0.09 |
| Online marketplace platforms | Newegg | NEGG | 0.08 | 40.66 | 0.72 |
| | Syuppin | 3179 | 92.04 | 11.76 | 0.82 |
| | uSell | PXHI | -0.505 | -10.71 | 0.23 |

| WACC Calculations | |
|---|---|
| Risk-free rate | 3.10% |
| Beta | 0.98 |
| Market risk premium | 6.50% |
| Cost of equity | 9.47% |
| Cost of debt | 6% |
| Net debt | $511,784 |
| Current Stock Price | $38.93 |
| Shares Outstanding | 36800 |
| Market cap | $1,432,624 |
| E/(D+E) | 73.68% |
| D/(D+E) | 26.32% |
| WACC | 8.6% |

| EV/Rev of Comparable Companies | | | Implied Enterprise Value | Implied Equity Value | Per Share Price | Implied Upside |
|---|---|---|---|---|---|---|
| Median | 1.21 | Median | $632,350 | $120,566 | $3.28 | -91.58% |
| Average | 2.10 | Average | $1,197,847 | $686,063 | $18.64 | -52.11% |
| 25th Percentile | 0.745 | 25th Percentile | $335,704 | -$176,080 | -$4.78 | -112.29% |
| 75th Percentile | 2.5225 | 75th Percentile | $1,469,659 | $957,875 | $26.03 | -33.14% |
| Maximum | 8.23 | Maximum | $5,110,758 | $4,598,974 | $124.97 | 221.02% |

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# Union Pacific Railroad

| Union Pacific Corporation \| NYSE: UNP | |
|---|---|
| Negative / **Neutral** / Positive | |
| Share price, 05/20/22: | $213.58 |
| Market capitalization: | $134,134mm |
| Shares outstanding: | 628.03mm |
| 52-week range: | $195.7/$278.9 |
| EPS (FY22): | $9.98 |
| Beta: | 1.21 |
| Price target: | $217.91 |

### Price Chart

### Financial Highlights

| *(Dollars in millions)* | **2021** | **2022E** | **2023E** |
|---|---|---|---|
| Revenue | 21804 | 23112 | 24499 |
| *% Growth* | *11.63%* | *6.0%* | *6.0%* |
| EBIT | 9635 | 9938 | 10804 |
| *% Margin* | *44.2%* | *43.0%* | *44.1%* |
| D&A (% of sales) | 10.1% | 10.5% | 10.5% |
| CapEx (% of sales) | 13.5% | 13.2% | 12.7% |


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# Investment Overview

Union Pacific is the largest freight railroad line in the western USA. The oligopolistic railroad industry is attractive because it has high barriers to entry and there are rarely more than two lines competing on a given route. UNP has significant pricing power allowing for inflation-plus pricing, fast growth in the higher margin domestic intermodal category, and should continue seeing gains from PSR.

After focusing on operating efficiency strategies over the past five years and contending with numerous headwinds in key markets, the rail industry is poised to experience accelerating growth. UNP's attractive network, intermodal opportunity, and shareholder friendly management leave it well positioned to take advantage of this opportunity and greater above average returns in the next 3-5 years.

# Company Overview

**Strongest railroad franchise in NA**

The original Union Pacific Railroad was founded in 1862 as part of the First Transcontinental Railroad project, a 1,911-mile continuous railroad line that connected the existing eastern U.S. rail network. Over time, they went on expanding through acquisition and added additional routes. Although they keep expanding opportunistically, since the early 20th century, UP's focus shifted from expansion to internal improvement.

***Fig. 1:*** *UNP rails*

Today, UP is one of seven Class 1 (designation for carriers earning annual revenue >$250 million) railroads in the United States. UP operates 7,000+ locomotives and 52,000+ freight cars over 32,200 route miles in 23 US States, making them the second largest railroad in the US after Burlington North (BNSF), which Berkshire Hathaway owns. The best way to think about the network is that it operates west of the Mississippi River and connects to all of the major West and Gulf Coast ports.

**Revenue breakdowns**

There are three main revenue categories – bulk, premium, and industrial – each accounting for roughly a third of revenues. We will now provide some color on what each of these segments mean.


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*Bulk-* This segment includes grain/grain products (16% of revenues), fertilizer (3%), food/ refrigerated (5%), and coal/renewables (8%). Grain is primarily hauling produce from Midwest destinations all the way to either the Gulf ports in Texas or to the Pacific Northwest. The coal business, which has been on a downslide for a while, goes primarily from the Powder River Basin in Wyoming and to various other power plants.

*Premium-* The premium segment can be split into auto (10%) and intermodal (22%). Auto consists of the shipment of auto parts, as well as the shipment of completed vehicles to distribution centers. This business includes domestic shipments and delivery through interchange partners in Mexico. The intermodal piece of premium can be broken down into international and domestic for Union Pacific. International intermodal means transporting shipping containers, which come into the ports in the (primarily) L.A./ Long Beach area and the Oakland/Tacoma/Seattle area, to a distribution center near the port or across the country to Texas/Chicago/Memphis, where they can then interchange off to the other carriers. The domestic intermodal business is about hauling from distribution center to distribution center within the United States (customers there include UPS).

*Industrial-* Industrial includes chemicals/plastics (10%), metals/minerals (9%), forest (7%), and energy (11%). This is a manifest business involving boxcar movements and it includes chemical shipments in the Gulf Coast, and lumber coming from the Pacific Northwest being shipped to the growth areas in the southwestern U.S.

*Other-* Although there are three main revenue streams, it is also important to note that UP owns a lot of land, which generates rental revenue. They periodically have a major land sale, eg. sale of RTD in Denver for the whole mass transit system. Additionally, UPDS is a UP subsidiary which acts as a distribution company, generating small incremental revenues and improving the intermodal offering.

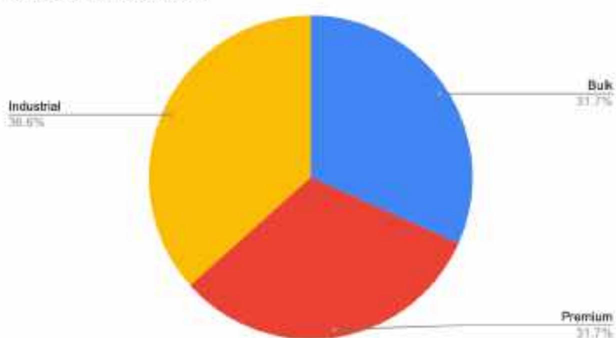


***Fig. 2***

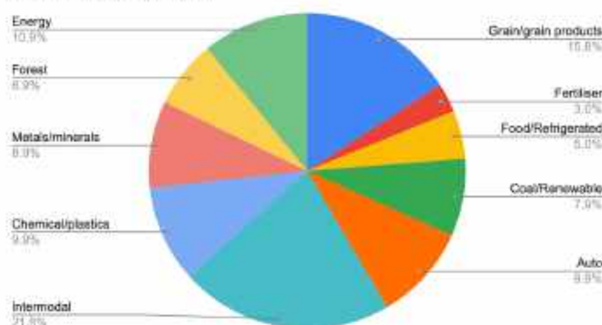


***Fig. 3***

**Levers for profit growth**

*Pricing and margins-* Across categories, pricing is typically market-based, meaning that there are industry standard prices for different levels of service reliability, on-time performance, and acceptance of volume variability. Over the last 20 years, UP has successfully taken prices up anywhere from 3% to 6% annually. For the last 10 years this has been helped by UP consistently improving service reliability relative to trucking. Note UP typically enters into 5 year contracts and that these contracts give the railroad the ability to charge a fuel surcharge if fuel prices rise. In addition to steady "inflation +" price increases, margin improvements (from cost reductions) have been key to UP's earnings growth. Indeed, they have reduced their operating ratio from 80% 10 years ago to 65%. Currently, they are pushing hard to obtain a 55% operating ratio.

*Favorable business mix shift-* The domestic intermodal piece is a growth engine because there's increased freight required to support ecommerce for growing population centers. This is premium and higher margin given importance of service reliability, on-time delivery, and the additional investment needed to facilitate it. Chemicals demand will also sustain and grow. This is favorable because there is more pricing power given a lot of the product is TiH, which requires special handling.

*Precision Schedule Railroading-* PSR is key to achieving the aforementioned 55% operating ratio target. Note that UP is still relatively early in implementation and there remains a runway for operational improvements going forward. See industry overview for more details.

# Industry Overview

The US rail transportation industry is worth $80 billion with a CAGR of 3% going forward. The industry is highly concentrated, with four companies controlling over 80% of all revenues. This is due to high barriers of entry associated with high capital costs and economies of scale related to railway construction and better services provided with more expansive control.

**Competitive Landscape**

The industry has five major players: BNSF, Union Pacific (UP), CSX, and Norfolk Southern. BNSF and UP compete closely because they operate mainly west of the Mississippi while CSX and Norfolk Southern are mainly east of the Mississippi. Additionally, it should be noted that Canadian Pacific (CP) is making a major expansion into US and cross border rail with its acquisition of Kansas City Southern (KSU). The CP-KSU acquisition will give the company lines that connect from Canada to Mexico without the need to make shipping deals with other companies. As a result, competition in the west could intensify.

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One of the defining characteristics of the rail industry is the barriers to entry due to the ownership of rail lines in specific geographies and the high capital costs with building and maintaining them. This results in there being two main rail service providers in a given geography, limiting intense competition. While competition may be low between rail companies, they face significant competition from other forms of transportation, the most significant of which is trucking. Trucking holds the advantages of speed and the ability to deliver anywhere as opposed to railroads, which are slower and can't engage in last-mile delivery. The demand for rapid delivery is reflected in the uptick of demand for trucks and a slightly increased market share in intermodals over the pandemic. Still, rail freight is more fuel efficient and cheaper to use than trucking, a trend exacerbated by the shortage in trucks. The future of electric transportation and driverless trucks will be important to the truck-rail competition dynamic and the future growth prospects of the industry.

**Key insights**

There are several notable trends in the rail transportation industry, namely the trend towards technologically advanced rail systems and precision scheduled railroading (PSR). PSR is a more efficient method of scheduling routes that is less capital intensive as it uses fewer locomotives and cars to deliver the same amount of freight. They no longer measure number of trains but rather car speed, meaning trains have fixed schedules and depart regardless of whether they are full. Although this resulted in initial customer outrage, it means they are no longer holding cars in terminals and terminals are less congested. As they flip assets faster, it lowers their cost structure and that of customers. Additionally, there is an opportunity to gain business from trucking and other rails or barges. To ensure this works well, they have to focus on making sure that the rails are in tiptop condition and are not being shut down for any reason. They also have more high speed corridors and less stopping to let trains pass. All in all, there should be more fuel savings, less wear and tear, and fewer train yards, amongst other efficiencies. As companies keep peeling back the onion, PSR will be the gift that never stops giving. UNP, although late to the PSR journey, has a solid PSR mindset and foundation to reap the significant unexploited benefits.

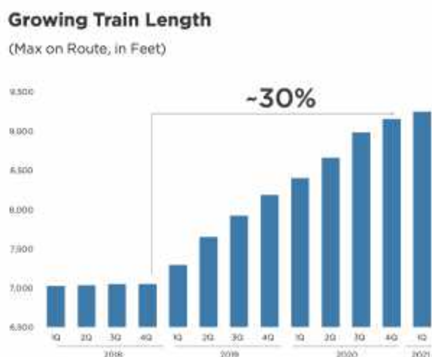


*Fig. 4:* *Train length growing*

*Fig. 5:* *PSR efficiency gains*

Additionally, an industry trend to look at going forward is the increasing competition between trucking and railroad companies, which is more prevalent than railroad-railroad competition due to the nature of the industry. This competition occurs in the intermodal space, an area in which both can compete. Inherently, trucks win out in short distance delivery as there are physical limitations to the reach of railways, but in the longer distance segment, trucks and railroads compete with each other. Overall, rail freight is characterized by slower speeds but cheaper prices due to higher fuel efficiency. Trucks can deliver products fast but at the expense of cost. The use of rail necessitates having rails at one's facilities to maximize benefit, which is often not the case.

**Overall outlook**

The industry faces many short term headwinds, with labor shortages and supply chain issues. In the longer term, declining revenues from coal transportation (15% of industry revenues) will hurt the industry. Nevertheless, the overall outlook for freight rail is strong as it is a critical component of the delivery supply chain and is cheaper than trucks which are becoming more expensive given driver shortages. Additionally, the fact that railroads do not directly compete with each other means that, unlike the airline industry, pricing wars are more unlikely and contained as well. The railroads are an attractive industry.

# Investment Thesis

**Increasing barriers to entry**

The oligopolistic nature of the rail freight industry results in very high barriers to entry. It is consolidating further with Canadian Pacific's acquisition of Kansas City Southern. In practice, there are usually just two rails competing in the same area. In this case, BNSF is UP's major competitor in the west. Additionally, the upfront costs and rail density make it impossible for a new entrant to succeed. This explains the industry's and UP's incredible pricing power. As intermodal and general volumes increase and the cost of building new rail lines is prohibitive, UP's pricing power and demand for services will increase as well. Additionally, while UP doesn't control any rail lines in Mexico, they own 26% of Ferromex, which should capture benefits from freight rail expansion in Mexico and provide an effective competitor to CP-KCS.

Due to these barriers of entry, UP's position allows it to reliably capture a stable share of the rail freight market. While trucks provide a more accessible form of competition, they cannot efficiently capture rail freight dominance in bulk and industrial goods due to the efficiency railroads bring and the lack of speed necessary in these market segments. UP is further solidifying this as they extend rail sidings to allow for longer, more efficient trains as well. The company is also further integrating technology into its systems, tracking trains and creating more efficient systems. In the intermodal space, railroads should still dominate in the long term as they

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continue to be the only form of reliable and cheap transportation and the prospect of new entrants in this space is unlikely as other forms of transportation can't replicate the efficiency of rail freight and new track construction is approximately $1-2 million per mile.

**High growth in domestic intermodal**

The rising cost of fuel, truck driver shortages, and improving service levels have combined to create a highly attractive alternative to trucking. At just one tenth the size of the long-haul trucking market and plenty of capacity, intermodal volumes should be able to grow double digits over the next three to five years. UNP is particularly well positioned here. Not only has the firm invested in spare capacity, but Knight Swift and Schneider recently left BNSF and chose UNP as their exclusive Western rail partner. Margins in intermodal have also improved, so this is no longer a profit drag.

Initially, trucks had the advantage of speed, especially on shorter distances (< 500 miles) where trains would require multiple stops and a lower average speed. However, with the implementation of PSR, UP has been able to improve their on time accuracy with a goal of 100% shipments on time. By changing the metric of measurement to car speed and optimizing that, UP is directly competing with trucks. By doing this, the premium customers would be willing to pay for trucks to get speed reduced. UP Distribution Services helps clients who need a combination of rail and road transportation for their products and helps the intermodal growth for UP. By becoming competitive with trucks and increasing reliability, UP is able to grow by capturing the large market share that is currently held in the trucking market.

**Potential for margin expansion**

UP has successfully reduced its operating ratio from 80% 10 years ago to 65%. This has two components. First, over the last 20 years, UP has successfully taken prices up anywhere from 3% to 6% annually. For the last 10 years this has been helped by UP consistently improving service reliability relative to trucking and winning in the higher-margin intermodal business (outlined above).

Currently, UP is pushing hard to obtain a 55% operating ratio. In order to achieve this, they will have to focus on cost management. There are three key levers for this: PSR, fuel costs, and labor costs. As outlined in greater detail in the industry overview, PSR is key to UP achieving the aforementioned 55% operating ratio target. Note that UP is still relatively early in its implementation of PSR, having done it for two years when Canadian railroads have done it for 10+ years. This means as the volumes and business mix changes, they can keep peeling back the onion, looking to take touches out of cars and improve dwell time of cars within terminals, therefore turning assets faster. For example, over time coal will disappear from their revenue, but the extra costs of a less efficient, specialized operation will also disappear.

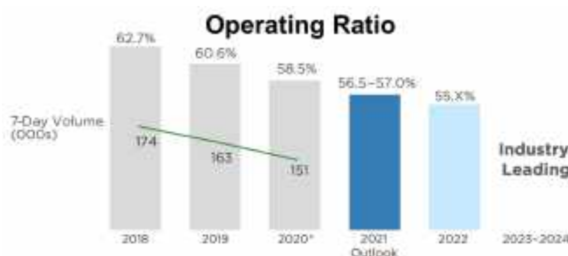


***Fig. 6:*** *Operating ratio target*

Fuel and labor cost efficiencies will also be key to sustained margin improvement. Fuel represents over USD 2Bn of annual costs. UP still lags the CN and CP railroad companies by over 10%. Through a combination of cruise control, more sophisticated technology on when to put on the gas and brake will allow them to close this gap. UP is also extending rail sidings to allow for longer, more efficient trains and integrating technology into its systems that track trains and help improve dispatching/ spacing so trains don't have to stop to pass one another.

Finally, labor costs are very significant and hard to bring down given strong unions. PSR not only helps reduce the number of workers needed but also means the railroad follows a schedule, reducing overtime pay and other associated arbitrary expenses. UP will also reduce labor costs as they get better at safety because it will mean fewer disruptions and lower incident costs. Although UP's personal injury rate increased 9% last year and equipment incident rate grew 7%, they recognise this problem and recently hired a new Chief Safety Officer to address this. Longer term, automation should drive structural improvements in industry margins, albeit with resistance from unions.

**High quality management**

UNP's core values are Serve, Grow, Win, and Together. Serve refers to providing a reliable product. Growth is about increasing profitable carloads, adding new services, and expanding geographic reach. This translates into a Win for shareholders. Finally, Together refers to maximizing value for all stakeholders (communities, customers, employees, shareholders).

Historically, UNP is known for having the best network in the industry but punching below its weight when it came to growth and operations. The firm was late to start its Precision Scheduled Railroading journey in 2018. Although they have a culture of developing their own talent and processes, they had to hire Jim Venna, previously COO at CNR, which pioneered PSR. Venna came out of retirement and only stayed for a couple of years but was critical to laying the foundations for a solid PSR journey at an accelerated pace. He did not hire many external people to help him and instead developed talent internally.

Venna instilled the strong PSR-focused culture that exists today and championed industry veteran Eric Gegringer, who has an engineering background, to take over the Operations role. Over the last 1.5 years, UP has also reduced the number of approvals required, making decision-making quicker and much more decisive, allowing them to capture opportunities and go after new business.

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# Investment Risks

**Regulatory**

While the STB appears to be viewing CP's deal with KCS favorably, there is still lingering risk they may take a hard line on industry pricing at some point. Should this risk materialize, it could significantly impact the revenue growth and margin improvement story.

**Competition with CP/KCS**

CP's acquisition turns KCS from a partner into a potential competitor. Nevertheless, UP has an excellent Mexico franchise (11% of volumes) and owns 26% of Ferromex. Note also that UP is the largest owner of trilevels, the cars that move automobiles (auto accounts for a lot of the Mexico business).

**Labor relations**

UP has been downsizing its workforce since 2018, and this has dealt a blow to employee morale. Additionally, working in the railroad is a 24/7 job meaning people actually leave for Amazon to get more work life balance (yikes!). Talent acquisition and retention may be a longer-term problem for the business.

# Valuation Discussion

We projected revenue growth of 6% going to 3% in 2027. This will come equally from volume growth (driven by intermodal growth) and pricing increases in line with inflation. We believe that our revenue growth assumptions are conservative given intermodal growth and the reshoring of manufacturing. We forecasted cost savings in labor costs, fuel (getting to 10% more efficiency), and lower supply costs as the tracks are run more efficiently and the infrastructure is improved. To facilitate this, we have a capex of over 13% of sales converging to depreciation over time. With these assumptions we reach the target operating ratio of 55% in 2025-2026. Whilst we have baked in a lot of the margin assumptions, we are incredibly confident that they can deliver these and might be able to get increased benefits from automation longer term.

We determined a WACC of 8.85% (Fig. 8) which gave an implied premium of -12.31% (Fig. 9) for reasonable assumptions. Hence our HOLD rating. Using a WACC and g sensitivity analysis, we got an implied premium between -46.8% and +93.6% (Fig. 10). For comps, we used a number of US and international railroads. These are close comps and have a median EV/EBITDA of 15x, lower than UNP's 17x. We believe UNP is a higher quality business than some comps and deserves its premium. Nevertheless, even at a 15x EV/EBITDA multiple we get a 16.36% implied premium. Averaging the Gordon growth and Multiples method gives a price target of 217.91, very slightly above the current share price of $213.58.

| | | | | Historical Results | | | | | | Forecast Period | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 |
| **Total Revenue** | | **19941** | **21240** | **22832** | **21708** | **19533** | **21804** | **23112** | **24499** | **25724** | **27010** | **28091** | **28933** |
| *%growth* | - | | 6.51% | 7.50% | -4.92% | -10.02% | 11.63% | *6.00%* | *6.00%* | *5.00%* | *5.00%* | *4.00%* | *3.00%* |
| **Total Costs** | | | | | | | | | | | | | |
| Compensation and Benefits | | -4779 | -4939 | -5056 | -4533 | -3993 | -4158 | -4391 | -4532 | -4630 | -4862 | -4916 | -5063 |
| *% of sales* | | 24.0% | 23.3% | 22.1% | 20.9% | 20.4% | 19.1% | *19.0%* | *18.5%* | *18.0%* | *18.0%* | *17.5%* | *17.5%* |
| Purchased Services and Material | | -2258 | -2363 | -2443 | -2254 | -1962 | -2016 | -2311 | -2327 | -2315 | -2431 | -2528 | -2604 |
| *% of sales* | | 11.3% | 11.1% | 10.7% | 10.4% | 10.0% | 9.2% | *10.0%* | *9.5%* | *9.0%* | *9.0%* | *9.0%* | *9.0%* |
| Fuel and Utilities | | -1489 | -1891 | -2531 | -2107 | -1314 | -2049 | -2196 | -2327 | -2315 | -2431 | -2388 | -2459 |
| *% of sales* | | 7.5% | 8.9% | 11.1% | 9.7% | 6.7% | 9.4% | *9.5%* | *9.5%* | *9.0%* | *9.0%* | *8.5%* | *8.5%* |
| Equipment and Other Rents | | -1137 | -888 | -1072 | -984 | -875 | -859 | -924 | -955 | -978 | -999 | -1039 | -1071 |
| *% of sales* | | 5.7% | 4.2% | 4.7% | 4.5% | 4.5% | 3.9% | *4.0%* | *3.9%* | *3.8%* | *3.7%* | *3.7%* | *3.7%* |
| Other Costs | | -997 | -948 | -1022 | -1060 | -1345 | -1176 | -1156 | -1225 | -1286 | -1351 | -1405 | -1447 |
| *% of sales* | | 5% | 4% | 4% | 5% | 7% | 5% | *5%* | *5%* | *5%* | *5%* | *5%* | *5%* |
| Other Income | | 221 | 245 | 94 | 243 | 287 | 297 | 231 | 245 | 257 | 270 | 281 | 289 |
| *% of sales* | | 1% | 1% | 0% | 1% | 1% | 1% | *1%* | *1%* | *1%* | *1%* | *1%* | *1%* |
| Depreciation & Amortization | | -2038 | -2105 | -2191 | -2216 | -2210 | -2208 | -2427 | -2572 | -2701 | -2836 | -2950 | -3038 |
| **Total Costs** | | **-12476** | **-12888** | **-14220** | **-12910** | **-11411** | **-12169** | **-13174** | **-13695** | **-13968** | **-14639** | **-14944** | **-15392** |
| **EBIT** | | **7465** | **8352** | **8612** | **8798** | **8122** | **9635** | **9938** | **10804** | **11756** | **12371** | **13146** | **13541** |
| *%margin* | | 37.4% | 39.3% | 37.7% | 40.5% | 41.6% | 44.2% | 43.0% | 44.1% | 45.7% | 45.8% | 46.8% | 46.8% |
| Tax Expenses | | -2533 | 3080 | -1775 | -1828 | -1631 | -1955 | -1988 | -2161 | -2351 | -2474 | -2629 | -2708 |
| Effective Tax Rate | | 33.9% | -36.9% | 20.6% | 20.8% | 20.1% | 20.3% | *20.0%* | *20.0%* | *20.0%* | *20.0%* | *20.0%* | *20.0%* |
| Depreciation & Amortization (+) | | 2038 | 2105 | 2191 | 2216 | 2210 | 2208 | 2427 | 2572 | 2701 | 2836 | 2950 | 3038 |
| *% of sales* | | 10.2% | 9.9% | 9.6% | 10.2% | 11.3% | 10.1% | *10.5%* | *10.5%* | *10.5%* | *10.5%* | *10.5%* | *10.5%* |
| Capex (-) | | -3505 | -3238 | -3437 | -3453 | -2927 | -2936 | -3051 | -3111 | -3138 | -3160 | -3146 | -3096 |
| *% of sales* | | 17.6% | 15.2% | 15.1% | 15.9% | 15.0% | 13.5% | *13.2%* | *12.7%* | *12.2%* | *11.7%* | *11.2%* | *10.7%* |
| NWC | | 1348 | -5476 | 559 | 494 | 1096 | 399 | 630 | 245 | 887 | 515 | 1168 | 804 |
| Change in NWC (-) | - | | -6824 | 6035 | -65 | 602 | -697 | 231 | 245 | 257 | 270 | 281 | 289 |
| *% of sales* | - | | -32.1% | 26.4% | -0.3% | 3.1% | -3.2% | *1.0%* | *1.0%* | *1.0%* | *1.0%* | *1.0%* | *1.0%* |
| Unlevered FCF | | -611 | 12913 | -4826 | 1366 | 752 | 3233 | 7095 | 7859 | 8710 | 9302 | 10040 | 10485 |
| *%growth* | - | | -2211.8% | -137.4% | -128.3% | -45.0% | 330.3% | 119.4% | 10.8% | 10.8% | 6.8% | 7.9% | 4.4% |
| **Discounted Cash Flow** | | **-611** | **12913** | **-4826** | **1366** | **752** | **3233** | **6519** | **6634** | **6754** | **6627** | **6571** | **6305** |

***Fig. 7:*** *Cash flow projections*

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| | |
|---|---|
| Current Share Price | 213.58 |
| Shares Outstanding | 628.03 |
| Market Capitalization | 134,134 |
| Total Debt | 33,835 |
| Cash & Cash Equivalents | 955 |
| Net Debt | 32,880 |
| Percent Equity | 80% |
| Percent Debt | 20% |
| | |
| Risk-Free Rate | 3.00% |
| Beta | 1.21 |
| Equity Risk Premium | 6.00% |
| Cost of Equity | 10.26% |
| | |
| Cost of Debt | 4.1% |
| Tax Rate | 20% |
| WACC | 8.85% |

***Fig. 8***

| | |
|---|---|
| Terminal Growth Rate | 3.00% |
| Terminal Value | 184,743 |
| Discounted Terminal Value | 111,095 |
| Sum of Discounted Cash Flows | 39,411 |
| Implied Enterprise Value | 150,506 |
| Implied Equity Value | 117,626 |
| | |
| Fair Value per Share | 187.30 |
| Implied Premium (%) | -12.31% |

***Fig. 9:*** *Gordon growth*

| | | Terminal Growth Rate | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | -12.31% | 1.5% | 2.00% | 2.50% | 3.00% | 3.50% | 4.00% | 4.50% |
| WACC | 7.35% | -5.0% | 3.7% | 14.3% | 27.3% | 43.6% | 64.9% | 93.6% |
| | 7.85% | -14.8% | -7.6% | 1.0% | 11.3% | 24.0% | 40.0% | 60.8% |
| | 8.35% | -23.1% | -17.1% | -10.0% | -1.6% | 8.4% | 20.9% | 36.5% |
| | 8.85% | -30.2% | -25.1% | -19.2% | -12.3% | -4.1% | 5.8% | 17.9% |
| | 9.35% | -36.5% | -32.1% | -27.2% | -21.4% | -14.7% | -6.7% | 2.9% |
| | 9.85% | -42.0% | -38.2% | -34.0% | -29.2% | -23.5% | -17.0% | -9.2% |
| | 10.35% | -46.8% | -43.6% | -40.0% | -35.8% | -31.1% | -25.6% | -19.2% |

***Fig. 10***

| Competitors | TEV/EBIT |
|---|---|
| CSX Corporation (NasdaqGS:CSX) | 15.3x |
| Norfolk Southern Corporation (NYSE:NSC) | 14.8x |
| Canadian National Railway Company (TSX:CNR) | 17.1x |
| Canadian Pacific Railway Limited (TSX:CP) | 28.4x |
| Daqin Railway Co., Ltd. (SHSE:601006) | 6.4x |
| Burlington Northern Santa Fe. LLC | - |
| West Japan Railway Company (TSE:9021) | NM |
| China Railway Special Cargo Logistics Co., Ltd. | 39.7x |
| China Railway Tielong Container Logistics Co., Ltd | 12.5x |
| Guangshen Railway Company Limited (SEHK:525) | NM |
| | |
| Union Pacific Corporation (NYSE:UNP) | 17.1x |
| | |
| | |
| High | 39.7x |
| Low | 6.4x |
| Mean | 19.2x |
| Median | 15.3x |

***Fig. 11:*** *Comps*

| | |
|---|---|
| Exit Multiple (EV/EBITDA) | 15 |
| Terminal Value (EV/EBITDA) | 248,681 |
| Discounted Terminal Value | 149,544 |
| Sum of Discounted Cash Flows | 39,411 |
| Implied Enterprise Value | 188,955 |
| Implied Equity Value | 156,075 |
| | |
| Fair Value per Share | 248.52 |
| Implied Premium (%) | 16.36% |

***Fig. 12:*** *Multiples method*

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# Vital Farms

| Vital Farms \| NYSE: VITL | |
|---|---|
| **Negative** / Neutral / Positive | |
| Share price, 05/21/22: | $9.58 |
| Market capitalization: | $391.46 mm |
| Shares outstanding: | 40.61 mm |
| 52-week range: | $24.36/$9.06 |
| EPS (FY21): | $.06 |
| Weighted Industry Beta: | 1.04 |
| Average analyst opinion: | $26.83 |
| Price target: | $4.49 |

### Price Chart

### Financial Highlights

| *(Dollars in millions)* | 2021 | 2022E | 2023E |
|---|---|---|---|
| Revenue | 260.90 | 307.86 | 357.12 |
| *% Growth* | *22%* | *18%* | *16%* |
| EBITDA | 3.938 | 18.470 | 17.860 |
| *% Revenue* | *1.5%* | *6.0%* | *5.0%* |
| EPS | .06 | .28 | .27 |


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## Investment Overview

Vital Farms Inc. is an organic produce company that has differentiated itself as a producer of high-quality pasture-raised eggs, and presently has a large market share in the fast-growing specialty eggs industry. Vital Farms has seen great revenue growth over the past three years, primarily driven by overall industry growth and consumer willingness to pay a premium for Vital Farms' eggs. However, their brand image is at risk as news about ethical scandals concerning VITL's chicken farming practices come out. Furthermore, Vital Farms is facing increasing competition as well-established players in the egg and organic produce industries enter the specialty eggs market with lower prices, and they suffer from inflexible supply chains tying them to high costs, leading to low margins. Even with optimistic projections of revenue growth given increasing competition, VITL's low margins lead us to an implied premium of -63.36%. After careful consideration, we are recommending a **SELL** on their stock.

## Company Overview

**Company History and Value Proposition**

Vital Farms, Inc. (NASDAQ: VITL) sells animal products – primarily eggs – and is known for its pasture-raised, ethically treated farm model. Founded in 2007 in Austin, TX, the company is now a national food brand which sources its products from over 225 family farms in the United States. They pride themselves on the integrity of their products. In 2017, they opened their processing and packaging facility, the Egg Central Station, in Springfield Missouri, which became fully operational in April 2022, and is able to process over 3 million eggs daily. At present, it is one of only six companies worldwide to have received the Select Site from Safe Food Quality Institute. They are also contracted with B Lab to conduct third-party reviews of VITL's ESG impact, and by meeting the standards set by the corporate governance non-profit, has become a "certified B corporation." The public benefit incorporation is a unique credential for their claims to prioritize ethical and organic products, and even within the organic niche, none of VITLs competitors share these certifications. Vital Farms is pursuing a strategy to capitalize on the premium consumers are willing to pay for ethically sourced animal products. [6]

**Business Model**

Revenue

The company offers three categories of products: eggs, butter, ghee, and prepared food, of which their eggs represent 90% of revenue. They attempted to expand into the prepared food segment with their egg bites and egg-based breakfast bars in 2020 and 2021 respectively, but are planning to discontinue both lines by the end of 2022. The shell eggs segment remains their focus. [6]

Distribution channels

Vital Farms sells products through three channels: "natural channels," composed of retailers associated with organic food, such as Wholefoods or Sprouts, the "mainstream" channel, composed of all other retail brands such as Kroger and Target, and the food service channel, composed of direct sales to food-service providers. Refer to Figures 1 and 2 for Vital Farms' revenue broken down by sales channel. They hope to increase their food-service channel as a primary engine of revenue growth going forward, since artisanal ingredients have more demand in professional food service. [6]

For the foreseeable future, VITL must rely on large distributors to sell their products in large chain stores, which gives them almost no negotiating power. Their current contracts with distributors necessitate that they accept any pass-through costs associated with transporting, storing, and selling


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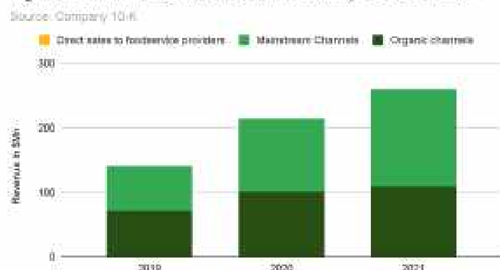

their inventory. While direct-to-retailer sales deliver regular revenue under contract, distributor sales contracts only specify the price at which the goods are to be sold, but not minimum purchase amounts or long term commitments. These unfavorable terms are unlikely to change, since the brand has not achieved enough prominence to negotiate individually with most large retailers, with the exception of Kroger. [6]

Costs

The operational costs of Vital Farms can be split between the cost of goods sold (i.e. the cost of the animal products paid to farmer-suppliers), packaging and manufacturing costs, and transportation costs. The cost of goods obtained from VITL's network of farms is set by contract, which requires Vital Farms to purchase all chicken eggs produced by their farmers for a set price. Packaging and manufacturing costs include the costs of contracting with food manufacturing firms to produce Vital Farms food products, as well as the costs of running Vital Farm's shell egg processing plant, Egg Central. [6]

# Industry Overview

**Introduction**

Vital Farms operates within the US egg and dairy industry – primarily within the egg industry, with 90% of Vital Farms' revenue coming from shell egg sales [6]. In addition, Vital Farms is part of a growing list of brands and companies that aim to sell sustainable and ethical food production.

The US egg and dairy industry was valued at approximately $89.2bn in the year ended February 2022 (CAGR, 2014 - 2021: 2.80%) [1], and is expected to grow at a CAGR of 3.0% annually (2022 - 2027) [1]. This market is primarily driven by the high incorporation of eggs and dairy in the American diet.

The chicken egg industry in the US has a low market share concentration, with the top four operators (Cal-maine, Rose Acre Farms, Versova, Hillandale Farms) making up only 33% of revenue in 2022. Looking forward, this decentralization is unlikely to continue, as larger producers are able to achieve lower per-unit costs through vertical integration and economies of scale. With an average of three large acquisitions per company over the last five years, the industry is becoming more concentrated. It will be much harder for smaller independent farms to compete over the next ten years without becoming contract growers for corporate producers. This may drive organic farmers to Vital Farms if they were the only corporation focused on cage-free eggs, but they are in consolidation in this space too. The top producers all source their products from high volume factory farming. However organic and cage-free eggs have increased demand among consumers. Both Cal-maine and Versova have acquired cage-free egg companies to diversify into organic channels. These are industry-wide trends.

The global ethical food market is expected to grow from $542.843 billion to $574.423 billion from 2020-2021 at 5.8% CAGR [2]. However the retail value of products in the United States with an ethical label is projected to grow less. From 2015 to 2020 there was only 6.5% [4] total growth and from 2018-2019 and 2019-2020 it was only 1.33% and 1.31% [3] respectively. Fruits and vegetables are the most purchased sustainable food product in the US, followed by coffee. Eggs and dairy products were not in the top two.

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**Industry Headwinds and Tailwinds:**

Eggs are a consumer staple in the United States, with a total market size of $10.2 billion. The egg production is broadly decentralized, although current rates of consolidation indicate that it will be dominated by less than five companies by 2040. Eggs are a relatively undifferentiated product, so most growth in this industry is by pricing and long-term trends in consumer demand.

"Free-range" and "cage-free" eggs, both considered specialty eggs, have taken off in recent years. The CAGR for cage-free eggs is 4.75% (forecast period: 2022-2027). This is driven in part by consumer choice, and in part by corporation policy; for example, Unilever announced plans to source 100% cage-free eggs by 2025. Per capita egg consumption in the United States is forecast to increase by about 1.5% each year over the next five years, and prices are forecast to rise by 2% YoY over the next five years. Vital Farms is in the specialty egg niche and is the largest producer of pasture-raised eggs in the US. Between 2017-2019, pasture-raised eggs have grown at a CAGR of 31.7%, while the specialty egg market has retail sales of up to $1bn.

Even traditionally non-sustainable producers in the industry are transitioning towards cage-free and ethically sourced eggs to meet rising demand for these products. 28% of all hens were cage-free produced in 2020, 14% in 2016 and 4% in 2010. The USDA has declared about 66% of U.S. hens must be in cage-free production by 2026 to meet projected demand [4].

In terms of buying specialty eggs, younger generations are more partial to ethically labeled food products, such as "pasture-raised" eggs. Gen-Z was found to be the most willing to purchase ethically sourced food and only half as many Baby Boomers.

While there are many tailwinds for the specialty egg market, an important caveat to note is that Vital Farms distinguishes itself not by selling mere "cage-free" eggs but "pasture-raised," an even higher standard with higher costs associated.

**Competitive Positioning:**

Vital Farms, Inc. operates in the organic dairy and animal products industry, which reached a value of $20 billion in 2020, with a forecast CAGR of 7% year over year until 2026. By comparison, Vital Farms' CAGR is 56.5%, and it is the largest pasture-raised egg brand by retail sales in the United States.

Vital Farms saw 90% of revenue in 2020 from the US pasture-raised retail egg market, which is a high-growth niche sector in the industry that generated approximately $256.0mn in sales in the year ended December 2020 at a CAGR of 35% (December 2018 - December 2020). Growth in this market is primarily driven by an increasing consumer demand for quality, cruelty-free, and organic produce. Vital Farms Inc. dominates this growing sector with a 76% market share as of year ended 2019. However, the demand for pasture-raised eggs represents only 4% of natural-channel demand, and while the customer base may grow over time, it is currently limited by the cost of pasture-raised products vs. cage free eggs. [5]

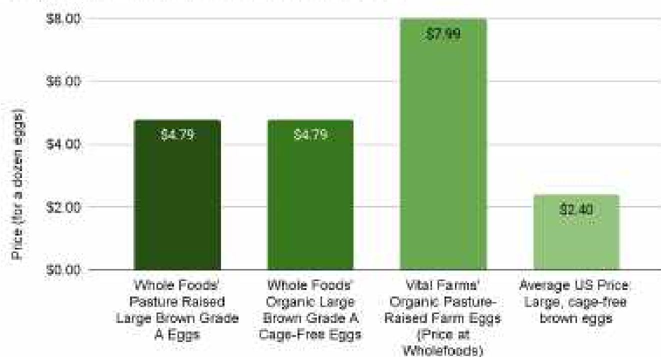
Vital Farms is also increasingly expanding into the dairy industry with its offerings of unsalted and salted varieties of butter in two-stick and four-stick packs, tubs of spreadable butter mixed with avocado oil, and ghee. [5] The US butter market was valued at roughly $4.0bn in the year ended December 2020, with a CAGR of 10% between 2018 and 2020. The Dairy industry has remained highly competitive, with the largest player, Dairy Farmers of America, controlling 11% of the market by revenue. Like the shell egg industry, the vast majority of growth occurs through management, mergers, and acquisitions. While VITL's farms make the barrier to entry low, they are unlikely to capture significant market share in the near future, as pasture-raised and ethically treated cows raised on family farms already represent 5-10% of the companies in the industry, and Vital Farms would face even tougher competition to differentiate its brand.

# Investment Thesis

**Thesis #1: Vital Farms will suffer from increasing price competition**

In a competitive market with a large number of substitute products, brand loyalty and pricing are the two differentiating factors which drive top-line growth. Currently, Vital Farms relies heavily on its brand image and brand loyalty to drive revenue. Its brand is associated with its corporate partnerships, distinctive packaging, and most importantly, its claims to ethically and sustainably source its products.

However, given its comparatively high prices, when grocery prices soar, the average price-conscious and health- or animal-welfare conscious consumer will no longer be willing to pay $6 to $9 for a dozen of Vital Farms' "organic A grade pasture raised eggs." Vital Farms will thus be more at-risk from cyclical price sensitivity. Despite advertising and consumer education efforts, there is no evidence that consumers differentiate between pasture-raised and cage free eggs, and in April 2022, a dozen large, cage-free brown eggs were priced at an average of $2.40 a dozen in the US [7], which is less than half the price consumers would have to pay for Vital Farms' cheapest eggs.




Vital Farms is also facing increasing price competition within the premium, specialty eggs industry as more players – such as Whole Foods – enter or expand their place in the market. Refer to Figure 4 for details. Due to Vital Farms' supply chain structure, which ties them to high costs as discussed in Investment Thesis 2, Vital Farms will find it hard to offer more competitive pricing.

Notable competitors include Cal-Maine Foods who is spending an increasing amount on investing into the specialty eggs market: its SG&A expenses increased by 20.4% from FY ended May 2020 to FY ended May 2021, which it attributed to increased production and sales of specialty eggs and efforts to advertise them. Recent acquisitions by Cal-maine and Versova have focused on building their portfolio of cage-free eggs, which will put them in direct competition with Vital Farms. Both have larger cash reserves to price their eggs closer to conventional egg prices and, as such, Vital Farms will likely be squeezed out by larger competitors.

**Thesis #2: Vital Farms' Supply Chain Is Inflexible and Ties Them to High Costs.**

Firstly, Vital Farms operates using a decentralized producer network. However, they fail to capture the benefits of decentralized production because they still have to ship all egg products to one egg central station in the middle of the country for quality control and packing. From the central egg packing station, they then have to be redistributed out to retailers. Eggs already have very thin profit margins, and increased transportation costs exacerbates the issue. There are three major costs associated with egg production: Processing, Cartoning, Transportation, known as PCT. Processing is both the highest cost per dozen, and has the highest variability, but transportation, while being the lowest cost out of the three, has the second highest variability in cost. This almost a direct causal relationship to distances traveled, longer distances equals higher costs. Compare this to competitors like Cal-Maine Foods, which have multiple production centers spread out across a wider area all across the southern United States. This means that there are less transportation costs from where the chickens are to the processing facility to consumers.

Beyond high transportation costs, Vital Farms relies on a chain of independent farms to produce eggs for them. However, as these farms supply eggs to Vital Farms under the expectation that they make more in doing so than they would by selling eggs as independent farms, Vital Farms can't cut down on the fees they pay these farms too drastically at risk of losing cooperation. Compare this to competitors who own all the chickens like Herbruck's Poultry Ranch, which maintain significantly more control over inventory and more flexibility.

VITL's integration model means that they are contractually obligated to purchase all of the eggs produced by contracted farmers, "irrespective of our ability to sell such eggs." They note in their SEC filings that there has been oversupplies in the past, and as a result they have sold the eggs at very low prices or donated them. [9]

**Thesis #3: Vital Farm's Ethical Issues Affects Revenue and Leads to Additional Costs**

Not only does Vital Farms' contracts hinder supply chain control, it leads to perverse incentives which forces VITL to engage in dubious practices. Anonymous contracted Arkansas farm owners spoke to Arkansas Business News in 2016, saying that when the market becomes oversaturated, VITL "turns out" — collects and kills — some of the birds to slow production. At the same time, Vital Farms' contract guarantees these farmers with "turned out" chickens "severance pay", which amounted to 1 cent per chicken in 2016. Essentially, VITL pays for absent chickens. [10]

There are other ethical concerns with Vital Farms' chicken farming practices. VITL has the beaks of their hens "tipped", meaning portions are cut or lasered off. VITL's "pasture-raised" claims are dubious. While they have access to pastures, they rarely spend time outside due to farms' animal care practices. Cornucopia Institute rates its "outdoor management system" at 70 points (out of 100) , one of the lowest among its peers in the 5-star ethical egg scorecard. [11] The lifespan of VITL's chickens are particularly low (and death rates high), and given a score of 40 points. This damages the brand's credibility especially when it tries to market to eco- and ethical-conscious consumers. It is especially important for Vital Farms to uphold its ethical practices since its high price assumes consumers will pay a premium for animal welfare, environmental consciousness, and nutritious products. If it fails to deliver, then consumers no longer have an incentive to pay up to twice as much for virtually the same products. Reputational damages also drive away potential suppliers, the family farms which Vital Farms rely upon. This is particularly dangerous to revenue in an industry with so many substitutes and so little product differentiation.

In addition to affecting revenue, Vital Farm's ethical issues have led to lawsuits from animal welfare organizations. A class action complaint has already been filed in 2021, alleging that VITL is mistreating their chickens and misleading consumers into thinking they are an ethical corporation. [12] Its founder Matt O'Hayer is also the CEO of Ovabrite, a bio-tech company that seeks to end male chicken culling (killing male chicks) by identifying egg sex before the chicken is hatched. [13] Vital Farms and Ovabrite are currently suing their contracted technology developed Novotrans for fraud, alleging that it never had the capacity for this technology. Vital Farms has taken on the cost of this lawsuit since Ovabrite is still in its early stages of development.

**Why our opinion differentiates from the market's**

The mean consensus target price for Vital Farms is $18.79, with a high of $27 and a low of $14.5. Cowen and Stifel reports rate VITL as a buy, while BMO, Credit Suisse, and Morgan Stanley recommend holding. However, optimistic reports often overstate the effect of Vital Farms' new "Egg Central Station," a processing facility that washes, inspects, and packages the eggs. The Central Station became fully operational in April 2022, adding 64,000 sq ft to the 82,000 sq ft facility as well as 50 full-time employees. This expansion reportedly increased run-rate revenue of eggs from 300M to 650M, and the facility is now able to process 35 million eggs weekly rather than 10 million eggs. However, in the short term, it is difficult for VITL to maximize their productive capacity since it relies on smaller family farms as suppliers and does not directly control their egg supply, as per thesis 2. In the long term, the Egg Central Station is its only processing facility, meaning eggs have to be transported from farms to Springfield, Missouri, and then distributed nation-wide. This lengthens the transportation process and makes delivery harder because the eggs are all sourced from decentralized farms, shipped to one centralized location halfway across the country, then shipped back out to retailers. In comparison, competitors like Cal Maine Foods operate 44 processing and packing facilities in multiple states.

Positive ratings also note the strong growth of pasture-raised eggs as well as a general trend towards eco-conscious and ethical consumption. While this trend is undeniable, reports might be overestimating Vital Farms' market share and competitive advantage in this industry. The Cowen report notes that VITL benefits from early entry as well as "sticky branding". Its base case assumes 10% household penetration, which is extremely bullish considering Vital Farms' household penetration is currently around 3%. Despite its unique supply chain model, Vital Farms' main product is a staple commodity with many available substitutes.

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# Investment Risks

**Risk #1:**

The pasture-raised, organic egg market could show potential for enormous growth. For instance, a law went into effect in California in 2022 requiring all eggs sold in the state to come from cage-free hens. Given Vital Farms' steady place in the organic eggs market, they could benefit from this greatly.

**Mitigating Factor #1:**

While the organic egg market is growing, Vital Farms may not grow with the industry. It is an early entrant, but its supply chain, competition, and ethical issues all undermine its place in the industry. Furthermore, while there is a trend towards cage free eggs, this trend may not extend to the highly-priced, pasture raised eggs market. In addition, Vital Farms faces steep competition from larger players entering or already in the organic egg industry. It is also a market that larger players like Tyson Foods could move into relatively easily, with their preexisting supply chains and distribution channels.

**Risk #2:**

**There's a risk that we are underestimating the potential of Vital Farms to move into other farm product industries.**

Vital Farms' "inverted franchise model" enables flexible expansion in two ways; first, it reduces the start-up costs for expanding into another industry, such as the pork industry. Instead of needing to buy land, feed production, animals (such as cows or pigs), Vital Farms only needs to adapt final processing and packaging facilities in order to expand into a new product area. Second, its inverted-franchise model eliminates regulatory nightmares frequently associated with expansion. The smaller farms themselves are responsible for following Food and Drug Administration's rules, as well as auditing by the Department of Agriculture.

**Mitigating Factor #2:**

The inverted franchise model is both a blessing and a curse. The benefits outlined above are outweighed by the supply chain inflexibility the model leads to, as outlined in thesis 2. This is especially concerning for the egg market, which has faced supply shocks in the past (with the avian flu, overproduction, etc).

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# Valuation – DCF

**Cash Flow Projections:**

| Line Item | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Revenue | 74.0 | 106.7 | 140.73 | 234.28 | 280.90 | 307.90 | 357.12 | 407.12 | 455.97 | 501.57 | 541.70 | 574.20 |
| % growth | - | 44% | 32% | 52% | 22% | 10% | 16% | 14% | 12% | 10% | 8% | 6% |
| EBIT | (2.0) | 6.4 | 3.3 | 11.6 | 0.4 | 6.16 | 7.14 | 8.14 | 9.12 | 10.03 | 10.83 | 11.48 |
| % margin | -3% | 6% | 2% | 0% | 0% | 2% | 2% | 2% | 2% | 2% | 2% | 2% |
| Effective Tax Rate | -2% | 11% | 34% | 24% | -553% | 23% | 23% | 23% | 23% | 23% | 23% | 23% |
| NOPAT | (2.0) | 5.721 | 2.182 | 8.81 | 2.388 | 4.77 | 5.54 | 6.31 | 7.07 | 7.77 | 8.40 | 8.90 |
| (+) D&A | 0.8 | 1.4 | 1.0 | 2.6 | 3.8 | 12.31 | 10.71 | 20.36 | 27.36 | 25.08 | 21.67 | 11.48 |
| % revenue | 1% | 1% | 1% | 1% | 1% | 4% | 3% | 5% | 6% | 5% | 4% | 2% |
| (-) Capex | 11.7 | 1.9 | 4.8 | 10.3 | 16.7 | 15.39 | 14.28 | 8.14 | 4.56 | 5.02 | 5.42 | 5.74 |
| % revenue | 16% | 2% | 3% | 0% | 6% | 5% | 4% | 2% | 1% | 1% | 1% | 1% |
| NWC | - | 8.5 | 26.0 | 38.6 | 38.2 | 32.31 | 38.45 | 47.39 | 56.71 | 66.74 | 77.58 | 89.06 |
| (-) Change in NWC | - | - | 15.55 | 4.88 | -2.78 | 6.16 | 7.14 | 8.14 | 9.12 | 10.03 | 10.83 | 11.48 |
| Change as % of revenue | - | - | 11% | 2% | -1% | 2% | 2% | 2% | 2% | 2% | 2% | 2% |
| Unlevered Free Cash Flow | - | - | -16.24 | -3.82 | -7.98 | -4.46 | -5.18 | 10.38 | 20.75 | 17.81 | 13.81 | 3.16 |
| % growth | - | - | - | -76% | 109% | -44% | 16% | -300% | 100% | -14% | -22% | -77% |
| Discounted Cash Flow | | | | | | -4.12 | -4.41 | 8.16 | 15.06 | 11.99 | 8.54 | 1.80 |

**WACC and Implied Premium Calculations**

| Weighted Average Cost of Capital | |
|---|---|
| Current Share Price | $11.50 |
| Shares Outstanding | 40.6 |
| Market Capitalization | 466.90 |
| Total Debt | 0.30 |
| Cash & Cash Equivalents | 99.60 |
| Net Debt | -99.30 |
| Percent Equity | 100% |
| Percent Debt | 0% |
| | |
| Risk-Free Rate | 2.90% |
| Beta | 1.040454694 |
| Equity Risk Premium | 5.23% |
| Cost of Equity | 8.34% |
| | |
| Cost of Debt | 3% |
| Tax Rate | 23% |
| WACC | 8.3% |

| Perpetuity Growth Rate | |
|---|---|
| Terminal Growth Rate | 3.0% |
| Terminal Value | 60.93808311 |
| Discounted Terminal Value | 34.78766998 |
| Sum of Discounted Cash Flo | 36.97 |
| Implied Enterprise Value | 71.76 |
| Implied Equity Value | 171.06 |
| | |
| Fair Value per Share | 4.213204575 |
| Implied Premium (%) | -63.36% |
| Bull Case: | -57% |
| Bear Case | -66% |

**Sensitivity Analysis:**

| Wacc vs. Perpetuity Growth Rate | 7.30% | 7.80% | 8.30% | 8.80% | 9.30% |
|---|---|---|---|---|---|
| 2% | -62% | -64% | -65% | -65% | -66% |
| 2.20% | -62% | -63% | -64% | -65% | -66% |
| 2.50% | -62% | -63% | -64% | -65% | -66% |
| 2.70% | -61% | -63% | -64% | -65% | -66% |
| 3% | -61% | -62% | -63% | -64% | -65% |
| 3.20% | -60% | -62% | -63% | -64% | -65% |
| 3.70% | -59% | -60% | -62% | -63% | -64% |
| 4% | -57% | -60% | -61% | -63% | -64% |

**Assumptions:**

- Revenue will taper down to match Industry CAGR over the next six years, and approach the terminal Growth rate
- EBIT margins will not rise to more than two percent, as Operating Costs will remain high (thesis 2)
- Projected tax rate is the average of years where tax burden was not deferred and tax benefits were not received
- We assume all Capex is related to the operation of the Egg Central station, and will taper down as the costs associated with getting the facility operational decrease, D&A is forecast to trail Capex by four years, as it has for the past five years..
- NWC capital change is forecast to stabilize at two percent of revenue, as we foresee rising costs roughly keeping pace with rising assets.

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# Valuation – Exit Multiples

| | Comparable Companies Analysis | | | | | | |
|---|---|---|---|---|---|---|---|
| | Trailing P/E | EV/EBITDA | EV/Revenue | Profit Margin | )perating Margi | RoE | RoA |
| VITL | 191.67 | 180.2917229 | 0.275031931 | 0.93% | 0.04% | 1.62% | 0.03% |
| CALM | 145.22 | 39.55 | 1.65 | -0.53% | -3.80% | -0.76% | -2.79% |
| TSN | 9.2 | 6.21 | 0.81 | 7.47% | 11.12% | 21.64% | 9.52% |
| PPC | 33.93 | 11.71 | 0.64 | 1.34% | 7.32% | 7.64% | 8.57% |
| POST | 10.4 | 6.87 | 1.51 | 7.25% | 9.91% | 15.48% | 3.41% |
| NZSE:ATM | 164.3 | 38.53 | 1.48 | 1.70% | 3.40% | 1.43% | 1.68% |

| Exit Multiples Method | |
|---|---|
| Exit Multiple (EV/EBITDA) | 47.19362049 |
| Terminal Value (EV/EBITDA | 185.8484775 |
| Discounted Terminal Value | 106.0951571 |
| Sum of Discounted Cash Fl | 36.97 |
| Implied Enterprise Value | 143.06 |
| Implied Equity Value | 242.36 |
| | |
| **Fair Value per Share** | 5.969546622 |
| **Implied Premium (%)** | -48.09% |

| | |
|---|---|
| Average EV/EBITDA | 47.19362049 |
| 75th percentile | 74.73543073 |
| 25th percentile | 6.705 |
| Bull Case: | -35.00% |
| Bear Case | -67.59 |

**Sensitivity Analysis**

| | Wacc vs. Exit Multiples | | | | |
|---|---|---|---|---|---|
| | 0.073 | 0.078 | 0.083 | 0.088 | 0.093 |
| 22 | -59% | -60% | -60% | -61% | -61% |
| 27 | -56% | -57% | -58% | -58% | -59% |
| 32 | -54% | -55% | -55% | -56% | -57% |
| 47 | -46% | -47% | -48% | -49% | -50% |
| 52 | -44% | -45% | -46% | -47% | -48% |
| 57 | -41% | -42% | -43% | -44% | -45% |
| 62 | -38% | -40% | -41% | -42% | -43% |

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